TITLE: THE GOVERNMENTAL RESPONSE TO NUCLEAR ENVIRONMENTAL PROBLEMS IN CHELYABINSK

AUTHOR: Yevgeny Gontmacher, Ministry of Social Protection
        John M. Whiteley, University of California, Irvine

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1755 Massachusetts Avenue, N.W.
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PROJECT INFORMATION:

CONTRACTOR: University of California, Irvine

PRINCIPAL INVESTIGATOR: Russell J. Dalton

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Executive Summary

Before the beginning of Glasnost and perestroika in 1985, attempts to organize the ecology movement in the former Soviet Union were suppressed by the organs of the state, especially the KGB. After the advent of glasnost and perestroika, the first initiators of ecological action were those who had access to information about the extent of environmental degradation. The turning point for the environmental movement was the Chernobyl disaster in April of 1986. The secrecy and repression of the weakening Soviet system were a powerful impetus for raising the environmental consciousness of citizens.

Within the former Soviet Union, the entire governmental framework for protecting the environment was vague, general and contradictory. Public input on environmental policy was essentially non-existent. Economic development in the command economy was the criteria the Central Committee of the Communist Party used to guide environmental protection policy-making.

The government response to Chelyabinsk occurs within this context. Virtually all of the industrial development in the Chelyabinsk region occurred under the system characterized above. Its status as a closed military industrial region exacerbated the secrecy and arbitrariness of government action.

Within the Chelyabinsk region, a catalyst for the green movement was increased knowledge about the nuclear waste explosion which had occurred near Kyshtym in 1957. For thirty-two years until 1989, Local and national governmental authorities had suppressed all information about the 20 million curie explosion. As more information became available, it became apparent that the environmental problem in the Chelyabinsk Oblast is qualitatively different from that which exists in most other regions of Russia because of the long-lived character of radionuclides.

In the beginning of the 1990's, relations between the "greens" and governmental authorities deteriorated. This resulted from the power struggle between the structures of the Communist Party and the emerging institutions of the Russian Federation, and the twin economic realities of declining industrial production and high inflation. A consequence of these realities were unwise choices in public policy affecting both the environment and public health. A flawed economy and a resistant government bureaucracy were dysfunctional legacies to the new Russian Republic from the institutions of the former Soviet Union.

There has been a general anti-environmental tone to governmental policy in the Russian Federation. Examples of this anti-environmental tone relevant to Chelyabinsk are the debates over nuclear waste policy, over the plan to add 30 new nuclear power stations, and over whether to resume construction of the Southern Urals Nuclear Power Station.
THE GOVERNMENTAL RESPONSE TO
NUCLEAR ENVIRONMENTAL PROBLEMS IN THE CHELYABINSK REGION

Yevgeny Gontmacher
The Ministry of Social Protection
Moscow, Russia

John M. Whiteley
University of California, Irvine

The Background

Before the beginning of glasnost and perestroika in 1985 attempts to articulate environmental problems in the former Soviet Union were suppressed by the organs of the state, especially by the KGB. This was especially true in areas away from Moscow, where independent political and educational activity was traditionally less common than in urban areas. As a center of the military-industrial complex, and containing closed cities, the suppression was doubly strong in Chelyabinsk Oblast.

After the advent of glasnost and perestroika, more information became available, and knowledge of that information more widespread. It became clear that the USSR was not just in economic crisis, but also in an ecological crisis which was transnational in scope. Ecological catastrophes were threatening entire cultures and regions within the former Soviet Union, as well as neighboring countries.

The spirit behind the initial ecological actions came from the artistic and literary intelligentsia. Prominent among them were such famous Soviet writers as Sergei Zalygin and Chingiz Aitmatov, individuals who had access to the inner circles of the most powerful leaders of perestroika’s early establishment. These individuals tried without much lasting success to organize the ecological movement with such groups as “Ecology and Peace” (“Ecologia i Mir”), “Issyk-Kul’s Forum,” and similar groups.

“Ecologia i Mir” started in reaction to the government plan in the early 1980s to try to reverse the flow of several rivers in northern Russia and Siberia. One purpose of this government project was to bring water to areas of the former Soviet Union where the Ministry of Atomic Power and Industry wanted to build RBMK nuclear reactors. This secret plan subsequently collapsed, before Chernobyl, due to reasons of economics, not environmental protest. The plan had been developed within the Kurchatov Institute in response to a goal of a Communist Party Congress to greatly increase nuclear power generation by the year 2000.

