Federal Environmental, Industrial and Nuclear Supervision Service

ANNUAL REPORT
ON ACTIVITIES OF THE FEDERAL ENVIRONMENTAL, INDUSTRIAL AND NUCLEAR SUPERVISION SERVICE IN 2012

Moscow
2013

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1. MAIN AUTHORITIES, FUNCTIONS AND TASKS

The Federal Environmental, Industrial and Nuclear Supervision Service was formed under Decree of the President of the Russian Federation No. 649 of 20.05.04 "Issues of Structure of Federal Executive Authorities" by transforming the Federal Industrial Supervision Service and the Federal Nuclear Supervision Service into the Federal Environmental, Industrial and Nuclear Supervision Service governed by the Government of the Russian Federation.

The Federal Environmental, Industrial and Nuclear Supervision Service (Rostechnadzor) is a federal executive authority which performs the functions of development and implementation of governmental policy and regulatory control in the established sphere of activity, and also in the sphere of technological and nuclear supervision, the functions of control and supervision in the sphere of safe operations connected with the use of mineral wealth, industrial safety, safety in atomic energy utilization (excluding the activities of development, manufacture, testing, operation and utilization of nuclear weapons and military nuclear power installations), safety of electrical and heat installations and networks (except for domestic installations and networks), safety of hydraulic structures (except for navigation hydraulic facilities as well as those hydraulic structures in respect of which the supervisory authority was delegated to the local government), safety of production, storage and use of industrial explosive materials and also special functions in the field of state security in the above area.

Rostechnadzor is:

an authorized body for the state safety regulation in the field of use of atomic energy (the federal state supervision authority in the field of use of atomic energy);

an authorized body in the field of industrial safety (a federal state supervisory body in the field of industrial safety);

a state mining supervision authority;

a federal state energy supervision authority;

a federal state civil construction supervision authority;

a regulatory authority according to the Convention on Nuclear Safety and Joint Convention on Safe Management of Spent Nuclear Fuel and Safe Management of Radioactive Waste, as well as a competent Authority of the Russian Federation according to the Amendment to Convention on Physical Protection of Nuclear Material.

Inasmuch as it concerns the functions in the established sphere of activities, Rostechnadzor exercises the powers of the bodies, which act in the international agreements of the Russian Federation as the bodies taking the necessary measures aimed at fulfillment of the obligations of the Russian Federation ensuing from the above mentioned agreements.

When executing the activities, Rostechnadzor is guided by the Constitution of the Russian Federation, federal constitutional laws, federal laws, acts of the President of the Russian Federation and the Government of the Russian Federation, international agreements of the Russian Federation as well as the Provisions for Rostechnadzor.

Rostechnadzor carries out its activity directly and through its territorial bodies in cooperation with other federal governmental authorities, governmental authorities of the constituent entities of the Russian Federation, local governments, public associations and other organizations.

Rostechnadzor exercises the following authorities in the established sphere of activities:

introduces to the Government of the Russian Federation draft federal laws, regulatory legal acts of the President of the Russian Federation and the Government of the Russian Federation as well as other documents that require decision of the Government of the Russian Federation on the subjects related to the sphere of activity of the Service, and also draft annual plan and prognostic indicators of the Service activity;

by virtue and in pursuance of the Constitution of the Russian Federation, federal constitutional laws, federal laws, acts of the President of the Russian Federation and the Government of the Russian Federation, it adopts independently the following regulatory legal acts in the established sphere of activities:

federal regulations in the field of use of atomic energy in compliance with the legislation of the Russian Federation;

procedure of issuing permits granting the right to work in the field of use of atomic energy to employees of nuclear facilities, in compliance with the positions list approved by the Government of the Russian Federation;

requirements to structure and contents of documents justifying safety assurance of nuclear installations, radiation sources, nuclear materials and radioactive substances storage facilities, radioactive waste storage facilities and/or safety assurance of applied activity in the field of use of atomic energy, as those requirements are needed for licensing of activities in this field; as well as review procedure of the above mentioned documents;

procedure for the operating organization on submission to the authorized state safety regulatory authority for atomic energy use of documents with the results of safety assessment of a nuclear installation, RM and RS storage facility, storage facility, RW storage facility and documents justifying their safe operation, as well as requirements to structure and contents of these documents;

procedure of conducting safety review (safety analysis review) of nuclear facilities and (or) kinds of activities in the field of atomic energy use;

procedure of arrangement of implementation of supervision over the state nuclear material control and accounting system;

requirements for registration of facilities in the state register of hazardous industrial facilities and for maintaining of this register;

procedure for preparation of the declaration on the industrial safety of hazardous industrial facilities as well as the content of information included thereto;

procedure of technical investigation of causes of accidents, incidents and cases of losses of industrial-purpose explosive materials;

procedure of making an industrial safety review and the requirements for execution of the report on this review;

list of officials exercising state supervision over the safety of hydraulic engineering structures (except for navigation hydraulic facilities);

form of the safety declaration for hydraulic engineering structures;

procedure of formation and rules of work of the expert review commissions on the state review of safety declarations for hydraulic engineering structures;

procedure of filing and record keeping while executing the state civil construction supervision; the requirements imposed for the documents included into such files;

form of the competency certificate for a certain type or types of activities affecting safety of capital construction facilities;

codes of rules in compliance with the legislation of the Russian Federation on technical regulation;

methods of development and establishing of the limits of maximum permissible radioactive releases to atmospheric air and the limits of permissible discharges of radioactive substances to water reservoirs;

procedures for the issuing and the form of permits for discharges and releases of radioactive substances;

federal codes and regulations in the field of industrial safety;

procedure of agreement on the fenced-off areas' boundaries for electrical supply network facilities;

specific features of compliance assessment for the products covered by the requirements related to safety assurance in the field of atomic energy use, and also their design practices (including survey), production, construction, installation, pre-commissioning, operation, storage, transportation, disposal, removal and burial;

regulatory legal acts on the other issues in the established sphere of activities except for the issues, legal regulation of which shall be accomplished as per Constitution of the Russian Federation and federal constitutional laws, federal laws, acts of the President of the Russian Federation and the Government of the Russian Federation solely by federal constitutional laws, federal laws, regulatory legal acts of the President of the Russian Federation and the Government of the Russian Federation.

Rostechnadzor performs control and supervision in the following areas:

observance of the regulations in the field of atomic energy use, validity conditions of the permits (licenses) for the right to carry out activities in the field of atomic energy use;

nuclear, radiation, technical and fire safety (at nuclear facilities);

physical protection of nuclear installations, radiation sources, storage facilities for nuclear materials and radioactive substances, systems of unified state control and accounting of nuclear materials, radioactive substances and radioactive waste;

fulfillment of international commitments of the Russian Federation in the field of safety assurance in atomic energy use;

compliance with industrial safety requirements for design, construction, operation, preservation and liquidation of hazardous industrial facilities, for manufacture, assembling, adjustment, maintenance and repairs of the equipment used at hazardous industrial facilities, for transportation of dangerous substances that are used at hazardous industrial facilities;

observance, within its competence, of the safety requirements in electric power engineering;

safe conduct of activities related to the use of mineral wealth;

compliance with fire safety requirements for underground facilities and blasting operations;

observance by owners of hydraulic structures of safety standards and rules for hydraulic engineering structures other than navigation hydraulic facilities or those hydraulic structures in respect of which the supervisory authority was delegated to local governments;

observance, within its competence, of the requirements of the law of the Russian Federation in the field of waste management;

timely return of irradiated fuel assemblies of nuclear reactors and their processing products to the vendor country, with which the Russian Federation has an international contract providing for import to the Russian Federation of irradiated fuel assemblies of nuclear reactors for temporary technological storage and processing on a product return basis (within its competence);

observance, within its competence, of the requirements for energy efficiency during design, construction, reconstruction, general overhaul of buildings, structures and

installations and the requirements for their equipping with devices for accounting of the energy resources consumed;

observance, within its competence, by owners of non-residential buildings, structures and installations of the requirements for energy efficiency imposed on such buildings, structures and installations in the course of their operation; as well as observance of the requirements for equipping them with devices for accounting of the energy resources consumed;

observance by legal entities in whose charter capital the share (interest) of the Russian Federation, municipality makes over 50 percent and/or concerning which the Russian Federation, subject of the Russian Federation, municipality have the right to directly or indirectly be in command of over 50 percent total votes attaching to voting shares (stock), which constitute charter capital of such legal entities, by state and municipal unitary enterprises, state and municipal organizations, state companies, state corporations, as well as by legal entities, whose property or over 50 percent shares or interest in the charter capital belong to state corporations, of the requirement to adopt programs in the field of power saving and improving energy efficiency;

conducting obligatory energy surveillance on the established dates;

observance of the requirements of technical regulations in the established sphere of activity.

