Assessments of the radioactive contamination structure or isotope composition of the fallout do not differ much as to scale. According to official data used by several "green" organizations, in mid April 1993 the isotope composition of the fallout in the area adjacent to the plant consisted mostly of heavy metals. These include isotopes with half lives from 35 days to one year, namely: Nb-95, Zr-95, Ru-103, Rh-106 (Illesh and Yakov, 1993). Such a composition at Tomsk-7 is obviously less hazardous when compared to Chernobyl given that at the end of the technological cycle the bulk of Cs-137 and nearly all Sr-90 with half lives of about 30 years had been removed at previous processing stages (Tchernikh, 1993c).

In the week after the explosion Minatom experts also stressed the negligible fallout of 8 mcCi of Pt-239 (a considerably more dangerous isotope having a half life of about 20,000 years) per square kilometer, in particular in Georgievka. However, initially those experts failed to detect plutonium in the environment and sometimes even denied the possibility of such radionucleus being incorporated into emissions (see Shoigu, 1993).

Nevertheless, there are data that still have not been widely disseminated to the public and sometime even are absent in the official reports of the responsible governmental bodies. For example, the specialists from the Russian Research Center, the Kurchatovski Institute, found intensive radiation of Cs-137 isotopes at a distance of two kilometers from the explosion epicenter that proved the presence of cesium in the fallout products (Borisov, Buturlin and Maleev, 1993). Those specialists as well as experts from Rosgeolkom have detected isotopes of Sb-125 having half lives of about three years, while a group from the Tomsk Politechnical University found two hot particles with sizes of 8-10 mcM and radiation exposure doses of 5 and 22 mR/h respectively. The great hazardousness of such particles is well known both to specialists and the public because of the experience of the Chernobyl disaster (Arutiunian et al, 1933; Borisov, Buturlin and Maleev, 1993; Illesh, 1993a).At the same time, bearing in mind that the fallout primarily fell on the sanitary protective zones near the plant site and on uninhabited woodland areas, it may be argued that the exposure of both personnel and local communities was rather limited. Our educated guess is that the maximum number of persons immediately affected by the accident didnot exceed 200, mainly plant personnel and firefighters, dramatically less than the impact of Chernobyl on millions of persons.

That is why, the Tomsk-7 accident's impact on human health and safety, especially in terms of dead bodies, wounded and evacuated persons was not very much (although there is some luck in the situation in that it could have been much worse if personnel had not been absent, if it had not been lunch time and if there had been less favorable winds), Although the ecological consequences were notable they were far less than that of Chernobyl. Also, in contrast to the accident that had taken place more than 40 years before which resulted in two deaths, the explosion of the extractor at the SCC in April 1993 did not lead to immediate human losses or lethal irradiation of anyone.

At the time of the explosion there were about 160 persons inside the plant, including 30 workers from the emergency medical service and firefighting units right after the accident

taking countermeasures in the immediate vicinity of the epicenter. The GKCS reported that the maximum individual radiation dose registered for two persons was seven mSv which is 14 percent of the annual permissible limited for personnel and other category "A" persons during the normal functioning of the plant, and less than 3 percent of that for the one only emergency irradiation. An additional individual got a 6 mSv dose. In total there were four persons close to the ruined apparatus who received more than 5 mSv dose which was considered as the annual permissible irradiation limit for the population (see Table # 2).

Official sources point out that as to individuals outside the plant, only two communities, the village of Georgievka with 30 inhabitants and to a lesser extent the village of Chernaia Rechka, were within the radioactive explosion track. Yet the doses there were substantially lower than permissible limits and thus not hazardous to human health. The total beta-activity of the fall out did not exceed in those localities 50 Ci while the overall dose of internal and external irradiation was less than 5 mSv for forecasted life expectancy. These official figures are supported by assessments made by independent experts from the RNC Kurchatovski Institute. They calculated that with an average radioactive density equal to 2 Ci per square kilometer the additional external radiation dose for the first postaccident year would not be more than .4 mSv, while in the next year it would be about .08 which is well below the 1 mSv considered as a starting threshold for federal nuclear hazard regulation (Borisov, Buturlin and Maleev, 1993; Romanov, 1993).