The turning point for the environmental movement was the Chernobyl disaster in April of 1986. It served to create a receptive atmosphere for environmental activists. After Chernobyl, Russians concerned about their ecological future became much more vocal.
In some cities elements of the population tried to end the construction of large scale projects which were potentially dangerous to the environment; for example, the nuclear heat stations in Voronezh and Nizhniy Novgorod, Krasnodar’s nuclear power station, and the biochemical plant in Kirishi (in the Leningrad region). Opposition from citizens to these government undertakings was typically spontaneous, and usually there was not an organizational infrastructure created which would sustain regular initiatives. After initial successes, environmental activism declined sharply. By contrast, sponsors of damaging projects had the resources of ministries and other organs of government behind them to sustain activity.

The Kirishi Biochemical Plant

The case of the Kirishi Biochemical Plant, belonging to the USSR Ministry of Medical and Microbiological Industry, is illustrative. After its opening near Leningrad in 1974, the plant had gained a negative reputation among environment activists for discharging hazardous wastes into the atmosphere. One response was the production by Dmitry Delov of a documentary film entitled "Against the Current." The film won a special prize at the 1988 Fribourg International Film Festival.

The response to the film by the managers of the Kirishi Plant was to demand in court that "the film and its producers be condemned for libel and slander." The lawsuit was dismissed. The judge's opinion stated:

"We analyzed the documentary and think that it is by no means offensive to the plant. The main message of the film is that scientific and technological progress must not conflict with the environment. In form this was a conflict between the plant and the film studio, but in essence this was a battle where departmental interests clashed with an artist's civic responsibility." While the dismissal of the lawsuit represented a legal victory for film producer Delov, the plant continued with business as usual.

The dispute over the film "Against the Current" had been preceded by an "unauthorized" rally in Kirishi on June 1, 1988 led by a mail carrier named Vladimir Vasilyev. The rally drew 12,000 Kirishi residents (the population of Kirishi is 60,000). The substance of the complaints voiced at the rally was that there had been a thirty-five fold increase in bronchial asthma since the plant had opened in 1974. Vasilyev released a tape recording of a scientific conference held in Kirishi where scientists and physicians from other cities had identified protein and vitamin

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1. Leningrad City Judge Boris Prokhorov, Telegraph Agency of the Soviet Union (TASS), January 24, 1989
2. op. cit.
concentrates released by the Kirishi Plant as the cause of fungal infections, lung and skin diseases, pregnancy complications and impaired immunity among biochemical plant employees.\(^3\)

The Ministry of Public Health investigated the complaints from Kirishi and found that disabling respiratory disease was at twice the average for the Russian Republic, and that the rate of bronchial asthma and asthmatic bronchitis among both children and adults was five to ten times higher than in other Leningrad district cities.\(^4\)

There were a variety of responses to the pressure from environmentalists. The Kirishi Plant was closed briefly by the then Minister of Medical and Microbiological Industry, V. Bykov, for the purpose of eliminating "design flaws" in the plant. The chief physician from the Kirishi District Hospital, Dr. V. Yesinovsky, warned that more than one generation of Kirishi residents would have their health affected negatively by the plant. The response by local authorities was to fire Dr. Yesinovsky and three other physicians from their positions at Kirishi District Hospital.

Mail carrier Vasilyev compiled a file which documented the losses on surrounding farms from disease among livestock caused by fodder contaminated by emissions from the plant. After presenting his file to Minister Bykov, he took his case to the USSR State Committee on Environmental Protection. Local governmental authorities revoked his residency permit ("propiska") after this action, though the excuse the authorities used is not known.\(^5\)

It was the developing economic crisis in the late 1980s which contributed to the cessation of most environmentally unsound projects, not sporadic protests such as that at Kirishi. The state simply lacked the rubles to undertake them. Selected projects which were considered vital by the state (and funded by it), however, went ahead irrespective of protests and adverse publicity in newspapers. This was demonstrated in the cases of a dam that partitions off the Neva Bay near St. Petersburg, and a heat energy station in the north of Moscow.

Virtually all of the industrial development in the Chelyabinsk region occurred under a system characterized in the following terms by Eric Green and the problems which plagued the region reflected the broader environmental problems in the former USSR:

In many ways the USSR's environmental problems embodied, in microcosm, the array of problems plaguing Soviet society as a whole. The economic structure essentially encouraged enterprises to degrade the environment just as it pushed development of heavy industry at the expense of high living standards. In

\(^3\)Correspondent S. Razin, Mail Carrier Vasilyev’s "Bombshell," Komsomolskaya Pravda, March 15, p. 2, 1988
\(^4\)op. cit., p.2
\(^5\)op. cit., p.2

