

LEGAL ASPECTS OF RISK ASSESSMENT

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PRACTICE AND PROSPECTS OF PROVING HARM TO HUMAN HEALTH CAUSED BY ATMOSPHERIC AIR POLLUTION AND INDOOR AIR IN PRE-TRIAL AND TRIAL

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Analysis of judicial practice on established cases of injuries caused by the negative impact of atmospheric air and indoor air and compensation of damages for the past 10 years has been made. The most common causes of complaints of citizens to the court with a request for compensation for damage to health due to the negative impact of air pollution are revealed. The most common causes are: the presence of odors in the implementation of the production activities of enterprises and organizations; violation of hygienic standards in residential areas; location of residential buildings within the boundaries of the sanitary protection zone; mismatch of construction, decoration materials and furniture requirements of the legislation; implementation of industrial activity in a residential area in violation of the law; and the deterioration of human health caused by the described violations. It has been shown that more than half of the requests for compensation for harm caused by the air pollution are not to be fulfilled. The compensation of damage is denied due to lack of evidence of non-compliance of air quality to hygienic requirements, the causal link between the activities of the entity and violation of the right to a healthy environment, and / or failure to prove the fact of harm to public health or the threat of such damage.

Key words: atmospheric air, indoor air, risk factors, injury, judicial practice, legislation of the Russian Federation, illegal actions, causation, compensation for harm.

The RF Constitution (Article 42) secures the right to favorable environment, accurate information about the environmental situation, and compensation in the event of health harm associated with violation of the environmental law. Execution of the constitutional right to compensation for the health damage caused by environmental pollution is reflected in the RF Civil Code (Article 1064), Federal Law of 10.01.2002 No 7-FZ “On Environmental Protection” (Article 79); Federal Law of 30.03.1999 No 52-FZ “About Sanitary and Epidemiological Well-Being of the Population”.

The Federal law of 04.05.1999 No 96-FZ “On Air Quality Protection” establishes that citizens and community organizations have a right to file a lawsuit to seek compensation for the health damage caused by air pollution (Article 29).

The Federal law of 07.02.1992 No 2300-1 “On Consumer Rights Protection” secures the right of

consumers to compensation for the health damage resulting from poor quality of goods, works, or services (Article 7).

General provisions on the compensation of health damage are provided by the RF Civil Code (Chapter 59). The grounds of liability for the health damage associated with violation of the sanitary and epidemiological law or consumer rights include:

- Health damage caused by environmental pollution;
- A causal relationship between an action (inaction) and health damage;
- Wrongfulness of an action (inaction) resulting in health damage;
- Guilt for health damage.

Every year Rospotrebnadzor agencies and organizations countrywide register about 300-400 cases of health damage caused by environmental violations. According to 2013-2014 RF state reports

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on environmental protection [3, 4], over 50 million people in Russia reside in cities with a high and extremely high levels of air pollution where not only one-time, but also average concentrations per annum of one or several substances exceed the maximum allowable levels. As a rule, high pollution is registered in regards to the following substances which are proved to cause negative health effects: nitrogen dioxide, pylyam, formaldehyde, sulfur dioxide, phenol, etc. [6, 7, 8, 9, 10].

The results of health risk assessments show that the probable number of additional cases of death due to diseases of the respiratory system, circulatory system, neoplasms associated with chemical air pollution (particulate matter, nitrogen oxides, benzo(a)pyrene, aromatic hydrocarbons, fluorine and its compounds, phenol, formaldehyde, heavy metals) totaled more than 11 200 cases in 2014; and the number of additional cases of diseases of the respiratory system, eyes, endocrine system, blood forming organs and certain disorders involving the immune mechanism, neoplasms, certain conditions originating in the perinatal period has exceeded 3.4 million. [5].

Even if risk assessment gives inflated estimates, risk occurrence still takes place. Finding the cases of health damage due to violations of the sanitary law is one of the tasks of the Federal Service for Consumer Rights Protection and Public Well-Being. Most commonly (except for emergencies and accidents), registration of the cases of health damage is led by residents or community interest groups. Results from an exploratory study show that the most common personal injury claims resulting from environmental health issues or hazards include the following:

- Odors from the production operations of enterprises and organizations,
- Exceeded hygienic standards in residential areas,
- Residential buildings are located within a sanitary protection zone;
- Building and finishing materials, furniture requirements do not meet the legislative requirements;
- Production operations are carried out in a residential building, legislative requirements are violated;
- Health effects caused by the above.