Although they noted the important fact that the radioactive cloud in general missed both Tomsk-7 and Tomsk and left those localities relatively safe, experts nevertheless pointed out local contamination spots within those areas. For instance, such a spot was detected at one of the bus stops where the radiation exposure dose levels varied from 50 to 90 mcR/h. Also certain dangers may stem from hot particles, two of those as already mentioned being found by Tomsk researchers. Such particles have great energy potential and may be easily transported long distances inflicting damage to human health through inhalation, the eating of meals and the drinking of water (Tarasov, 1993)

Though the Tomsk-7 accident did not create serious problems in terms of somatic and genetic health, the cited data and assessments do not provide 100 percent grounds for being sure that the consequences for human health are negligible This is so if taken into account are the latest results of research on low dose radiological effects and accumulation of additional accident doses, with those produced by natural K-40, U and Th radionuclei as well as radioactive contamination caused by multiyear effects from the SCC nuclear reactors and global radioactive fallout. The results of that research and the anxiety of the communities in the Tomsk region also contributed seriously to the development and the enforcement of a number of decrees and regulations aimed on alleviating the consequences of the accident.

The lessons of the 1979 Three Mile Island accident as well as the 1986 Chernobyl disaster also suggest that everyone should pay special attention to the sociopsychological repercussions of an accident and the psychic or mental health effects on neighboring

Table 2

Irradiation of the SCC personnel resulting from the SCC accident

Dose (mZv)	Number of Persons Irradiated	% of Total
0 - .2	8	26.6
.2 - .3	2	6.7
.3 - .4	2	6.7
.4 - .5	2	6.7
5 - 1.0	1	3.3
1.0 - 2.0	5	16.7
2.0 - 3.0	3	10.0
3.0 - 4.0	3	10.0
4.0 - 6.0	3	10.0
6.0 - 7.0	1	3.3
7.0	2	6.7
TOTAL	30	100

communities. Two days after the explosion, that is on April 8, those living in the village of Naumovka next to Georgievka--especially women known to show fear at lowerlevels (see Drabek, 1986)--in the light of rumors about the issuance of special tablets for Tomsk-7 residents began to express alarm for their own health as well as that of their children. The women complained about tiredness, headaches and general indisposition. No less an alarm level was shown in the neighboring village of Malinovka. There a few local residents confessed to being alarmed and buying all the iodine stock in the nearest village drug stores (Kondratiev, 1993), reflecting the grim days of Chernobyl. Analogous reports were also circulating in Tomsk-7 and discussed in particular by the chief of the sanitary and epidemiological service of the town (Kunitsina, 1993).

At the same time, there were no objective reasons for such responses given the earlier data presented concerning the fallout composition and radiation exposure doses in those villages. However, as is discussed later, lacking true and necessary information, the stress type behavior manifested, is quite logical.

4. Response to and Alleviation of the Accident's Aftermath

The explosion at the plant and the consequent dispersion of a radioactive cloud beyond the SCC boundaries served as a catalyst for the response by the local and regional authorities, nearby communities, and the special services designated for taking countermeasures and the localization and alleviation of emergencies. The timeliness and effectiveness in fulfilling such tasks in Tomsk-7 should be at least noted.

One of the most critical problems was that of alerting or warning relevant services and bodies at the local and regional levels as well as related federal departments, especially the GKCS. The collected data testifies to substantial tardiness in the alerting of the services and chief managers of the plant, the GKCS and Minatom. Information about the explosion at 12:58 p.m. on April 6 was received by the civil defense chief of Tomsk-7 at 1:19; by the SCC chief engineer at 1:20; by the chapter of the town's Department for Security at 1:55, or in other words, 17, 22 and 55 minutes later The warning reached town, regional and federal authorities even later. For instance, the head of the Tomsk regional administration learned of the accident only at 2:30 p. m. while residents of Tomsk-7 and Tomsk heard about it by radio an hour and more than an hour later (Arutiunian et al, 1993; Khronika, 1993; Pereubedit, 1993; Zakharov, 1993).

Soon after the accident the chief of the GKCS passed a special memorandum to the Russian parliament confessing that:

> as it was in Chernobyl the information concerning the accident both at local and federal levels was communicated by Minatom with a considerable delay that could have resulted in tragic consequences (Illesh, 1993c)

And though the actual medical and radioecological effects of the accident, as discussed earlier, were not so serious, the delay varying from 17 minutes to nearly five hours meant that the radioactive cloud moved a distance of from nine to 60 kilometers. This thus substantially increasing the contaminated area and abatement costs. Regular information for people through local and regional mass media was organized only after the evening of April 6.

In part, the reason for such a pronounced tardiness in warning is related to technological factors. The same memorandum stated that there was a:

> lack of an automatic radiation control system and a local emergency wanring sytem within a 30-km zone around the SCC (Illesh, 1993c).