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determining environmental and other policies, the legislature and judiciary were at best symbolic counterweights to the dominance of the Council of Ministers. As a result, the public had no institutionalized means of translating its concerns into policy changes and virtually no legal protection from arbitrary government actions. Despite volumes of well-intentioned rhetoric, the leadership did not create regulatory mechanisms to correct these problems. In sum, the factors that led to economic stagnation and eroded the regime’s legitimacy also caused widespread destruction of the natural environment.6

Soviet Government Response During the Initial Years of Glasnost and Perestroika

In July of 1985, a Soviet decree entitled "On Observance of the Requirements of Legislation on the Protection of Nature and the Rational Utilization of Natural Resources" addressed the consequences of failure to comply with ecological standards and requirements.7 Maloney-Dunn indicated that there were two direct consequences of this decree: the government agencies charged with enforcing the decree enacted stronger environmental regulations, and the 1986 Judicial Act was promulgated by the Supreme Court of the USSR in an attempt to increase environmental enforcement.8

From 1987 through 1990 there were a number of government decrees and environmental laws passed which reflected an increased concern with the environment.

- "On State Enterprises (or Associations)" (1987) - fines were increased for environmental pollution, as well as requiring waste-free technology
- "On the Radical Restructuring of Environmental Protection in the USSR (1988)" - new powers were granted to republic and Soviet state committees to prohibit the expansion of existing industrial facilities or the construction of new ones, or to halt work at or file suit against polluting enterprises or organizations.9
- Procuracy expanded (1988) - an entity responsible for ensuring compliance with Soviet law was empowered to shut down polluters, levy fines, and imprison environmental offenders.10

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8Ibid, p. 380-381.

Perhaps the most significant environmental initiative during the closing years of the Soviet era was the establishment of the State Committee on Environmental Protection, Goskompriroda, in January of 1988. The intent was to unify the previously fragmented administration of environmental protection by the creation of a ministry-level organization.

There were six tasks assigned to Goskompriroda when it was established by the USSR Council of Ministers and the Central Committee of the Communist Party:
- to monitor and publish data on the use of natural resources and environmental protection efforts;
- to submit environmental protection proposals to the State Planning Agency for integration into the USSR’s five-year and annual economic plans;
- to approve norms regulating the use of natural resources based on expert analyses of what standards are ecologically viable;
- to conduct analyses of proposed projects to assess environmental impact;
- to issue permits for disposal of toxic wastes, geological prospecting, logging and other land use;
- to manage nature reserves and regulate hunting within the Soviet Union.

Green’s assessment was that Goskompriroda’s "impact on government policy and environmental quality during its first two years has been unsatisfactory." The reasons for this assessment ranged from organizational and leadership difficulties within Goskompriroda to the concerted opposition from the rest of the government bureaucracy.

At the same time that Goskompriroda was not being effective, there was an accompanying major increase in public access to information, the 1987 law which allowed citizens to form voluntary associations was beginning to have an impact, and restrictions had been eased on the publication of environmental data. Prior to 1989 the Ministries had a virtual monopoly on the collection and dissemination (and lack thereof) of environmental data.

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Another environmental protection innovation established during the Soviet era was Goskompriroda’s introduction of environmental impact assessments (EIA). In practice, the promise of such a new undertaking exceeded its actual accomplishment during this period.

In 1989 the Soviet parliament established the Committee on Ecology and Rational Use of Natural Resources. The Committee had fifty members, twenty-five from the Congress of People’s Deputies and twenty-five from the Supreme Soviet. Green reported that some two hundred deputies constituted an informal ecology bloc in the parliament. An example of the effects of this structure was the dual role of Parliamentarian Sergei Zalygin who also served as editor of Novy Mir, a journal with 2.6 million subscribers which conveyed environmental issues to the broader public.

During its initial period of work, the Committee on Ecology and Rational Use of Natural Resources had a number of accomplishments, including conducting hearings on Chernobyl, and on the explosion in the Urals at Kyshtym in 1957. At the same time, a lack of support structures and staff handicapped its effectiveness. Green contrasted the 34,000 staff members who provide support for 535 United States Congressmen with the 600 staff for 542 legislators, fourteen committees, and eight commissions in the Soviet parliament.

The close of the Soviet era was not without progress on improving the government’s role in the environment. Glasnost had permitted unprecedented release of environmental information, and the new freedom of voluntary association had given citizens an opportunity to participate systematically on environmental issues, though the effectiveness of such participation was underdeveloped.