At the same time, analysis of the court rulings on determination of the cases of health damage caused by outdoor and indoor air pollution in recent years has shown that more than half of the claims for pollution-related compensation are not satisfied. The

claims are denied due to the lack of evidence of the causal relationship between industrial operations and the violation of the right to a favorable environment, and/or failure of evidence of health damage or risk. For example, in case 33-430/2015¹, reviewed by the Court Collegium for Civil Cases in the Kabardino-Balkar Republic it was determined that in 2012-2014, the Center for Hygiene and Epidemiology of the Kabardino-Balkar Republic that collected a series of atmospheric air samples in Nalchik revealed exceeding concentrations of hydrogen sulfide and ammonia; Gidrometallurg and its management were pronounced guilty; however, no evidence provided by the controlling authorities, even the Prosecutor's Office, on air pollution, was accepted by court because the connection between the level of air pollution and the company operations was announced unproved.

The Court Collegium for Civil Cases of Perm Regional Court on March 5, 2014 in the case No 33-1680/2014² dismissed a group damage claim related to the operations of a gas station located 60 m away from a residential area for the reason of lack of evidence of health damage.

Citizen Sh. was dismissed a health damage claim connected to the breeding complex with a storage tank located on the adjacent land plot. The decision of Krapivino Regional Court, Kemerovo Region of May 28, 2014 in the case No 2-186/14³ states that "... unpleasant odor felt by the claimer cannot be considered moral or physical suffering..."

At the same time, legal claims to cease the production operations were satisfied. For example, by decision of Kaluga Regional Court in the case No 2-495/2014⁴, citizen Sh.V.G. was prohibited to carry out on the land plot any activities related to the storage or technical maintenance of transportation vehicles because such activities can impact the environment or create health hazards. At the same time, plaintiff D.Z.P. was dismissed a legal claim against Sh.V.G. for health damage: expenditures for the purchase of drugs and recovery of non-pecuniary damage. The Court referred to the fact that the testimony of witnesses and the plaintiff presented a

¹ <https://rospravosudie.com/court-verxovnyj-sud-kabardino-balkarskoj-respubliki-kabardino-balkarskaya-respublika-s/act-488599870/>

² <http://domovodstvo.ru/fas3/C3D7DA7EAAEAA11644257CE20083C3EF.ht>

³ <https://rospravosudie.com/court-krapivinskij-rajonnyj-sud-kemerovskaya-oblast-s/act-451979298/>

⁴ <https://rospravosudie.com/court-serpuxovskij-gorodskoj-sud-moskovskaya-oblast-s/act-471725666/>

certificate cannot be used as proof that it was the defendant's activities that harmed the plaintiff's health.

In some cases, the judgment was made in favor of the plaintiffs, but the plaintiffs were denied compensation for moral damage.

For instance, on February 4, 2014¹, Nytva Regional Court of Perm Krai examined a claim for the purchase and sale of land with a residential home. In the contract, the defendant concealed from the plaintiff the fact that the house was built of railway sleepers, which were waste, which misled the plaintiffs regarding the quality and safety of the home sold. The findings by the Perm Krai Center of Hygiene and Epidemiology revealed exceeding concentrations of hazardous substances indoors – a residential building, a living-room: the content of "hydroxybenzene" exceeds MPC by 2.9 times, "formaldehyde" content of the substance exceeds the standard value by 1.8 times. However, the Court saw no reason to apply the provisions of Art. 150 1100 of the Civil Code, since the plaintiff had not presented evidence that the defendant's actions harmed his life or health.

On June 26, 2014, Ob Municipal Court of Novosibirsk region decided to grant the plaintiff's claims – to terminate the contract of social tenancy. By the resolution of Ob Administration, the plaintiff's family was granted a well-appointed living space (flat) on the basis of a contract of social tenancy. The living space provided by the defendant did not correspond to construction, sanitary and SNIP technical standards in terms of consumer properties, which was confirmed during an inspection conducted by Ob City Prosecutor's Office. Novosibirsk Office of the Federal Service for Supervision over Consumer Rights Protection and Human Well-Being revealed adverse factors and unfavorable living conditions in the building, namely the concentration of pollutants in the air of the living-room exceeded the maximum permissible concentration by 2.9 times. The Court concluded: within 4 months, the City of Novosibirsk, Ob region was compelled to provide the plaintiff with a well-appointed living space based on the contract of social tenancy, with a total area of not less than 30 square meters, that meets the established requirements, and is located within the boundaries of Ob, Novosibirsk region.

On October 24, 2014, Glazov Regional Court of the Udmurt Republic reviewed the claims of citizen

K.M.E. to the entrepreneur Z.R.V. regarding a store that sells bicycles, mopeds, scooters, motorcycles, four-wheelers, and agricultural equipment (walk-behind tractors, saws, etc.) located on the first floor of a residential building, underneath the plaintiff's flat.