The chief of the Tomsk-7 town council stressed the unsatisfactory functioning of existing communication lines and the lack of reserve ones (Illesh, 1993c; Pereubedit, 1993). The state of the technical capabilities for warning the population is even worse: for example, the residents of the village of Chernaia Rechka could not be warned about the explosion at the SCC because the only telephone apparatus in the local school was not functioning (Malash, 1993).

Nevertheless, the main reasons for a lack of adequate alerting and warning systems in the southern part of the Tomsk region highly saturated with hazardous industries have to do with socioeconomic and organizational, including human factors. The underestimation of the importance and the problems in organizing comprehensive protection for both hazardous nuclear and chemical plant personnel and local communities is the prime reason for the weaknesses of local and regional warning systems, despite the recent grim experience of Chernobyl and recurrent accidents at the SCC per se. To our knowledge, there are still no press services at relevant groups in Tomsk-7 and Tomsk, including the civil defense, security, police, etc. that would provide official information to the mass media and directly to citizens. A key condition for this situation is the socioeconomic crisis impacting both the region and Russia as a whole, in the transition to the so-called "free market." Suffice it to note that the aforementioned telephone in Chernaia Rechka did not function since it had been disconnected by the local service since the school simply had no money to pay for it (Malash, 1933; Zakharov, 1993).

The pronounced delay in warning local people and the federal government was also created by the passiveness and incompetence of local and regional authorities. This can be illustrated by the fact that on the day of the accident, April 6, and well after it had occurred (from 2:00 p.m. up to 7 00 p.m.), while the meeting of the Tomsk regional council was under way, none of the participants were informed. They learned about the explosion only when they went back home and looked at local and federal TV The head of the council who was present at the meeting and who had received confidential information about the accident at 3:00 p.m., from the chief of the regional administration, had made no attempt to share it with his colleagues (Khronika, 1993).

Notable shortcomings in the warning system organization were further aggravated by flaws in the planning, preparedness for and operative response to the accident by the plant, local and regional authorities and responsible services, including the civil defense. In particular, the contingency preparedness planning did not provide for information sources operating directly from an accident site. The only source of information, for example, for the Tomsk-7 and regional civil defense services, was the SCC's operation manager. A procedure for coordinating activities among the SCC, Tomsk-7 and regional authorities was not determined in advance (Pereubedit, 1993). The technical and material support basis for the response and containment of the accident was weak, even given the current situation in Russia. As the chief of the State Fire Service (SFS) said:

> Among all so called closed towns, Tomsk-7 is the least equipped in terms of fire protection. For example, Cheliabinsk-65 (the former Cheliabinsk-40) has developed an excellent fire protection and response system and it is considered criminal to economize on relevant costs (Sememchenko, 1993)

Confirming all these problems, the GKCS commission prescribed that the SCC director, the emergency commissions of Tomsk-7 and Tomsk should:

> revise contingency plans, insert corrections in time schedules and warning procedures in case of an emergency, improve the organization of radiation monitoring and control and the composition of means and forces designated for alleviation and recovery activities (Akt, 1993).

The earlier mentioned shortcomings led to delays and a decrease in the efficiency of the decisions made including tardiness in setting up in the aftermath of the accident the operative regional response headquarters. This was further followed by delay in organizing any reconnaissance, in mobilizing related means and forces, in warning and informing the population through the mass media and in starting a deactivation of the contaminated areas.

However, later, the responsible organizations succeeded in bringing the situation under control with the assistance of groups of high-level experts who came from various regions to provide necessary operative help and consultations. Yet the key role belonged to the specialists from the affected facility, i.e., the SCC. Three stationary air monitoring posts subordinate to the environmental department of the SCC, and located within the control area switched to a 24-hour schedule for taking samples for Ru-103, Rh-106, Zr-95 and Nb-95. The same department of the SCC also took samples of the waste waters of the complex, as well as from the waters of the Samuska and Tom rivers.

Radiation monitoring in potential fallout areas as well as the measurement of absorbed radiation doses was performed by the SCC's task force for external irradiation measuring, the Tomsk-7 sanitary and epidemiological station, medical post 81 of the Federal

Department of Biomedical and Extreme Issues of the Ministry for Health of the Russian Federation, specialists from the Tomsk-7 Committee for Environment and Natural Resources, and emergency commissions of the SCC, Tomsk-7 and Tomsk. In addition, the latter commission had elements from the army, including aviation and signal service units for route reconnaissance and monitoring, as well as the Tomsk Politechnical University that participated in laboratory activities. Material support for all these actions were provided by Helicopter Mi-8 with dosimeters, one radiological and three agrochemical laboratories together with three hydrometeorological posts (Arutiunian et al, 1933; Tchernykh, 1993b).