At the same time that there was progress on creating a more viable set of structures (governmental and non-governmental) for promoting environmental protection, the broader problems of Soviet society and economy served to undercut accomplishments:

While glasnost and democratization have focused the attention of public opinion and government agencies on the problems of ecology, environmental improvement is far more dependent on economic perestroika, the most complex—and thus far most unsuccessful—element of Gorbachev’s reform program. Economic reform is turning into a nightmare; the leadership is losing credibility among Soviet citizens because perestroika has not yet paid tangible dividends. The stalled economic

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17 Ibid.
reform is also bad news for environmental protection since the new policies hinge decisively on the successful transition to a more marketized economic system.\textsuperscript{18}

The flawed economy and a resistant government bureaucracy were dysfunctional legacies to the new Russian Republic from the institutions of the former Soviet Union. The current response of the Russian government to the Chelyabinsk environmental movement is directly traceable to that legacy.

\textbf{Chelyabinsk Region at the End of the Soviet Era}

Within the Chelyabinsk region, a catalyst for the green movement was increased knowledge about the nuclear waste explosion which had occurred near Chelyabinsk 65 and Kyshtym in 1957. At the time it happened, local and national governmental authorities had suppressed all information about the 20 million curie explosion.

Reports about the "Kyshtym Disaster" had surfaced in the public literature in the West starting in 1976\textsuperscript{19} and 1977.\textsuperscript{20} A book about the disaster was published in Great Britain in 1979.\textsuperscript{21} It was not until 1989, however, that the Soviet government confirmed to the international community that an accident at a nuclear waste storage site had occurred, or provided any details about it.\textsuperscript{22} The first disclosures within the former Soviet Union occurred in 1989\textsuperscript{23} and 1990.\textsuperscript{24} These reports, coupled with a growing awareness of other environmental problems related to nuclear development, and other formal and informal sources of information, combined to create an awareness that a situation existed in the Chelyabinsk region which was hazardous to health.

The environmental problem in the Chelyabinsk region is qualitatively different from that which exists in most other regions of Russia because of the long-lived character of radionuclides. More ordinary problems of air and water pollution can be addressed by some combination of technical modernization of polluting enterprises, closing plants, or employing existing technology to clean up soil and water pollution.

Even if Chelyabinsk 65 were to be closed immediately, there is no available technology for many existing problems of radioactive contamination. There is a recurrent danger of nuclear waste explosion requiring vigilant (and expensive) preventive maintenance. There is spreading groundwater contamination, and there is a time-frame of the toxicity which spans centuries, not years.

The response of the Chelyabinsk green movement in 1990 and 1991 was to make several demands:

1. Close Chelyabinsk 65, or at least change the nature of work done there;
2. Cease the importation of radioactive wastes;
3. Acknowledge the special status of contaminated areas;

The "green" movement of the Chelyabinsk region with such an activist agenda remained small in this period, numbering perhaps 200-300 activists among a population of 3.6 million. Why did the movement remain so small?

One reason was that the urban population of the Chelyabinsk region (1.2 million out of a regional population of 3.6 million) does not easily participate in mass mobilization political activities. This is especially true when the source of radioactive risk is two hours away even by car (and most people do not have cars) and shrouded in secrecy. In the Soviet era, the region had a traditionally privileged position because of military enterprises and the presence of closed cities where secret research and development was carried out. Also, there was little information available to the population about the radioactive pollution of the region, though many people within the closed region surmised that areas around Chelyabinsk-65, Kasli, and Kyshtym included extremely adverse environmental zones. The material privileges bestowed within the closed regions served to muffle rumors.

In the current situation, even when there is greater access to more reliable information, the great majority of the population does not seek active participation in political life. In addition, a relatively high salary from work at a potentially harmful place (or living on contaminated territory) is accepted by many as preferable in comparison to lower incomes and "clean" work.

There are two dynamics at work which affect the environmental movement. The first dynamic is that the "greens" can only expect the passive support of the population. The second dynamic is that environmentally adverse decisions by authorities do not meet with sufficient resistance from the population to cause their reversal. Therefore, there is a strong tendency for governmental authorities to revert to Soviet era decision making, giving primacy to production.
and economic values instead of ecological ones. And the judicial system has yet to become a positive force in environmental law.

By the end of the Soviet era, the populations of regions that were especially damaged by radioactive contamination, for example the village of Muslyumovo, had received some information about the real situation with respect to nuclear contamination, and waited for aid from the state. They have waited in vain. They have demonstrated their emotions during meetings in Muslyumovo, but only a small number of activists have written appeals to the government, to the President of Russia, or even to the United Nations. A fledgling environmental health group has been formed in Muslyumovo with the name "White Mice," and it has affiliated with the national non-governmental organization, the Social-Ecological Union. The organizers selected the name "White Mice" to convey the meaning a Western group might if it selected the name "Guinea Pigs" to convey a sense of being the subject of experiments beyond their control.