Rostechnadzor carries out licensing of the activities in the field of atomic energy use and licensing of other activities within the competence of the Service in accordance with the legislation of the Russian Federation.

Rostechnadzor grants permits for:

the right to conduct activities in the field of use of atomic energy by employees of nuclear facilities;

use of specific types of engineered devices at hazardous industrial facilities;

operation of supervised hydraulic structures;

radioactive releases and discharges to the environment;

use of industrial-purpose explosive materials and operations involving the above mentioned materials;

Rostechnadzor:

approves the standards of maximum permissible radioactive releases to atmospheric air and the standards of permissible discharges of radioactive substances to water reservoirs;

registers hazardous industrial facilities and maintains the state register of such facilities

performs audits (inspections) to make sure that the requirements of the law of the Russian Federation, regulatory legal acts, regulations in the established sphere of activities are followed by legal entities and individuals.

Rostechnadzor approves:

registers of managers and specialists (employees) job positions, which define qualification requirements for the employees to obtain permits for the right to conduct activities in the field of atomic energy use;

lists of radioisotope products whose import and export are not subject to licensing;

operation rules for hydraulic engineering structures;

fenced-off areas' boundaries for the electrical supply network facilities.

Rostechnadzor:

arranges and ensures the functioning of the system of monitoring nuclear facilities in case of accidents;

establishes, develops and supports functioning of the automated information and analytical system which serves, among other things, the purposes of the unified state system of radiation situation monitoring in the territory of the Russian Federation;

directs the activities of the functional subsystems for monitoring of chemically hazardous and highly explosive facilities as well as for nuclear- and radiation hazardous facilities as part of the unified state system for prevention and elimination of emergencies;

issues conclusion on the conformance of constructed, reconstructed, repaired capital construction project to the requirements of process regulations and design documentation;

approves safety declarations of supervised hydraulic engineering structures prepared at the operation, decommissioning stages of a hydraulic engineering structure, and after its reconstruction, overhaul, restoration or preservation;

generalizes practices of administration of the laws of the Russian Federation in the established sphere of activity;

develops, approves and puts into effect safety guides for atomic energy use (to the extent of its competence);

participates in the accreditation activities in the field of atomic energy use.

Resolution of the Government of the Russian Federation No. 333 of 04.05.2008 established the Rostechnadzor's authorities in counteraction against terrorism.

Resolution of the Government of the Russian Federation No. 303 of 16.05.2005 established the functions of Rostechnadzor with regard to assuring biological and chemical safety of the Russian Federation.

Resolution of the Government of the Russian Federation No. 537 of 25.08.2005 established the functions of Rostechnadzor related to the implementation of the Comprehensive Nuclear Test Ban Treaty.

Resolution of the Government of the Russian Federation No. 864 of 19.11.2008 established that Rostechnadzor exercises state control (supervision) over the activity of self-controlling organizations in the field of engineering investigations, architectural and structural design, construction, reconstruction, major overhaul of capital construction facilities, as well as maintaining a register of the above mentioned organizations.

Rostechnadzor:

according to the procedure established by the legislation of the Russian Federation, places orders and makes government contracts as well as other civil agreements for supplies of goods, execution of works, delivery of services to meet the needs of the Service, as well as for research and development works for the state needs in the specified sphere of activities;

functions as the main administrator and recipient of the federal budget assets allocated for maintenance of the Service and implementation of the functions assigned to the Service;

arranges reception of citizens, ensures timely and thorough consideration of verbal and written applications of citizens, relevant decision-making and making replies to the applicants within the dates established by the legislation of the Russian Federation;

ensures (within its competence) protection of information classified as state secret;

arranges professional training for the employees of the Service, their refresher courses, advanced training and on-the-job training;

cooperates according to the established procedure with the public authorities of foreign countries and international organizations in the specified sphere of activities;

exercises other authorities in the specified sphere of activities if such authorities are envisaged by the federal laws, regulatory legal acts of the President of the Russian Federation or the Government of the Russian Federation.

2. ORGANIZATIONAL STRUCTURE OF ROSTECHNADZOR

In 2012 Rostechnadzor has preserved its two-tier system (headquarters - territorial bodies of federal subordination) for management of the activity, which was formed in 2009.

Distribution of authorities and the existing organizational structure of the territorial bodies and the headquarters of Rostechnadzor create the conditions for ensuring of a comprehensive approach during arrangement of supervisory activities, excluding internal duplication of functions, strengthening of monitoring and coordination of activities carried out by territorial departments in the federal districts, and approximation of inspection and supervision, licensing and authorizing activities to the supervised facilities located in the regions.

The organizational structure of Rostechnadzor comprises 15 structural divisions of the headquarters, 6 interregional territorial departments for nuclear and radiation safety supervision and 30 territorial departments for industrial and environmental supervision at interregional and regional levels.

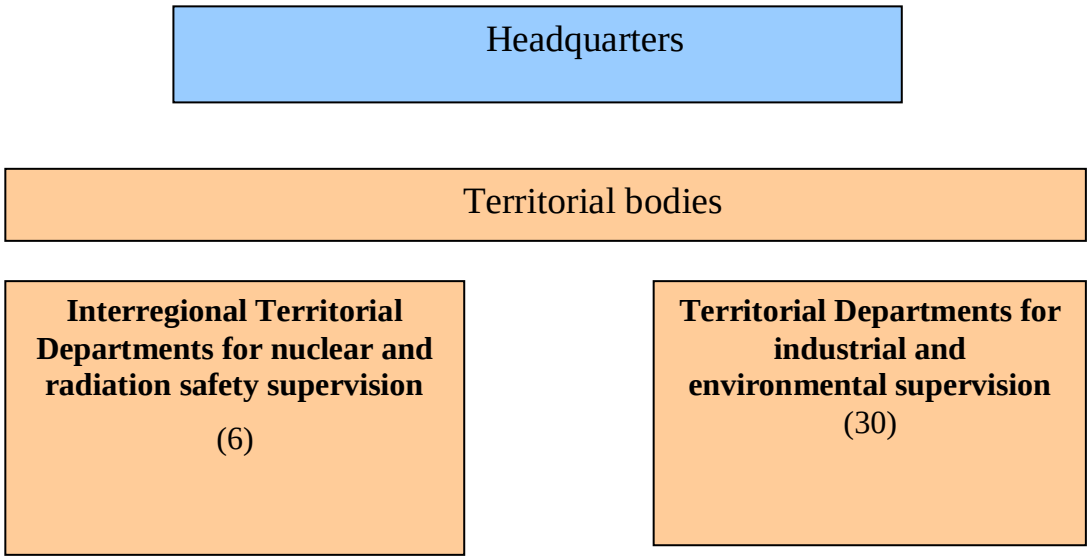


Fig. 1. Organizational structure of Rostechnadzor

In order to provide for the implementation of the authority assigned to Rostechnadzor, the structural units of the headquarters are arranged by disciplines. In 2012, the structure of the headquarters comprised 7 general-purpose structural units (6 departments and an autonomous division), 2 nuclear supervision departments and 6 industrial supervision departments (Fig. 2).