Among the special forces involved in response activities, the *fire and rescue service* of Tomsk-7, as in Chernobyl, demonstrated high preparedness for and response effectiveness in counteracting the accident. The same can also be said of the militia (police) and medical services, although objectively to a lesser degree taking into account their relatively modest response effort stemming from the incomparably minor consequences of the Tomsk-7 explosion. Immediately after the explosion 53 firefighters and nine pieces of special firefighting equipment went to the plant site. A search for hotbeds of fires and radioactive contaminated spots was initiated and in less than ten minutes the fires inside the building and on the roof were put out. The fire and rescue personnel also actively participated in searching for injured persons but there was none. After their effort had finished, the firefighters had to leave their equipment for special antiradiation treatment (Kishkurko, 1993; Semenchenko, 1993).

The main task of the *medical service* was to provide monitoring of the radiation safety for those personnel directly involved in response and alleviating activities. Over April 6-8, a two day period, 65 persons were examined at the SCC medical post, including workers, firefighters, service personnel, and physicians who worked in the affected building and participated in the mentioned activities. No radioactive substances were detected in their bodies but since April 12 additional biophysical investigations have been undertaken. Medical groups also took an active part in preventive and selective screening actions in the communities reported to be within the radioactive fall out areas, but found that no one was affected (Arutiunian et al, 1993).

As to the *federal authorities*, the response of several responsible governmental bodies and services to the accident was timely enough, being initiated almost immediately after getting a warning from the site. In organizational terms, the responsible departments included Minatom, the GKCS, the Ministry for Health, among others as well as various interdepartmental task forces which created commissions for assessing the causes and consequences of the accident and for making decisions on recovery and reconstruction activities

On April 8, the Joint Commission, including representatives from Minatom, the Russian Academy of Sciences, the Ministry of Defense, the Ministry for Health, started its work under the chair of a person from the former department. This commission worked at the SCC for ten days, up to April 17, and three days later, on April 20, issued an official report

to the Russian government. As early as the evening of April 6, a special team headed by the deputy chief of this committee was established and on the next day left Moscow for Tomsk-7. It stayed there until April 13 and together with experts from the other responsible organizations performed radiation reconnaissance at the accident site and assessed the aftermath. The Gosatomnadzor received a directive from the Russian government to perform an independent investigation on what had happened.

The Ministry for Foreign Affairs and Minatom sent a joint invitation to the IAEA to visit the site of the accident. The commission headed by the deputy direction of the nuclear safety department of the IAEA and including representatives from the United National Scientific Committee for Effects of Atomic Radiation and the secretary of the National Radiological Protection Council of Great Britain, visited Tomsk-7 on April 15-16 and examined the site and adjacent territory. It assessed the radioecologial situation both at the plant site and the village of Georgievka and inspected the radiological protection laboratory of the SCC. The preliminary results of that work were the comments of the Commission chairman that stressed in particular the inadequacy of technical and material support and the outdated and old equipment, and that there would be a special official report by the IAEA on the accident.

In legal and organizational terms the response of the federal authorities to the Tomsk-7 accident involved the preparation of three important documents by the President, the Supreme Soviet (parliament) and by the Council of Ministers (government) of the Russian Federation, respectively. On April 9 the President of Russia, pointing out the aftermaths of the accident, issued special Executive Order # 224. This covered the taking of comprehensive measures on establishing governmental as well as nongovernmental control over the safety of civil and military nuclear facilities, as well as accelerating the development and putting into practice a concept for population protection and economic activities in territories that suffer from radioactive contamination.

That Executive Order provided directives to responsible departments, including Minatom, Minpriroda, etc. and to the Tomsk regional administration to promote necessary recovery measures for areas contaminated by the radioactive fallout, to assess losses and to calculate and pay compensation in the framework of established legal procedures. This document also served as a basis for the further enlarging the powers or commissions of the Gosatomnadzor, the main administrative instrument for nuclear facilities control as stated in Executive Order #636 issued in October, 1993 (Rogozhin, 1993b).