Environmentalism and Government at the End of the Soviet Era and the Transition to the Russian Republic

Before the demise of the former Soviet Union at the end of 1991, relations between the "greens" and governmental authorities had deteriorated. This resulted from a combination of factors. One factor was the power struggle between the structures of the Communist Party which supported the Soviet Union on the one hand, and the emerging institutions of Russia on the other. An academic specialist on the Russian environmental movement, Oleg Yanitsky, has been highly critical of the government during this period of transition. Among other charges, he claims there had been a disintegration of state authority, leading to the loss of policy making and respect for authority, and excesses of unregulated privatization. All this led, in his opinion, to a crisis of legitimacy. 25

Another prime factor in deteriorating relationships between environmentalists and the government were the twin economic realities of declining production and increasing inflation. A consequence of these realities were unwise choices in public policy affecting both the environment and public health. For example, the government closed the Armenian nuclear station after a big earthquake in 1987. Though undamaged by the earthquake, the nuclear station is located near an earthquake fault, and people reasonably worried about the potential for another Chernobyl. Still, by 1993 the government decided to open this station again. In the face of obvious (and unmitigated) safety concerns, the reasons for this decision were economic

in nature: Factories and homes both needed the electric power, and other sources were not available.

Another example of the economy forcing unwise environmental choices were concerns about the rise in unemployment in Russia. Even modest limits on environmental pollution could result in the closure of a significant part of the industrial, transport and agricultural sectors of the economy. In addition, many enterprises were in such dire financial straits that they could only avoid bankruptcy through government subsidies and loans. Also, new environmental legislation was not being enforced by the Executive branch of the government.

The judicial system continued to be unresponsive to the environmental crisis. One reason was that environmental law had been one of the areas of the judicial system which historically received the least attention during the Soviet era. Another reason was that the unusual sanctions available to the court were minor, consisting mostly of small ruble fines. Finally there was simply a lack of information in the judiciary about applicable environmental law. For example, the chairperson of Astrakhan’s Committee on Ecology and Natural Resources, W. Popov, stated that judges thoroughly consider civic and criminal legislation, but are not conversant with environmental laws dealing with the atmosphere, the environment, or water and soil protection. "That’s why when we go to the court we take additional copies of these documents to judges."26

The Response of Governmental Structures to Environmental Concerns in the New Russian Federation

There is a general anti-environmental tone to government policy in the Russian Federation. One example of this anti-environmental tone relevant to Chelyabinsk concerns a debate in 1992 and 1993 over the provisions of a draft law on nuclear waste disposal which was then under development in the Supreme Soviet. A key political debate centered around whether spent nuclear fuel was going to be classified in the law as radioactive waste per se, or in a separate category of material available for reprocessing and subsequent use in nuclear reactors.27

The Ministry of Atomic Power urged the Supreme Soviet to classify spent nuclear fuel as acceptable for reprocessing. Such a classification would have allowed the Ministry to import spent nuclear fuel from nuclear power reactors in Eastern Europe (and elsewhere), and earn, potentially, hard currency income. A consequence of such activity, of course, would be to

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26W. Popov, Zeleoniy Mir, No. 12, 1993.
increase the radioactive waste deposits in the Chelyabinsk 65 region. The waste products from reprocessing are especially toxic to the environment and comparatively voluminous when compared to other types of toxic waste. Environmentalists were united and vociferous in their opposition.

The sixth draft of the law entitled On State Policy for Handling Nuclear Waste was passed by the Committee on Ecology and Rational Use of Natural Resources in September of 1992, and the Presidium of the Supreme Soviet approved the bill for consideration at its next session.28

Following the procedure in place at the time for the consideration of draft legislation, the Deputy Prime Minister signed the bill. It was adopted at a first reading by the Supreme Soviet on April 14, 1993.29 A second (and final) reading was rescheduled for the Fall 1993 session.

The Supreme Soviet was abolished by President Yeltsin on September 21, 1993, and On State Policy for Handling Nuclear Waste died along with the Russian parliament. There is some sentiment in the new Duma to reconsider the nuclear waste topic. It is too early (in the middle of 1994) to assess the prospects for passage.

A recounting of a dispute between the Ministry of Atomic Power and members of a former parliament and the environmental community would not have been particularly noteworthy (conflict is after all endemic and expected) were it not for the unexpected appearance of Presidential Decree Number 472.30

The wording of the decree was relatively innocuous. It authorized the Russian Federation to fulfill intergovernmental agreements of the former Soviet Union. One portion of the cited agreements authorized Russia (read the Ministry of Atomic Power) to deliver nuclear fuel (read sell) to countries in the former Soviet sphere of influence.