CHAIRMAN
Nikolai Georgievich Kutin

SECRETARY OF STATE - DEPUTY CHAIRMAN
Aleksei Viktorovich Ferapontov

DEPUTIES CHAIRMAN
Valery Sergeevich Bezzubtsev

Boris Adolfovich Krasnykh

Vsevolod Borisovich Kuzmichev

Svetlana Gennadievna Radionova

6 functional departments and an autonomous division	2 nuclear supervision departments	6 industrial supervision departments
Executive Office *Valeriya Viktorovna Vasilina*	**Department for Safety Regulation of Nuclear Power Plants and Nuclear Research Installations** *Mikhail Ivanovich Miroshnichenko*	**Mining Supervision Department** *Alexander Ivanovich Perepelitsyn*
Department for Organizational-Control and Licensing and Permitting Activities *Victoriya Ivanovna Kondratieva*	**Department for safety regulation of nuclear fuel cycle facilities, nuclear power installations of ships and radiation hazardous facilities, supervision over control and accounting of nuclear materials and radioactive substances and their physical protection** *Eugeny Georgievich Kudryavtsev*	**Department for General Industrial Supervision** *Grigory Maksimovich Seleznev*
Financial Department *Lyudmila Vladimirovna Novikova*		**Department for State Construction Supervision** *Alexander Nikolaevich Gorlov*
State Service and Personnel Department *Servey Panteleevich Karpenko*		**Department for State Energy Supervision** *Dmitry Ivanovich Frolov*
Legal Department *Dmitry Alekseevich Yakovlev*		**Department for Supervision of Mining Industry** *Gennady Pavlovich Ermak*
International Cooperation and Protocol Department *Irina Victorovna Sokolova*		**Department for Supervision of Oil and Gas Industries** *Svetlana Anatolievna Zhulina*
Division for Protection of State Secret, Organization of Mobilization Preparedness Activities and Mobilization *Yury Georgievich Ageev*		

Fig. 2 Organizational structure of the Rostechnadzor Headquarters

According to Resolution of the Government of the Russian Federation No.39 of January 28, 2011 "On the ultimate staff number and salary fund of federal state civil officers and employees of the headquarters and territorial bodies of federal executive authorities", the ultimate number of the employees of the Rostechnadzor's headquarters since February 2012 made up 733 persons and that of the Rostechnadzor's territorial bodies - 9,015 persons.

The staff number of the employees of the territorial bodies carrying out inspecting and supervisory functions as of end 2012 made up 6,880 persons (76.3% of the total staff number), of which:

- the number of employees carrying out industrial supervision functions made up 3,294 persons, whereas the actual number made up 2,993 persons (90.9% staffing);

- the number of employees carrying out state energy supervision functions made up 2,557 persons, whereas the actual number made up 2,347 persons (91.8 % staffing);

- the number of employees carrying out state civil construction supervision functions made up 369 persons, whereas the actual number made up 314 persons (85.1 % staffing);

- the number of employees carrying out nuclear supervision functions made up 660 persons, whereas the actual number made up 552 persons (83.6 % staffing).

As of end 2012, staffing of the Rostechnadzor's territorial bodies of industrial supervision made up on an average of 90.4 %. Staffing of the interregional territorial departments for nuclear and radiation safety supervision with the civil officers made up 83.4%.

Territorial Bodies of Rostechnadzor

Territorial departments exercising authorities in the field of inspection and supervision of industrial safety assurance:

1. Interregional Industrial Department of Rostechnadzor, Moscow (Moscow - city of federal importance; Chukotka Autonomous District, Norilsk and surrounding territories; Kabarda-Balkar Republic; Karachai-Cherkes Republic; Republic of Dagestan; Republic of Ingushetiya; Republic of North Osetiya - Alania; Chechen Republic; Stavropol Territory).

2. Rostechnadzor's headquarters, Moscow (Moscow, Smolensk, Tver and Kaliningrad regions).

3. Upper Volga Department of Rostechnadzor, Yaroslavl (Vladimir, Ivanovo, Kostroma and Yaroslavl regions).

4. Upper Don Department of Rostechnadzor, Voronezh (Belgorod, Voronezh, Kursk, Lipetsk and Tambov regions).

5. Oka Department of Rostechnadzor, Tula (Bryansk, Kaluga, Orel, Ryazan and Tula regions).

6. North-Western Department of Rostechnadzor, Saint Petersburg (St. Petersburg - city of federal importance, Leningrad, Novgorod and Pskov regions).

7. Belomorsk Department of Rostechnadzor, Petrozavodsk (Republic of Karelia, Murmansk region).

8. Pechora Department of Rostechnadzor, Syktyvkar (Republic of Komi, Nenets Autonomous District).

9. Northern Department of Rostechnadzor, Vologda (Arkhangelsk and Vologda regions).

10. Lower Volga Department of Rostechnadzor, Volgograd (Republic of Kalmykia, Astrakhan and Volgograd regions).

11. Lower Don Department of Rostechnadzor, Rostov-on-Don (Rostov region).

12. North Caucasus Department of Rostechnadzor, Krasnodar (Krasnodar Territory, Republic of Adygeya),

13. Volga-Oka Department of Rostechnadzor, Nizhny Novgorod (Nizhny Novgorod Region, Republic of Mordovia).

14. Western-Ural Department of Rostechnadzor, Perm (Perm Territory, Republic of Udmurtia, Kirov region).

15. Middle Volga Department of Rostechnadzor, Saratov (Saratov and Penza regions).

16. Middle Volga River Basin (Middle-Povolzhiye) Department of Rostechnadzor, Samara (Samara and Ulyanovsk regions).

17. Volga Area Department of Rostechnadzor, Kazan (Republic of Tatarstan (Tatarstan), Republic of Mari El, Chuvash Republic - Chuvashia).

18. Ural Area Department of Rostechnadzor, Ufa (Republic of Bashkortostan, Orenburg region).

19. North-Ural Department of Rostechnadzor, Tyumen (Tyumen region, Khanty-Mansi Autonomous Area - Yugra, Yamalo-Nenets Autonomous District).

20. Urals Department of Rostechnadzor, Yekaterinburg (Kurgan, Sverdlovsk and Chelyabinsk regions).

21. North-Siberian Department of Rostechnadzor, Novosibirsk (Novosibirsk, Omsk and Tomsk regions).

22. Yenisei Department of Rostechnadzor, Krasnoyarsk (Krasnoyarsk Territory (without Norilsk and its surrounding territories), Republic of Tyva, Republic of Khakasia).

23. Baikal Area Department of Rostechnadzor, Irkutsk (Irkutsk region).

24. Trans-Baikal Department of Rostechnadzor, Chita (Trans-Baikal Territory, Republic of Buryatia),

25. South-Siberian Department of Rostechnadzor, Kemerovo (Kemerovo region, Altai Territory, Republic of Altai).

26. Far-Eastern Department of Rostechnadzor, Khabarovsk (Primorye Territory, Khabarovsk Territory, Amur region, Jewish Autonomous Region).

27. Kamchatka Department of Rostechnadzor, Petropavlovsk-Kamchatsky (Kamchatka Territory, North Kuril Islands (Paramushir, Shumshu) of the Sakhalin region).

28. Lena Department of Rostechnadzor, Yakutsk (Republic of Sakha (Yakutia)).

29. Sakhalin Department of Rostechnadzor, Yuzhno-Sakhalinsk (Sakhalin region).

30. North-Eastern Department of Rostechnadzor, Magadan (Magadan region).

Interregional Territorial Department for nuclear and radiation safety supervision

1. Central Interregional Territorial Department for nuclear and radiation safety supervision of Rostechnadzor, Moscow.

2. North-European Interregional Territorial Department for nuclear and radiation safety supervision of Rostechnadzor, Saint Petersburg.

3. Don Interregional Territorial Department for nuclear and radiation safety supervision of Rostechnadzor, Novovoronezh, Voronezh region.

4. Volga Interregional Territorial Department for nuclear and radiation safety supervision of Rostechnadzor, Balakovo, Saratov region.

5. Urals Interregional Territorial Department for nuclear and radiation safety supervision of Rostechnadzor, Yekaterinburg.

6. Siberia and Far East Interregional Territorial Department of Rostechnadzor for nuclear and radiation safety supervision of Rostechnadzor, Novosibirsk (Siberia and Far East Interregional federal districts).