The above items are equipped with new rubber tires; at warm temperatures, they produce suffocating fumes. Intense odor of the vehicle tires can be smelled inside the store as well as in the flats located above the store. As a result, the plaintiff is experiencing headaches, nausea, pains in the liver, depressed spirits, and troubles with sleep. An inspection by Glazov Interregional Prosecutor's Office and Rospotrebnadzor showed that the content of phenol and formaldehyde vapors in the air of the store and the living room in the above flat exceed the maximum permissible concentration: the concentration of phenol and formaldehyde in the tested the air in the living-room of the flat above exceeded MPC by up to 2 times; in the air of the store, the concentration of phenol exceeded MPC by up to 2 times; the concentration of formaldehyde conforms with the standard requirements. Glazov Office of Rospotrebnadzor concluded that siting of the store in a residential building violates the law, therefore, the storage and sale of hazardous goods is subject to termination as illegal. The claim for health damage compensation was upheld by the court due to the absence of the plaintiff.

However, the lack of evidence of nonconformity with the hygiene requirements, of the causal relationship between the potential source of air pollution and nonconformity of the air quality with the requirements of the law, of the causal relationship between poor health and the source of damage are the basis for rejection of the plaintiff's health damage claims.

On March 25, 2014, the Justice of the Peace of Glazov Regional Court, the Udmurt Republic, concluded to terminate the case of refusal to perform the contract due to a material breach of its terms by the contractor, and deny the claim for moral damage compensation. The plaintiff and the defendant concluded a consumer work agreement, by which the contractor assumed an obligation to make repairs. Meanwhile, during the warranty period, the plaintiff discovered odors in the flat. An air quality inspection conducted by the Udmurt Republic Center for Hygiene and Epidemiology found exceeding MPC content of phenol and formaldehyde. The court dismissed the plaintiff's claims, since the plaintiff had not presented evidence that the presence of the claimant pollutants (phenol and formaldehyde) in the air of the flat in concentrations exceeding the

¹ Дело № 2-20/2014. Решение № 2-961/2013 М-905/2013 2-20/2014(2-961/2013;)-М-905/2013 2-20/2014 от 4 февраля 2014 г. <http://sudact.ru/regular/doc/tjWYVbSw6cgO/>

established norm was a consequence of the performance of the contractor works with the use of poor quality materials.

On October 1, 2014, Levoberezhniy District Court of Lipetsk dismissed the claim of citizen P.N.D. to citizen I.M.G. to oblige the defendant to take measures to eliminate the threat to life and health of the plaintiff. The defendant rented out her apartment, and the tenants filled it with strong persistent smells (including the smell of incense). The smells penetrated the plaintiff's apartment, living above, and caused deterioration in the plaintiff's well-being and overall health (including headache, asthma, and high blood pressure). However, the plaintiff did not present evidence of any foreign smell, or the products of combustion in the apartment, nor of a threat or actual harm to life and health. A Rospotrebnadzor inspection of the air quality in terms of the content of incense or its products of combustions was not possible because of the lack of determination of the method in the field of accreditation. Thus, even if ill health did take place, the lack of habitat quality parameters significantly reduced the chances to collect the evidence of a causal relationship between the wrongful acts of the defendant and infliction of the bodily harm.

In Russia, there are some examples of positive judgements on health damage claims in favor of the respondent impacted by air pollution. For instance, Segezhsy City Court of the Republic of Karelia examined in open court session a civil case under the claim of "Ariston" Youth and Children Fund in the interests of c. K. to OJSC "Siberian-Urals Aluminum Company" for damages and the recovery of material damage. The court found that the harmful effects of emissions produced by the industrial enterprise included polluting the environment with fluoride. It was determined that the causal relationship between the source of pollution and the level of air pollution with fluorine in Nadvoicy and the incidence of fluorosis in the town is undeniable. The fact of fluorosis was confirmed for the citizen K. as caused by the environmental pollution. The court recovered compensation for treatment costs in favor of the plaintiff.

There are examples of positive decisions regarding health damage compensation, including moral suffering caused by poor indoor air. For instance, decision by the Magistrate of the court district No 2, Engels, Saratov Region, of May 2, 2014, on case No 2-3/2014; decision by the Magistrate of the court district No 3, Leninsky district court, Yekaterinburg, Sverdlovsk Region, of June 9, 2014; determination by the Judicial Board on Civil

Cases of Vladimir Regional Court of August 26, 2014; decision by the Ostankino district court of Moscow on case No2-4937/2014 ~ M-4823/201, determination by the Judicial Board on Civil Cases of Moscow Regional Court of July 16, 2014 on case No 33-15597/2014, decision by Lefortovo district Court of Moscow of December 19, 2014 on case No 2-3708 / 2014 ~ M -2835/201 etc. Compensation for the moral damage in these cases ranged from 2,000 to 10,000 rubles. The plaintiffs had to prove the fact of damage as a result of the installation of stretch ceiling, pasting photo-wallpaper, delivery of furniture. Installation of stretch ceiling, pasting photo-wallpaper, and delivery of furniture in a residential building led to exceeded MPC of hydroxybenzene (phenol), formaldehyde, acetone, ethyl acetate, butyl acetate, toluene, xylene, ethyl alcohol, methyl alcohol, isopropyl alcohol, and styrene by 1.3-113.0 times.