A portion of the cited agreements authorized Russia (read the Ministry of Atomic Power and the management of Chelyabinsk 65) to accept spent fuel from nuclear power stations abroad for reprocessing (for which the Ministry of Atomic Power would presumably be paid in hard currency).

The decree directed that vitrified (glassified) waste from reprocessing spent fuel should preferably be returned to the country of the nuclear fuel’s origin. While this portion of the decree appears to mitigate negative long-term environmental consequences for Chelyabinsk; in reality, as issued the directive would have little practical effect in safeguarding the environment. Most high-level liquid nuclear waste from reprocessing would remain in the

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30 Decree of the President of the Russian Federation, Number 472, Moscow, April 21, 1993.
Chelyabinsk 65 area, and it is impractical to transport large quantities of high-level solid waste, even in vitrified form. The decree allowed Prime Minister Chernomyrdin to sign a protocol with Hungary which envisaged that high level waste would remain on Russian territory.

The most significant portion of the Executive Decree from April of 1993 called for an expansion of reprocessing activities. This was in direct contrast with (and contradiction of) the intent of Article 18 of the draft Nuclear Waste Law which called for limiting and phasing out reprocessing and achieving the "lowest possible generation of radioactive waste." 31

Already in effect at the time of President Decree No. 472 was the 1992 Russian Law on Environmental Protection. This law had been passed by the Supreme Soviet on December 19, 1991, and signed by President Yeltsin in February of 1992. 32 Subsequent environmental acts, including those on nuclear waste, are to be consistent with the principles and framework of this fundamental law. 33 A literal interpretation of the Law on Environmental Protection is that while it forbids storage and burial of foreign nuclear waste, reprocessing of it in Russia is not expressly prohibited.

The public environmental community did not have advance word of the development of Presidential Decree No. 472. There are arguably adverse environmental consequences which will result from Decree No. 472, and it certainly appears to undercut the intent of both the draft Nuclear Waste Law and the enacted 1992 Law on Environmental Protection. The policy of the government with respect to nuclear waste and reprocessing is widely perceived as anti-environmental.

Another example of the perceived anti-environmental bias of the government is a decree released on December 24, 1992 entitled "Questions of Nuclear Stations Construction in the Russian Federation." This decree was prepared by the Ministry of Economy and the Ministry of Atomic Power. It authorized the start of construction for some 30 new nuclear power plants without the completion of the prior environmental review stipulated in the 1992 Law on Environmental Protection. And the Ministry of Ecology had signed off on the decree!

In 1993, President Yeltsin’s Adviser on the Environment and Public Health at the time, Alexei Yablokov, noted a number of gross omissions in the activities of the Ministry of Ecology: 34

31 Article 18, On State Policy for Handling Nuclear Waste, the Supreme Soviet.
1. The Ministry has been transformed into a bureaucratic monster with an excessive staff for what it actually does. In Moscow alone, there are 630 employees;
2. It has failed to organize an ecology-resources bloc in the Government. Through this bloc, the Ministry of Ecology could influence the ministries which are linked to the exploitation of natural resources. Ecologization of governmental activity will not be successful until the parliament can strongly influence activities of the ministries;
3. Financial support for the nature protection system has declined. Although the legislature demands a separate section on "nature protection" in the state budget drafted by the government, it was absent in 1993, and will likely be absent in 1994. At the same time, Goskompriroda has established pollution penalties for 1993 which are at a much lower level (in comparable prices) than was the situation in 1991.
4. It is a blight on the Ministry of Ecology that the 1992 Law on Environmental Protection remains only in declaratory form. The regulations necessary to implement the law successfully have yet to be promulgated. This has been especially damaging in four regulatory areas: circumstances where ecological expertise is required, statutes which set forth areas for environmental control and supervision, approaches to using the economy to further environmental protection, and characteristics for identifying ecological disaster zones.
5. The ecological expertise of the State has been discredited. Important governmental decisions are made without preliminary environmental review and commentary. Perhaps worse, policy formulation is proceeding without entertaining environmental considerations.