Organizations Subordinated to Rostechnadzor

Federal State Unitary Enterprises.

1. FSUE VO "Safety", Moscow.

Federal budgetary enterprises (FBE)

1. Scientific and Engineering Center for Nuclear and Radiation Safety, Moscow.

2. Scientific Engineering Center "Energobezopasnost (Energy Safety)", Moscow

3. Center for laboratory analysis and technical measurements of the Central Federal District, Moscow

4. Center for laboratory analysis and technical measurements of the Volga Federal District, Nizhny Novgorod.

5. Federal State Budgetary Educational Enterprise "Educational and Methodological Cabinet", Moscow.

3. CHANGES IN THE REGULATORY AND LEGAL FRAMEWORK OF ROSTECHNADZOR'S ACTIVITIES WITHIN 2012

Provisions on various types of supervision were developed and approved, and namely:

Provisions on the federal state supervision in the field of industrial safety;

Provisions on the federal state supervision in the field of safety of hydraulic engineering structures;

Provisions on the federal state supervision in the field of atomic energy use.

One of the most significant events in 2012 related to Rostechnadzor's implementation of its functions consisted in introduction of the regime of continuous state inspection (supervision) providing for the possibility of continuous staying of the authorized officials exercising state inspection (supervision) at the extra-hazardous facilities and performance of measures by the mentioned officials in order to monitor the safety state and implement the measures aimed at ensuring safety at these facilities.

The following provisions regulating execution of the continuous state inspection (supervision) regime were developed at approved in this regard:

the "Provisions for the continuous state supervision regime at hazardous nuclear facilities and hydraulic engineering structures";

the "Provisions for the continuous state supervision regime at nuclear facilities".

The list of nuclear facilities subject to continuous state supervision regime was approved.

The provisions for licensing of specific activity types were developed and approved, and namely:

Provisions on licensing of industrial safety review activities;

Provisions on licensing of survey activities' execution;

Provisions on licensing of operation of explosion and fire hazardous industrial facilities;

Provisions on licensing of operation of chemically hazardous industrial facilities.

Besides, in 2012 Rostechnadzor took part in development of the technical regulations of the Customs Union "On Safety of Equipment Operating under Excess Pressure", as well as in review of modifications to 4 technical regulations of the Customs

Union ("On Safety of Low-Voltage Equipment", "On Safety of Machinery and Equipment", "On Safety of Equipment Intended for Use in Explosive Atmospheres", "On Safety of Devices Operating on Gaseous Fuel").

Altogether, 6 draft federal laws, and 31 draft Decrees of the Government of the Russian Federation were developed by Rostechnadzor as part of its law-making activities in 2012. 54 regulatory enactments of Rostechnadzor were adopted.

4. PERSONNEL POLICY

To ensure engaging of most qualified specialists to the civil service and pursuant to the law of the civil service, the Commissions were functioning in the Rostechnadzor's headquarters and its regional bodies (territorial departments) in 2012 to arrange for the competition for the vacant position in the civil service.

Qualitative composition of the Rostechnadzor's civil officers

In general, civil officers of the Rostechnadzor's headquarters and territorial bodies have the required professional education, professional experience and the record of civil service complying with the requirements of the legislation on the civil service.

Thus, 99.8% of civil officers have received professional education. 96.7% of civil officers have higher education in the specialties corresponding to the functions and specific tasks imposed on Rostechnadzor on the whole and its structural divisions in particular (as per replaceable positions). 70% of this number have higher technical education, 5% have higher legal education, 2% have higher education in the speciality of state and municipal administration, and 3.2% have secondary vocational education. 1.1% of employees have the academic degree of PhD, 0.08 % have the academic degree of DSc (Doctor of Sciences).

16.8% of employees have served in the supervisory bodies 15 years and more; 20.8% have served from 10 to 15 years; 30.9% have served from 5 to 10 years; 24.7% have served from 1 to 5 years; and the record of service of 6.8% of employees is less than 1 year.

21.6% of civil officers have their record of civil service from 15 years and more; 19 % have served from 10 to 15 years; 31.5 % have served from 5 to 10 years; 21.9%

have served from 1 to 5 years; and the record of service of 6% of civil officers is less than 1 year.

Information on passing professional refresher courses and professional development at Rostechnadzor in 2012

In 2012, professional refresher courses and professional development of the Rostechnadzor's civil officers were arranged in the framework of the government order for 2012 approved by Decree of the Government of the Russian Federation No. 23-r of January 26, 2012 and in compliance with Art. 62 of Federal Law No. 79-FZ of July 27, 2004 "On the Civil Service of the Russian Federation".

1,513 civil officers of Rostechnadzor passed training in the framework of the government order for professional refresher courses, professional development and probation within the reporting year.

The following educational institutions were involved for training of the civil officers in 2012:

- ✓ SEI VPO "The Russian Presidential Academy of National Economy and Public Administration"
- ✓ SEI VPO "Moscow State Technical University named after N.E. Bauman"
- ✓ FSBEI VPO "The Russian State Trade and Economic University"
- ✓ SEI VPO "Kazan National Research Technological University"
- ✓ FSEI VPO "Moscow State University of Environmental Engineering"
- ✓ Scientific Educational Institution DPO "Central Institute for Continuing Education and Training"
- ✓ FSBEI VPO "Financial University under the Government of the Russian Federation"
- ✓ FSBEI VPO "Saratov State Legal Academy".

Training was conducted in 12 cities of the Russian Federation (Moscow, Obninsk, Saint Petersburg, Rostov-on-Don, Krasnodar, Yekaterinburg, Ufa, Kazan, Saratov, Novosibirsk, Kemerovo, and Khabarovsk).

5. SAFETY REGULATION OF NUCLEAR POWER PLANTS AND NUCLEAR RESEARCH INSTALLATIONS

Regulatory and Legal Activities

Besides the aforementioned regulatory and legal documents pertaining to regulatory activities, the following documents were issued in 2012:

Regulatory legal acts of the Government of the Russian Federation:

Decree No. 1044 of the Government of the Russian Federation dated October 15 2012 "On the federal state supervision in the field of atomic energy use",

Decree No. 373 of the Government of the Russian Federation dated April 23 2012 "On Approval of the Provisions of the Regime of Continuous State Supervision at Nuclear Facilities",

Order No. 610-r of the Government of the Russian Federation dated April 23, 2012 on approval of "The List of Nuclear Facilities Subject to Continuous State Supervision Regime";

Federal Regulations

- "Rules for design and safe operation of hoisting cranes for nuclear facilities" (registered in the Ministry of Justice of Russia under No. 23122 of February 03, 2012),

- "Requirements for emergency power supply systems of nuclear power plants" (registered in the Ministry of Justice of Russia under No. 23123 of February 03, 2012).

- "Requirements for quality assurance programs for nuclear facilities" (registered in the Ministry of Justice of Russia under No. 23509 of March 9, 2012),

- "Rules for design and operation of reactivity members' actuators" (registered in the Ministry of Justice of Russia under No. 23796 of April 11, 2012),

- "Standard content of the action plan on protection of personnel in case of an accident at a nuclear power plant" (approved by order No.518 of 18.09.2012, submitted for registration).

Safety guides:

- "Regulations for the content and composition of documentation on comprehensive survey of nuclear research installations for lifetime extension",

- "Regulations for the Rostechnadzor's quality management system in the field of state regulation of safety in atomic energy use",

- "Regulations for the recommendations on comparison of calculated and measured radioactivity in analysis of nuclear safety of WWER reactor plants",

- "Calculated ratios and methods for calculation of hydrodynamic and thermal characteristics of components and equipment of liquid-metal coolant nuclear installations",

- "Main recommendations on development of Level 1 probabilistic safety analysis for the NPP unit for initiating events conditioned by in-site fires and flooding",

- "Final inspection and exemption of nuclear research installations from the federal state supervision in the field of use of atomic energy",

- "Regulations for the recommended calculated ratios and methods for calculation of hydrodynamic and thermal characteristics of components and equipment of liquid-metal coolant nuclear installations",

- "Determination of causes and conditions of violations of requirements for safety assurance in atomic energy use",

- "Regulations for the structure and content of the report on results of the integrated engineering and radiation survey for the NPP unit decommissioning",

- "Final inspection and exemption of nuclear research installations from the federal state supervision in the field of use of atomic energy",

- "Provisions on the procedure of preparation and transmission of data in the system of the information support of the governmental control of NRIs at normal operating conditions and during accidents".