In mid-April 1993, the Supreme Soviet represented by its Committee for Environmental and Natural Resources set up a special task force to analyze the causes and aftermath of the Tomsk-7 accident. On 23 July 1993 it passed the Regulation, "About the Measures Eliminating the Consequences of the Accident Occurred at Sibirski Chemical Complex (Tomsk-7) in Tomsk oblast (region) on 6 April 1993".

Later, on 7 October 1993, the Council of Ministers (the Government of Russia) enforced that statement through issuing Executive Order #1770-p which requires the respective

federal and regional administrative bodies to develop more effective measures for liquidating the consequences of the accident including compensations for losses (to the SCC) and medical care support to the SCC personnel and local and regional communities. Moreover, this Executive Order necessitated development of the special program providing ecological safety to the Tomsk region considering the long-term impact of the SCC. Unfortunately, although the respective drafts of the documents had been elaborated the continuing deep socio-political and economic crisis in Russia in the mid 1990s and lacking of funds impinged the process of realization of the program.

The already noted shortcomings and flaws primarily at the local and regional levels in warning, preparedness for and response to the emergency situation, as well as the contradictions and discrepancy in information concerning the degree and scale of the radiation effects could not but affect the response of communities to the accident. The brief television address of the regional emergency commission made to the public on April 6 alarmed many of them. The official data communicated to the newspapers either were delayed or simply were incomplete. This resulted in the emergence and spread of rumors as early as the next morning, thus disturbing seriously a considerable part of the population of the region (Kunitsina, 1993; Vigon, 1993).

The response of communities to the official messages by radio and TV was followed at least by great doubts and very often by complete distrust both as to the data and the interpretation provided by the SCC and local and regional authorities. Unfortunately, until now there has been no public opinion poll made that would present statistical data about the residents of Tomsk-7, Tomsk and the Tomsk region regarding whether the official information was perceived as incomplete or even false. Nevertheless, the analysis of the data in newspapers and polls in related situations, e.g., those connected with the nuclear testing at the Semipalatinsk proving grounds in 1940-1970s and its long term effects on the population of the Altai region bordering the Tomsk region in the southwest, makes probable that such a perception is dominant (Popov, Sazonov and Farberov, 1993; Zakharov, 1993).

This kind of perception is deeply rooted both in the multiyear secrecy covering the very existence of the SCC and the authorities keeping silent about its functioning and effects, and the distrust of people concerning the competence and honesty of federal, regional and local authorities that stemmed from their experience of previous accidents (the "Chernobyl syndrome). It is also connected with the earlier mentioned discrepancy and tardiness of official information, as well as the delayed warning of citizens occasioned by the wish of the authorities to disregard the responsibility for inadequate preparedness and response to what had happened. Notably, a substantial portion of the population feel doubts or distrust not only towards official information from governmental sources, but also to mass media interpretations of the scale and degree of the accident, as well as having enough grounds to believe that newspapers and TV are inclined to overdramatize or distort real events.

Consequently, the residents of the Tomsk region like the majority of Russians prefer to reply upon the opinions and assessments of their friends, relatives, neighbors or simply acquaintances or even fortuitous others. Many people rely upon the mass media in the absence of trustworthy data, on the one hand, and on the other, believe that there is a tendency for the media to sensationalize and therefore likely to misinterpret or misinform about what is going on. For example, on April 6, the Russian radio transmitted the news that the explosion at Tomsk-7 was creating a hazard for the lives of residents in nearby communities. Such a communication easily gave birth to rumors and fear (Kondratiev, 1993)

A group of Americans from an international financial corporation who happened to be assisting colleagues in Tomsk in a privatization effort, having heard the first radio messages, hastily left the city by taxicab. They were soon followed by other foreign businesspersons and specialists. The city authorities prohibited school children from walking or playing sports outdoors and a few schools suspended classes and let the pupils return to their homes. Some families in Tomsk took their children out of the city, and some left by airplane. Many persons remembering Chernobyl started to save vodka and iodine although there was no medical need for such behavior. In some kindergartens and schools in the first two days after the accident, iodine tablets were distributed with the best of intention to the children by personnel. Yet they got a reverse effect in some instances as a few children were poisoned by the iodine.