Yablokov's assessments are harsh. There has been some progress by the Ministry of Ecology. For example, Russian state environmental experts examined over 55,000 projects in 1992: nearly 20 percent were rejected, about 40 percent were returned for alteration and further examination by experts, and 40 percent were adopted with commentary. Nevertheless, Yablokov, referring to the previous Parliament disbanded in October of 1993, states: "The Ministry of Ecology could not attain the ecologization of the government's activity."35

Yablokov’s view is clear: “The Ministry of Ecology has not been able to influence the policy of the Russian government toward a more ecological orientation.” 36

Relevant to government policy toward Chelyabinsk, Yablokov cited two examples from reports of the former Parliament’s Committee on Ecology and the Rational Use of Natural Resources. The first example is that the government spent funds that had been earmarked for the rehabilitation of the region contaminated by the Kyshtym 57 nuclear waste explosion for other purposes. The second example is that the government has elected to delay the whole program for rehabilitating the parts of the South Ural region adversely affected by nuclear development.

Yablokov quoted the Committee on Ecology and Rational Use of Natural Resources as concluding: “The government of the Russian Federation does not give sufficient attention to the solution of Russia’s ecological problems, and does not provide for the protection of environment and health during the transition from the current economic situation to a market economy.” 37

Minister of Ecology, Danilov-Danilyan, was interviewed on television in Chelyabinsk, and addressed as part of that interview the problem of disposal of high-level radioactive waste. 38 In the beginning of the interview he expressed concern about the possibility of burying nuclear waste in containers in deep geological repositories (most likely closed mines).

In another part of the interview he talked about promises which the U.S. Congress had made to help with developing storage facilities for plutonium and highly enriched uranium from dismantled nuclear warheads:

“During recent negotiations with representatives of American environmental organizations we discussed possibilities for the construction of model controlled storehouses. One would be built at the beginning, then several more. Now in the American Congress there are debates about sending big sums of money for helping Russia solve these problems. Previously, the Congress promised several hundred million dollars in the forthcoming fiscal year, with an increase of 50 percent in the following year. If this program will be successful, it will mean great progress in making decisions about the ecological problems of the Chelyabinsk region.” 39

There are two issues here for the Chelyabinsk environmental movement. First, there has not been any significant aid forthcoming from the United States for nuclear waste storage from

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36 Ibid.
37 Ibid.
39 Ibid.
reprocessing. Second, the United States has not solved its own problem of nuclear waste storage from nuclear power plants. If the potential aid from America he was referring to was for the storage of nuclear materials from dismantled nuclear weapons, that funding (also not yet forthcoming in substantial amounts) was intended for another region (Tomsk).

The response of the Ministry of Atomic Power to the Chelyabinsk region has been to talk about the need to establish public trust and to create an atmosphere of openness, to indicate the need to demonstrate the safe operation of nuclear power stations, and to plan to install modern equipment. The Ministry has also urged an energy policy for Russia which will increase from 11% to 22% the reliance on nuclear power for electric energy generation. This increase would include finishing construction of the Southern Urals Nuclear Power Station in the Chelyabinsk region.

It is clear that there are different factions within the Russian government that have fundamentally contrasting positions on nuclear safety and energy policy. The economy has prevented significant action in any direction. Governmental inaction simply defers addressing critical problems of nuclear safety and getting closer to a solution of the problem of nuclear waste disposal.

The Response of Local Government to Chelyabinsk

The response by local government to the nuclear environmental problems present in the Chelyabinsk region has been curiously muted. The debate over the construction of the Southern Urals Nuclear Power Station is illustrative. Construction of the South Urals Nuclear Power Station began in 1984. It was intended to consist of three liquid metal fast breeder reactors. This is a controversial technology which uses plutonium as a primary fuel.

In the political climate in Chelyabinsk of 1989, there was intense local discussion about continuing construction. This discussion was occurring three years after Chernobyl, and immediately following the government's first release of information about the Kyshtym disaster of 1957. 140,000 individuals signed petitions calling for a halt to construction. At the time construction was halted, the Ministry had completed work on the utility connections and the basic structures for the administration buildings. Foundations had been poured at two of the reactor sites, and the first support girders raised.

In June of 1989, Boris N. Nikipelov, then First Deputy Minister of Medium Machine Building (now the Ministry of Atomic Power) held a news conference where he stated that the choice of the reactor site had been made specifically to enhance the environment. The circumstance behind this argument is to be found in the areas already contaminated by plutonium production at Chelyabinsk 65. Water contaminated by radionuclides is contained behind a series of ponds below the production reactors. The ponds were formed by a series of
earthen dams. Runoff from melting snow has filled the ponds nearly to overflowing. The environmental argument to continue construction which was offered by the Ministry was that, on an urgent basis, a means needed to be found to evaporate water from the ponds to prevent overflowing the dams (sending some radionuclides downstream), or to prevent a worst case scenario of one or more of the earthen dams bursting and sending a torrent of contaminated water down the Techa River.