State control and supervision

Nuclear power plants

In 2012 Rostechnadzor was regulating nuclear and radiation safety at 17 nuclear power plants (the Balakovo NPP, Baltic NPP, Beloyarsk NPP, Bilibino NPP, Kalinin

NPP, Kola NPP, Kursk NPP, Leningrad NPP, Leningrad NPP-2, Nizhny Novgorod NPP, Novovoronezh NPP, Novovoronezh NPP-2, Rostov NPP, Seversk NPP, Smolensk NPP, Tver NPP, Central NPP), which operate 32 power units, 4 power units are at the stage of preparation for decommissioning (1st, 2nd power units of the Novovoronezh NPP, 1st, 2nd power units of the Beloyarsk NPP), 10 power units are under construction (1st, 2nd power units of the Leningrad NPP-2, 1st, 2nd power units of the Novovoronezh NPP-2, 3rd, 4th units of the Rostov NPP, 4th unit of the Beloyarsk NPP, 5th unit of the Kursk NPP, 5th unit of the Balakovo NPP, 1st unit of Baltic NPP) and siting activities are conducted in respect of 11 power units (1st, 2nd units of the Seversk NPP, 3rd, 4th units of the Leningrad NPP-2, 2nd unit of the Baltic NPP, 1st, 2nd units of the Central NPP, 1st, 2nd units of Nizhny Novgorod NPP, 1st, 2nd units of Tver NPP).

In 2012 the Department organized and conducted 3 (2) comprehensive inspections with the participation of ITD NRS and Scientific and Engineering Center for Nuclear and Radiation Safety (SEC NRS) of Beloyarsk, Balakovo and Novovoronezh NPPs (hereinafter see the data for 2011 indicated in parentheses). As a result of inspection 26 (11) violations were found in respect of the requirements of federal standards and regulations in the field of atomic energy use ; 3 (2) improvement notices were issued (1 was issued in the first half of the year); and penalties imposed in the total amount of 241 thousand rubles (0). In the framework of supervision over design and engineering organizations and manufacturing plants, inspection was exercised to check observance of regulations while executing the activities related to enhancement of quality and reliability of equipment and pipelines, as well as to check manufacturing of a long-term manufacturing cycle equipment for NPP-2006.

3,012 target inspections and monitoring activities were conducted by ITD NRS in the framework of continuous supervision. In the course of inspections 471 violations of the requirements of federal atomic codes and regulations and license validity terms and conditions were found and an improvement notice was issued to clear the said violations. The sum of the fines imposed made up 1,967 thousand rubles.

In 2012, no occurrences were found, which might be classified as accidents as per the "Provisions on the procedure of investigation and accounting of operational

occurrences of nuclear power plants" (NP-004-08). 51 operational occurrences subject to accounting as per NP-004-08 were observed, which is 5 occurrences greater than in 2011. 13 operational occurrences occurred during trial commercial operation of Unit No.4 of the Kalinin NPP.

NPP gas-aerosol releases were below permissible values, the actual values of radionuclide activity in liquid discharges from the NPPs were lower than the permissible values.

In the reporting period there were no registered cases of exceeding the average value of radiation dose limit for Group A personnel in any consecutive 5 years established by NRB-99/2009 at 20 mSv per year at NPPs in Russia.

Basing on the outcome of completed inspections, a follow-up on the implementation of validity conditions of licenses, analysis of ITD NRS reports, and annual reports of the operating organization on the current safety status of nuclear power plants, the status of nuclear, radiation and technical safety at power units of nuclear power plants is qualified as satisfactory in general. The system of regulatory documents in the field of safety generally meets the state-of-the-art IAEA requirements. At the same time, Rostechnadzor continues its efforts on analysis of the existing regulatory documents in terms of sufficiency of requirements for assuring safety of nuclear facilities in case of extreme natural phenomena.

Nuclear research installations

In 2012 Rostechnadzor performed regulation and supervision of nuclear and radiation safety of 66 nuclear research installations (NRI) in 17 operating organizations (OO) of various ministries and departments.

Since the decommissioning activities had come to a close in 2012, the Federal Environmental, Industrial and Nuclear Supervision Service of Russia implemented the procedures related to removal of the following NRIs from the supervisory scope:

- critical assemblies: RF-GS (FSUE LSC RF-FEI), KS No.3 (JSC MSZ);
- subcritical assemblies: SO-2M (FSUE VNIIKhT), PKS (SPimash).

In 2012, 104 (151) inspections were carried out to check the status of nuclear, radiation and technical safety of nuclear research installations. 201 (193) violations of the requirements of the federal standards and regulations and other regulatory documents in the field of atomic energy use were found by the inspections. The total sum of administrative fines imposed by the ITDs made up 293 (161) thousand rubles.

In 2012, 6 NRI operational occurrences classified as per the "Provisions on the order of investigation of and accounting for operational occurrences at nuclear research installations" (NP-027-10) took place, which is 5 occurrences less than in 2011.

No radioactive substances were released or discharged to the environment at the Rostechnadzor supervised NRIs in quantities exceeding the established values, and radiation situation did not exceed natural background.

No cases of occupational overexposure were observed during operational occurrences.

Radiation burden on the permanent and temporary personnel was below the limits of control levels established at the enterprises.

Supervision is being carried out over the activities related to decommissioning of NRIs and storage facilities of nuclear materials and spent nuclear fuel located in the territory of the OO (the following research reactors: TVR (FSUE LSC RF-ITEF), AM (FSUE LSC RF-FEI), AST-1 and RBT 10/1 (JSC LSC NIIAR), MR (SRC KI) are at the decommissioning stage), as well as a spent nuclear fuel storage point located in the territory of FSUE NIIP.

The status of nuclear, radiation and technical safety at NRIs is characterized as satisfactory on the whole following the results of completed inspections of NRI safety, and follow up on the implementation of license conditions. The system of regulatory documents on NRI safety meets the current IAEA requirements on the whole, and NRI inspection programs are consistent with international practices.

Permitting activity

Nuclear power plants

In 2012 Rostechnadzor headquarters issued 20 licenses to the operating organization - JSC Concern Rosenergoatom and the organizations engaged in designing, engineering, manufacturing equipment for power generating units of nuclear power plants, safety review, etc. Apart from that, 206 amendments to license validity terms and conditions were issued and 17 rejections were given to execute them basing on the reviews, which ascertained that these amendments lacked proper substantiation of nuclear and radiation safety.

Interregional territorial departments for nuclear and radiation safety supervision (ITD NRS) issued 648 licenses for the right of execution of activities and rendering services for nuclear power plants to the organizations that carry out activities and deliver services to nuclear power plants as specified in the table.

The permits were granted to the employees of nuclear power plants for the right to work in the field of atomic energy use, and namely: by the Service's headquarters - to 51 employees of the operating organization belonging to managerial staff of nuclear power plants; by ITD NRS - 394 permits were given to the operating personnel of nuclear power plants.

Nuclear research installations

In 2012, the Rostechnadzor's headquarters granted 11 licenses to the operating organizations; the ITD NRS granted 38 licenses for the activities at NRIs.

The permits were granted to the employees of nuclear research installations for the right to work in the field of atomic energy use, and namely: by the Service's headquarters - to 15 employees of the operating organization belonging to NRI managerial staff; by ITD NRS - 69 permits were given to the NRI personnel.

Research and Development

The following activities were performed in the framework of scientific research in the field of development and application of the existing regulatory documents on nuclear and radiation safety regulation:

- The statement of work and the proposals were prepared on the first revision of the draft federal codes and regulations "Basic requirements for probabilistic safety analysis of nuclear power plants".

- The final revision and a package of documents were prepared to determine the possibility of publishing the draft federal codes and regulations "Periodic safety assessment of NRIs".