The methods and evidence of harm to public health associated with poor indoor and outdoor air quality have been developing in recent years. An algorithm to apply the medical and biological data in the development of the evidence base has been proposed and tested [2]. Scientific background for the identification and quantification in human biological fluids of chemical impurities that could serve as a marker, an indicator of both short-term and long-term human exposure to hazard has been developing [1]. In parallel, the methods of determining the response markers that can become a significant argument in favor of the fact that contact with the risk factor leads to negative health effects are improving. The practice of carrying out sanitary-epidemiological studies, investigations, examinations, with application of a whole range of new methods such as identification of impurities and methods for evidence of a causal relationship between elements of the system, "the source (cause) pollution - habitat - human health" has been growing.

So, for example, Perm Office of Rospotrebnadzor along with the Prosecutor's Office, environmental authorities, and Kungur government have collected evidence of public health damage caused by air pollution in the area of location of Russkoye Pole enterprise, Kungur. The findings indicate a number of hazardous substances in the emissions and the environment. The same substances were found in the biological fluids of children (that is, a population group which is not exposed to workplace factors or harmful habits). The authorities proved a significant causal relationship between the level of contaminants in the biological fluids, a series of laboratory markers, and the fact of health damage.

Disorders in the somatic health of 12 out of 104 children could not have been caused by any other factors except for continuous negative impact of hazardous chemical impurities. Based on the gathered evidence the authorities were able through a pre-trial process to make the guilty party take measures to improve the environmental situation. However the issues of health damage compensation was not discussed due to the overall passivity of the population and lack of belief that such compensation was possible.

A similar comprehensive study was conducted in the course of a criminal case under Part 1 Art. 238 of the RF Criminal Code¹, instituted in connection with a high level of formaldehyde in the indoor air of block-frame houses that had been built for the purpose of resettlement of Berezniki residents from accident-prone areas of the city. It was found that the average daily concentration of formaldehyde in the indoor air ranged from 4.5 to 35.9 MPC (Mean value was 13.1 MPC), the outdoor level was below the threshold of the determination method (0.001 mg/m³). The blood of 90.9% of adults and children who had lived in the homes under study for 1.5 to 3 years contained industrial chemical contaminants in the concentrations that significantly exceeded the background level and the regional level of the comparison group. At the same time, expert medical and biological studies were not able to conclude that the above factor caused health damage. This allowed to relieve certain social tension that had arisen after the field studies of the indoor air quality. However, further accommodation in the residential buildings under question was seen as a threat to life and health: a risk assessment study showed that continued accommodation in the buildings under set exposure for another 6-8 years (depending on the age group and length of stay) could lead to the fact that the acceptable health risk could become unacceptable resulting in diseases. These data formed the basis for the decision on the resettlement of residents from 180 residential buildings under study.

All the obtained data and results speak in favor of expansion of the practice of gathering evidence on health damage associated with the negative impact of environmental factors. In-depth biomedical and epidemiological studies are often time-consuming and expensive activities in the practice of health

inspection agencies, but in some cases only such studies can help us establish and prove the damage to health of the citizen by providing a scientific background and support to the management decisions - from determining the level of liability to preparing sanitary-epidemiological and health prevention programs.

In order to increase the significance of evidence in pre-trial and trial processes on health damage caused by air pollution, it is necessary to:

- establish in law the procedure on investigation of the cases on health damage associated with violation of the sanitary legislation and poor air quality;

- create a science-based system of criteria for the assessment of the health effects determined by the environment, including air pollution, the presence of pollution levels, evidence of unacceptable health risks;

- expand the analytical and clinical laboratory facilities to identify and quantify hazards and responses to the impact, including development of a system of exposure markers and response markers;

- create a system of registration of pollution-induced health damage cases.

Of course, in each case when determining the level of health damage, it is necessary to consider a whole range of factors that could cause the disorder. At the same time, availability of an evidence-based system of criteria and methods, and critical analysis of the application of this system in practice can protect the public interest and serve as the key to respecting the rights of citizens to a healthy environment and compensation for the health damage caused by the violation of legal requirements.

¹ Criminal Code Art. 238 Part 1 - Production, storage and transportation for the purpose of distribution or sale of goods and products, works or services that do not meet the security requirements of the life or health of consumers.

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