Nikipelov indicated that there was a commission of independent experts who were working in the Chelyabinsk region "to analyze thoroughly the design of the power station and the degree of safety of its construction in the area." Needless to say, many members of the environmental community flatly rejected the argument of Minister Nikipelov that construction of a breeder reactor was the proper solution to the pond water environmental problem, and they further doubted that the Ministry would commission a truly independent evaluation of any kind.

In November of 1989, the Chelyabinsk Regional Parliament convened a conference to discuss the Southern Urals Nuclear Power Station. This conference was, in part, a response to the petitions signed by the 140,000 protesters. The work of the conference centered on economic feasibility and ecological safety.

As a consequence of the focus of the subject matter, representatives attended from the USSR Academy of Sciences, the USSR Academy of Medical Sciences, the Ministry of Health, the Ministry of Atomic Power and Industry (as it was then called), Goskompriroda (the State Committee for the Protection of Nature), the USSR Nuclear Society, and the Public Anti-Nuclear Committee. In addition, deputies come from the USSR Supreme Soviet and local Soviets.

Yuri Vershinin served as a spokesman for the findings of the conference. He was identified as a corresponding member of the USSR Academy of Sciences, deputy chairman of the Urals Branch of the Academy, and co-chairman of the USSR Ecological Fund. His summary remarks are stated as follows:

"... there are no alternative sources of energy which could solve all technological, ecological and social problems. Safety of the station must be ensured. The staff who will operate the South Urals AES are among the best qualified in the USSR which is a very substantial guarantee of reliability. Embodied in the idea of the fast

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neutron reactor is a whole range of physical principles which should ensure the station's increased reliability. In particular, should overheating occur which can arise in a breakdown, processes of so-called negative reactivity arise which stabilize the situation at a certain level and do not allow it to develop further. In other reactors and in other projects this principle did not operate.42

By way of background, Cochran and Norris reported that 1.5 billion rubles had been originally authorized for the Southern Urals Nuclear Power Station, and that 270 million had been spent before construction was suspended, including an allocation to the Atommash plant at Volgodonsk for reactor parts.43

Cochran and Norris noted that the Ministry of Atomic Power had argued for continued construction of the power plant on the grounds that "the facility is needed to provide employment for the skilled workers who have lost or will lose their jobs as a result of the shutdown of the (plutonium) production reactors..."44 The investment in rubles already made and the need for employment for staff of the Ministry of Atomic Power are not arguments which carry weight with the environmental community.

Finally, Cochran and Norris cited several general nuclear safety considerations about Russian breeder reactors, since that is what is proposed for the Southern Urals Nuclear Power Station:

The breeder program is plagued by safety concerns - leaks in the sodium-water heat exchangers and the possibility of a runaway chain reaction during an overheating accident - and by problems encountered in the development of "mixed-oxide" (MOX) plutonium fuel. The BN-600 breeder at Beloyarskiy continues to operate at half power, and until recently operated with highly-enriched uranium rather than plutonium. The Soviet breeder is increasingly vulnerable to charges that it is uneconomical. Even its backers cheerfully admit that breeder generated electricity is "2.5 times more expensive" than power from conventional power plants.45

42Ibid.
44Ibid.
The Los Angeles Times reported on May 7, 1994 that a fire broke out at the world's second-largest breeder reactor near Yekaterinburg in the Southern Urals. The cause of the fire at the Beloyarsk reactor was indicated to be leaking liquid sodium which is used as a cooling agent to transfer heat away from the reactor core and use that heat to generate steam to power the turbines which generate electricity. This is the same technology planned for the Southern Urals Nuclear Power Station. Whether mechanical failure or human error was responsible for the leakage is not known. The news story quoted unnamed sources as indicating that Russia’s nuclear plants "face a money shortage that often means they take shortcuts in safety measures, environmental and nuclear officials charge." The story also reported that some 20,000 violations of safety rules had occurred at Russian nuclear power plants in 1993.

But it is clear that irrespective of documented problems and cost factors, the Ministry of Atomic Power considers breeder reactors to be safe, and is unswerving in its support for the Southern Urals Nuclear Power Station. They have also obtained the support of local scientists and government officials in the Chelyabinsk Oblast.

Many members of the environmental community within Chelyabinsk, and scientists out of the area, have expressed grave reservations. But the most likely reason that construction has not resumed is the lack of availability of necessary financial resources. In this regard the status of the Southern Urals Nuclear Power Station is representative of government response to both nuclear and non-nuclear environmental problems in the former Soviet Union and in current day Russia: There is a general anti-environmental tone to government policy and a willingness to subordinate environmental considerations to economic development.

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