- The final revisions of the proposals on introduction of changes were completed and a package of documents was prepared for review to determine the possibility of publishing the regulatory documents "Rules of design and safe operation of pressure vessels for nuclear facilities (NP-044-03)", "Rules of design and safe operation of steam and hot water pipelines for nuclear facilities (NP-045-03)", "Rules of design and safe operation of steam and hot-water boilers for nuclear facilities (NP-046-03)".

The methods applied to improve operability of the welded joints of austenitic pipelines DN 300 for RBMK reactors were analyzed.

The methods for calculation of residual stresses in the welded joints of DN 300 and DN 800 pipelines of RBMK reactors were developed.

The analysis of operational occurrences reports and annual safety reports for nuclear power plants and NRIs within 2011-2012 was performed; the information on results of inspecting and supervisory activities in 2012 was collected and analyzed.

The safety analysis for nuclear power plants with the new generation of water-moderated water-cooled power reactors (power unit No.1 of NVNPP-2 is a reference power unit) was performed to ensure implementation of inspecting and supervisory activities.

The recommendations were prepared on improvement of the safety analysis for operation of NPP and SFSF buildings and structures based on results of monitoring observations of the current movements of the Earth crust.

Maximum individual radiation risks conditioned by the spent nuclear fuel removal from NPP and NRI sites were assessed.

A full-scale calculation for one operating NPP power unit with the RBMK-1000 reactor was made.

The album of design and beyond design basis accident modes at WWER-1000 NPPs was made.

The methodological recommendations were developed for comparison of measurements and calculations of the effective multiplication factor of subcritical systems with deep subcriticality.

The analysis of the aging predictive models was made based on the example of radiation cracking of WWER pressure vessels taking into account the results of the samples' testing and the pressure vessel irradiation.

Exemplary list of beyond design basis accidents subject to accounting in the NPP project and the exemplary assessment of violations taken place at the NPP by means of instructions containing the formalized PSA model were prepared.

6. SAFETY REGULATION OF NUCLEAR FUEL CYCLE FACILITIES, MARINE NUCLEAR POWER INSTALLATIONS AND RADIATION HAZARDOUS FACILITIES

Nuclear fuel cycle facilities

In 2012 Rostechnadzor supervised 17 industrial nuclear fuel cycle facilities (NFCF), 109 research and development and design organizations, organizations that fulfill the works and deliver services to NFCF including those that are engaged in transportation and storage of nuclear materials and carry out other works for the nuclear fuel cycle facilities, whose activity was licensed by the Rostechnadzor headquarters.

The indicators of licensing and supervisory performance over the period under review are rather stable on the whole. The number of operational occurrences at NFCF, violations of the norms and regulations in the field of atomic energy use and validity conditions of the licenses issued by Rostechnadzor, as well as the number of improvement notices following the facts of operational occurrences have been showing a general tendency to decline over the last three years.

In 2012, 4 incidents occurred without any radiation consequences for the personnel and environment and not resulting in the NFCF failure, and namely: 2 incidents at NFCFs were due to external technical reasons; 2 incidents occurred as a result of erroneous actions of personnel.

Marine Nuclear Installations and Life Support Facilities

In 2012 Rostechnadzor exercised state regulation of nuclear and radiation safety of nuclear-powered vessels and supporting facilities, as well as of organizations that fulfill the work and deliver services in the field of atomic energy use.

Under the state supervision were 10 nuclear-powered vessels and 5 nuclear support vessels (hereinafter referred to as NS vessels) of FSUE "Atomflot" with the State Nuclear Power Corporation "Rosatom".

FSUE "Atomflot" operates and also provides for basing of nuclear-powered and nuclear support vessels, repairs of nuclear power equipment, storage and processing of radioactive waste (radwaste), transportation/loading and technological operations with nuclear fuel.

The status of nuclear and radiation safety at FSUE "Atomflot" meets the requirements of the federal standards and regulations in the field of atomic energy use.

Ship-building yards and dockyards carrying out the activities and rendering services in the field of atomic energy use were under the state supervision.

The level of nuclear and radiation safety assurance at the ship-building sector enterprises meets the requirements of federal standards and regulations in the field of atomic energy use.

No accidents or emergencies occurred in 2012 at the supervised nuclear facilities.

The registered operational occurrences didn't result in exceeding of safe operational limits and were removed as per requirements of operating instructions. The radiation situation during all occurrences remained within the normal state limits.

Radiation safety assurance and organization of radiation control in the supervised organizations are arranged in accordance with the requirements of regulatory documents. No cases of occupational overexposure were recorded in the reporting period. Radiation burden on the permanent and temporary personnel was below the limits of control levels. Safety of personnel and public in terms of exposure to radiation factors was assured.

No unauthorized releases or discharges of radioactive waste were revealed. No radioactive contamination was recorded at the facilities or adjacent territories. The level of preparedness of supervised organizations and their relevant structural divisions makes

it possible to assure efficient performance of measures aimed at elimination of radiation accidents and consequences thereof.

Radiation Hazardous Facilities

General description of radiation hazardous facilities

In 2012, the ITD NRS supervised 1,708 organizations, 3,725 stationary radiation sources and 1,103 storage facilities for radioactive substances and radioactive waste.

425 licenses were issued to organizations for the activities in the field of atomic energy use and 2,238 permits were granted to officials for the right to operate in the field of atomic energy use.

The main licensed activities of organizations comprise:

operation of radiation sources;

operation of radiation substances and radwaste storage facilities.

Among the supervised facilities were enterprises of different industries, enterprises of the fuel and energy complex, geological, scientific and transportation organizations, military units and organizations of the Ministry of Defense of the Russian Federation, medical institutions, customs authorities and other organizations, as well as 49 regional and departmental information and analytical centers (RIAC, DIAC) of the state system for accounting and control of radioactive substances and radioactive waste.

State supervision covers:

1. Medical, scientific, research laboratories and other facilities, where operations with open radionuclide sources (ORnS) are practiced.

2. Complexes, facilities, devices, equipment and items with closed radionuclide sources (CRnS) including:

technological and medical irradiating installations;

fault detectors;

radioisotope instruments and other sources;

RITEGs.

3. Radioactive substances storage facilities including:

specialized storage facilities located mainly in the sections of FSUE "RosRAO" affiliated offices;

non-specialized storage facilities located at nuclear facilities.

4. Radioactive waste storage facilities including:

specialized storage facilities of FSUE "RosRAO" sections;

non-specialized storage facilities located at nuclear facilities;

storage facilities containing radionuclide waste of natural origin.

5. Facilities of oil producing organizations, at which open storage is provided for the oil-field equipment with salt depositions of natural radionuclides RA-226, RA-228, U-238, TH-232 and K-40 (e.g. LLC Lukoil Nizhnevolzhskneft, JSC Rosneft-Stavropolneftegas, etc.);

In 2012 the supervisory activity was focused on:

inspecting of organizations with most potentially hazardous radiation sources, storage facilities of radioactive substances and radioactive waste;

inspection of radiation hazardous activities conducted by organizations including recharging of the existing facilities and equipment and decommissioning of non-used or non-serviceable radiation sources (powerful radioisotope plants and radioisotope thermoelectrical generators);

supervision of RIAC activity and the system of physical protection of radioactive sources and radioactive substances and radioactive waste storage facilities.

The safety status at radiation hazardous facilities is generally assessed as satisfactory.

The assessment is based on the absence of accidents or radiation occurrences, as well as on non-exceeding of the radiation dose burden on personnel of the supervised organizations and community the established norms.

Inspection activity

In 2012, 1,521 inspections were conducted to check the status of radiation safety including 1,229 target and 111 routine inspections, and 181 inspections in the process of licensing.

201 unscheduled inspections were carried out in the course of supervisory activity, the following aspects being inspected at that:

authenticity of information provided in the documents submitted for obtaining the licenses for the activities in the field of atomic energy use;

authenticity of information on availability of ionizing radiation sources in the non-supervised organizations;

information on changes in the radiation safety status in relation to removal of the organizations from the supervisory scope or taking over supervision thereof;

the state of accounting and storage of radioactive substances, radioactive sources and radioactive waste at certain organizations;

the progress of investigation of radiation accidents and incidents;

the circumstances related to detection of unattended closed radionuclide sources;

aspects related to recycling of radiation sources.