Despite this and explanations by members of the regional emergency commission in the following several days, the demand for iodine tablets in the region surpassed all reasonable limits. A similar alarm and anxiety, especially in the first days, was also felt by residents of the communities located within the track of the radioactive fallout (Kishkurko, 1993; Kunitsina, 1993, Zakharov, 1993)

As to the recovery and liquidation of the aftermath of the accident, the key role in financing and practical implementation was assigned to the "culprit" of the accident, i.e., the SCC. Because of the measures undertaken as early as June 1993 the radiation exposure doses in the contaminated areas of the Tomsk region were cut by 25-30 percent. Terminating the deactivation of the affected areas and the burial of the affected apparatus has been cited as among the most urgent future countermeasures. After the nonreactive and unexploded part of the radioactive solution containing uranium and plutonium are taken off the apparatus, its residues should be examined and put into a concrete containment (Illesh, 1993b). These and other steps should facilitate a decrease of the radiation exposure dose levels in the affected territories by 2/3rds at the end of 1993, by 78 percent at the end of April 1994, by 88 percent a year later and by more than 93 percent in mid-1996.

The Tomsk region administration estimated that the losses from the accident were more than 200 billion rubles (using June 1993 prices) or about 200 million US dollars. But the chiefs of both the SCC and Minatom argue that this figure is at least an overestimation of the order of one. I agree. Indeed, in Chernobyl, the direct and indirect losses and costs for urgent recovery actions in total were believed to be about ten billions of rubles in 1988

prices or approximately 10,000 billions of rubles in 1993 prices or about ten billion US dollars. The latter figure only exceeds by 50 times the mentioned estimation of the losses in the Tomsk-7 accident, keeping in mind that its medical, ecological and socioeconomic aftermaths are incomparably less than in Chernobyl

Conclusion

Our system analysis of the Tomsk-7 radiation accident shows it to be the most serious incident at any nuclear facilities in the USSR after Chernobyl. It ranks first among the other emergencies that occurred after 1986 that resulted in the spreading of a radioactive cloud outside the industrial site of a plant and its sanitary protective zone. The accident inflicted substantial material and financial damage on the SCC, led to a radioactive contamination of a fraction of the territory in the Tomsk region, and aggravated the sociopsychological tension and alarmed tens of thousands of residents of the region which stemmed mainly from their distrust of information from official sources, primarily the authorities and administrations.

Though the medical, ecological and socioeconomic aftermaths of the Tomsk-7 accident were much more inferior to those in Chernobyl, some important characteristics of this accident make it worthwhile to make a comparison. First of all, both cases have much in common in that deep or external as well as direct or internal causes are involved. The latter embrace a combination of errors in the design of the apparatus and the safety control systems; and human, primarily operator shortcomings stemming from improper training. Similar enough are also aggravating factors (e.g., using combustible materials in the construction of the roof) and helpful circumstances (e.g., meteorological conditions favoring the mostly densely populated areas such as towns and cities) in both accidents.

There are substantial grounds for comparing some of their consequences as well. These include similarities in fallout composition involving some analogous isotopes with long lives, although in different concentrations, and spotty contamination of nearby territories including forests as well as in the most impacted areas. Especially interesting in the aftermath of both accidents is the resemblance in preparedness for, response to and recovery by the plant, local and regional authorities, responsible governmental departments and communities. Both occasions are also characterized by numerous errors and drawbacks in planning and training at the prodrome phase, and by confusion, shortcomings, misunderstandings, and misinterpretation of the actual situation at the initial stages of response and recovery.

In particular, these conditions displayed themselves in a lack of capability for clear-cut coordination of all means and forces that should be involved in effective planning and plan implementation; the lack or unavailability of necessary specialists and equipment within the region for routine operations (e.g., laboratory testing), and as a result, the need to draw upon external experts and services, delays in warning the population and authorities and distortions in the informing of the public about the causes and aftermath of the accident. As a result both the Chernobyl and the Tomsk-7 accidents have also much in common in

terms of effects of a sociopsychological nature including nervousness, alarm and anxiety of people for their children and their own health and safety that stemmed from uncertainty and a distrust of official sources of information.

However, like in Chernobyl the fire, medical and militia services proved their high mobilization and preparedness potential as well as an effectiveness in the operative countermeasures they undertook, despite the backwardness of the material and technical bases in response to and recovery from the Tomsk-7 accident. All of this confirms that the experience of Chernobyl and the other radiation accidents and incidents, including those occurring at the SCC in the 1950-1990s, should be analyzed more thoroughly and comprehensively than they have been and that lessons from them should be practically implemented by all responsible organizations and authorities. In spite of the hard times being presently suffered by Russia there now exist necessary prerequisites and possibilities, in particular in the framework of developing Russian System of Preventing and Eliminating Emergencies (RUSES).