Performance of non-scheduled inspections was also conditioned by the following:

follow-up to check execution of statement of orders issued on results of previous inspections;

execution of specific orders (directions) of the Rostechnadzor Chairman and his deputies, as well as the management of the ITD NRS;

on other grounds laid down by the legislation of the Russian Federation including those implemented by the public prosecution bodies involving the state inspection (supervision) or municipal inspection body.

Totally in the process of supervisory activities 1,506 (2,202 in 2010 and 1,836 in 2011) violations of the requirements of federal standards and regulations in atomic energy use were detected.

The major causes of violations were mainly related to poor personal implementation.

The inspecting staff based on the inspection results exercised the authorities granted by the legislation of the Russian Federation for calling the guilty persons to administrative account for violations of the law in the field of atomic energy use.

The principal contributors to violations of the license validity terms and conditions detected by inspecting staff during inspections conducted in 2012 were:

violations connected with keeping general documentation related to radiation safety assurance;

violations connected with radiation accident preparedness and elimination of accident effects;

lack of scheduled training and testing of the personnel knowledge.

To ensure follow-up of the supervised organizations' implementation of measures related to radiation safety assurance, the inspections divisions shall exercise preventive and routine inspection to check:

implementation of measures on meeting the radiation safety requirements by the officials of the supervised organizations;

whether the officials of the supervised organizations observe the dates for submitting information on implementation of license validity terms and conditions and elimination of violations found in the course of inspection activities.

Issuance of statement of orders for elimination of violations in the activities of the supervised organizations still remains the basic disciplinary action applied to the violators. Such action was applied in cases when deficiencies were of an organizational nature and didn't generally affect assurance of radiation safety.

Besides, the inspection divisions used such form of interfaces with the state executive authorities as providing them with the results of analysis of supervisory activities on ensuring radiation safety as well as with the annual reports of the supervised organizations to enable timely response to the found violations and deviations of the organizations' observance of regulations in the field of atomic energy use.

Operational occurrences related to radiation sources

In 2012, 33 occurrences in operation of radiation hazardous facilities were observed (cf. 43 operational occurrences in 2010; 58 operational occurrences in 2011). All 33 occurrences were assigned to class P-2.

The operational occurrences in 2012 were related to:

thefts of ionizing radiation sources (IRS): three cases (no victims, the persons guilty were brought to administrative and criminal responsibility);

freezes-in and breakages of the logging devices during geophysical work containing radionuclide radiation sources: 7 cases (in 6 cases the IRS were buried in the wells).

Investigations were conducted for all cases of operational occurrences.

The activities while inspecting investigation of operational occurrences at radiation hazardous facilities meet the requirements of the Rules for Investigation and Accounting for Violations in Management of Radiation Sources and Radioactive Substances Applied in National Economy (NP-014-2000).

Within the reporting period:

No overriding of the basic radiation dose limits for personnel and population was recorded;

Neither intolerable releases and discharges of radioactive substances nor contamination of the environment were observed;

Unauthorized intrusion into the territory of radiation hazardous facilities or unauthorized access to radioactive sources, radioactive substances or radioactive wastes were not recorded.

The enterprises requiring a more intense inspection exercised by the regulatory authority were found within the reporting period. Such enterprises comprise:

The status of radiation safety in the supervised organizations meets the requirements of norms and regulations in the field of atomic energy use.

Based on the performed analysis of operational occurrences, one may make a general assessment of the safety status at radiation facilities basing on the absence of accidents and radiation incidents and non-exceeding of the radiation doses on the personnel of the supervised organizations and population above the established standards. The safety status at the supervised organizations during operation of radiation sources and use of radioactive substances may be assessed as satisfactory.

Analysis of the operational occurrences at radiation hazardous facilities of the Russian Federation registered within 2012 makes it possible to establish a "0" level

(below the scale level) for these events according to the International Nuclear and Radiological Event Scale (INES, IAEA, Vienna, 2010).

7. SUPERVISION OF ACCOUNTING, CONTROL AND PHYSICAL PROTECTION

In 2012 the following activities were carried out in this field:

arrangement and implementation of the state supervision over accounting and control of nuclear materials, radioactive substances and radioactive waste as well as ensuring their authorized proliferation and controlled use;

arrangement and implementation of the state supervision over physical protection of nuclear installations, radiation sources, storage facilities, nuclear materials and radioactive substances;

arrangement and implementation of supervision over the state of the counter-terrorist protection of nuclear installations, radiation sources, storage facilities for nuclear materials and radioactive substances, systems of unified state control and accounting of nuclear materials, radioactive substances and radioactive waste.

The following documents were developed and put into effect in 2012: federal codes and regulations, instructions, the regulation and methodological recommendations determining the activities in the field of accounting, control and physical protection of nuclear materials, radioactive substances and radioactive waste.

Information on the status of control and accounting of nuclear materials, radioactive substances and radioactive waste

Supervision of the nuclear materials accounting and control is exercised over 50 organizations handling nuclear materials.

Totally in 12 months of 2012, 163 inspections were conducted to check the status of nuclear materials accounting and control. 97 violations of federal standards and regulations and license validity terms conditions were observed.

Following the results of inspections conducted within 12 months of 2012, two administrative fines were imposed to the amount of 220 thousand rubles.

Two anomalies in nuclear material control and accounting were found within the reporting period when assessing the difference in the information provided by the

supplier and the receiver of nuclear materials.

No cases were found during inspections within 12 months of 2012 related to loss and unauthorized use of nuclear materials at the supervised facilities.

1,739 organizations exercising accounting and control of radioactive substances and radioactive waste (including regional information and analytical centers established in the constituent entities of the Russian Federation) were supervised in 2012.

Within 12 months of 2012, the Rostechnadzor's inspectors conducted 1,022 inspections to check the status of accounting and control of radioactive substances and radioactive waste; 332 violations of the regulations and the license validity terms and conditions were found.

20 administrative fines to the total amount of 1 million 120 thousand rubles were imposed for violations related to accounting and control.

As of information received from the ITD NRS, a loss of the radionuclide sources' unit and a loss of two sources with expired service life were detected; as well as 11 ionizing radiation sources were found during receipt of the scrap metal.

Information on the status of supervision over physical protection of nuclear materials, nuclear installations, radioactive substances and storage facilities thereof

Within 12 months of 2012, Rostechnadzor was carrying out supervision over physical protection at 54 nuclear facilities and 1,579 radiation hazardous facilities.

118 inspections of physical protection of nuclear materials, nuclear installations and storage facilities of nuclear materials were conducted.

115 violations of regulations and license validity terms and conditions were found during inspections.

Statements of orders altogether containing 115 items were issued.

Within the stated period the commissions conducted 882 inspections at 869 radiation hazardous facilities operating in the field of atomic energy use. 109 violations of standards and regulations and license validity terms conditions were observed.

Statements of orders altogether containing 109 items were issued.

Within 12 months of 2012, the ITDs for nuclear and radiation safety supervision applied administrative sanctions in the form of fines applied to legal entities and

individuals for violations of regulations and license validity terms and conditions to the total amount of 890 thousand rubles.

No unauthorized actions with respect to nuclear installations, nuclear materials and storage facilities were observed.

Unauthorized actions with respect to the radiation source were revealed at one radiation hazardous facility in the ITD NRS for Siberia and the Far East.

No radioactive contamination of the examined territory, units, and equipment was detected; no persons exposed to radiation were found.

8. MINING SUPERVISION

The Mining Supervision Department carries out supervision over observance of industrial safety requirements during design, operation, preservation, and elimination of ore mining and metallurgical industry hazardous industrial facilities, as well as supervision over explosive material use, storage, distribution, and over blasting operations and use of deposits, surveyor support of mining activities.

Regulatory and legal activity of the Mining Supervision Department

In 2012, the Mining Supervision Department revised the Federal industrial safety codes "Provision for safe conduct of mining activities in deposits prone to and hazardous of bounces" and "Methodological Instructions for assessment of ore and rock deposit proneness to bounces."

Upon coming into effect on 03.11.2011 of the Federal Law "On Licensing of Specific Activity Types" and prior to its amendments introduced by Federal Law No. 133-FZ dated 28.07.2012, the following type of activity was subject to licensing: "development, manufacturing, testing, storage selling and disposal of ammunition (including cartridges for commercial and service weapons and of component parts of cartridges), industrial-purpose explosive materials, pyrotechnic products of classes IV and V as per national standard, use of industrial-purpose explosive materials, pyrotechnic products of classes IV and V as per the technical regulations."

This new type of activity turned out to be actually impracticable within the framework of the existing legislation; therefore the licensing of activities in the field of industrial-purpose explosive materials was suspended.

Following Rostechnadzor initiative, Federal Law No. 133-FZ dated 28.07.2012, specified the following type of activity subject to licensing: "activity associated with handling of industrial-purpose explosive materials". Licensing in the field of the use of industrial-purpose explosive materials was resumed.

In 2012, Rostechnadzor Administrative Regulations for rendering state service for issuing permits for conducting works with industrial-purpose explosive materials were developed (approved by Rostechnadzor Order No. 254 dated 16.04.2012, registered with the Ministry of Justice of Russia on 30.05.2012, Reg. No. 24397).

State control and supervision

Ore Mining and Non-metallic Industry, Facilities of Underground Construction

5,682 examinations were conducted (in 2011 – 7,765 examinations), 27,744 violations of safety regulations were revealed and turned over for elimination (in 2011 – 38,998 violations).

In accordance with the Code for Administrative Malefaction, 3,530 administrative penalties were imposed. Based on the results of 28 checks, the materials were handed over to law-enforcement bodies for commencement of prosecution. 1 manager was disqualified within the reporting period.

For violations of industrial safety requirements and failure to fulfill (tardy fulfillment of) orders for elimination of the revealed violations, in 10 cases warning notices were issued, and in 93 cases temporary ban on the activity was imposed. Administrative suspension of the activity of the enterprises upon proposals of Rostechnadzor territorial bodies and corresponding decrees of the court was imposed in 132 cases.

Metallurgical and Chemical Recovery Industries and Facilities

In 2012, 15 fatal injury incidents occurred at the supervised metallurgical and chemical recovery enterprises and industries, including: one multiple-casualty case, in

which 24 persons suffered, with three lethal outcomes. Three accidents occurred, one - with lethal outcome, the impaired damage amounted to 51,016 thousand rubles.

In 2012, Rostechnadzor territorial bodies carried out 2611 examinations at supervised metallurgical and chemical recovery enterprises and facilities; 13,341 violations of industrial safety codes were revealed and orders for elimination thereof issued; temporary ban was imposed on activities of 91 plants and facilities because of gross violations of operation regulations; 1500 persons were brought to administrative responsibility, which included fines imposed on managers and specialists of supervised enterprises in accordance with item 1 of article 9.1 of the Code of Administrative Infractions of the Russian Federation amounting to the sum of 75,620 thousand rubles (as compared to 46,501 in 2011).

The total sum of imposed penalties amounted to 680,000 rubles, including 200,000 rubles - for juridical person.

Supervision over industrial safety requirements at 1,530 supervised metallurgical and chemical recovery enterprises and 1,888 hazardous industrial facilities is provided by 98 inspectors-metallurgists of the territorial bodies. Length of service of the inspectors is from 6 months and up to 28 years. Basically, inspectors-metallurgists supervise metallurgic facilities. In the Urals department, supervision over metallurgy production is exercised, in addition to inspectors-metallurgists, by gas and chemical supervision inspectors. In the Interregional Technological Department supervision over metallurgic production is exercised by chemical and mining supervision inspectors. The average work load per one inspector is 26.6.

Survey Activities and Safe Use of Mineral Wealth

1,816 scheduled and unscheduled examinations were conducted.

6,082 violations of geological-and survey support of mining activities were revealed.

918 administrative suits were filed for failure to observe the established requirements for conducting surveys and ensuring of safety during mining activities.

Imposed penalties amounted to the total sum of 69,595 thousand rubles.

Production, Storage and Use of Industrial-Purpose Explosives

In 2012, the number of revealed losses of explosive materials decreased, as compared to 2011, and amounted to 10 cases, including 5 scatterings, 1 loss, and 4 thefts (7 thefts in 2011). Sum total of stolen explosive materials amounted to 11.54 kg and 3 electrical detonators (26.65 kg of explosive materials and 14 electrical detonators in 2011), 48.6 kg of explosives and 1 electrical detonator were scattered, 3.6 kg of explosive materials and 9 electrical detonators were lost.

In 2012, one fatal incident (two cases in - 2011) and one accident (two accidents in 2011) occurred in explosive handling facilities.

In 2012, 139 inspectors conducted supervision at 5,434 industrial-purpose explosive facilities, for 128 of them this type of supervision is additional to the primary types of supervision assigned to them.

In 2012, Rostechnadzor inspectors conducted 1,497 checks of the enterprises involved in operation with hazardous production facilities, as well as the checks of the enterprises that are specialized in blasting operations, including 614 scheduled and 883 unscheduled inspections, as a result of which 4668 violations were revealed.

In the course of the checks, violations were found at 592 juridical persons involved in the activities in the field of industrial-purpose explosive materials. As a result of the checks, 689 orders were issued, and as a result of 473 checks administrative files were suited. In 9 cases orders on temporary suspension of activities were issued, and in 6 cases the activity was temporarily banned. The amount of the fines totaled 29,847 thousand rubles. This sum included 250 thousand rubles for citizens, 9,991 thousand heads for officials and 19,606 thousand rubles for juridical persons.

In 31 cases state control orders were not fulfilled, in three cases the materials were handed over to law-enforcement agencies for inciting the criminal law cases.

The analysis of checks conducted in 2012 by Rostechnadzor central office and its territorial bodies shows that its supervised organizations associated with production, storage, and use of explosive materials on the whole observe the industrial safety regulatory procedures established by the Russian Federation legislation. Corresponding

hazardous production facilities are registered in the public register, procedure for HPF declaration, review and insurance is observed.

Permitting activity

Ore Mining and Non-metallic Industry, Facilities of Underground Construction

In 2012, the Mining Supervision Department reviewed 1,121 industrial safety review reports, in 82 cases review reports that violated the existing regulations for conducting and presenting industrial safety reviews were turned down.

The Mining Supervision Department reviewed 1,037 applications and accompanying materials for obtaining Rostechnadzor permits for the use of technical devices at hazardous production facilities of the mineral resource industry. Following the review of submitted documents, 916 permits for the use of technical devices and process equipment were issued. In 121 cases the permits for the use of technical devices were denied, and motivated causes for the denial were presented in each individual case.

Metallurgical and Chemical Recovery Industries and Facilities

In 2012, Rostechnadzor central office issued 211 permits for the use of new samples of technical devices in metallurgical and chemical recovery industry (65% of which were of foreign origin), 220 industrial safety reviews of technical devices, buildings and structures, industrial safety declarations and other documents were approved. Due to objective reasons, one industrial safety review was rejected, and 42 permits for use of technical devices were handed out. Eight review reports on metallurgical enterprises safety were approved.

Survey Activities and Safe Use of Mineral Wealth

5,437 materials on mining activities development plans, 742 design documents for conducting survey activities, 2,250 allotment projects, 7,003 materials for elimination (mothballing) of facilities associated with mineral wealth use including elimination (mothballing) of wells (oil, exploratory, observation and other wells) were reviewed. Rostechnadzor territorial bodies reviewed 242 applications for survey activities' licenses.

Production, Storage and Use of Industrial-Purpose Explosives

In 2012, 4,927 permits for conducting blasting operations were granted. 43 permits for conducting blasting operations were withdrawn. 3,732 blaster (expert-blaster) qualification certificates were issued, 14 certificates were withdrawn.

In 2012, Rostechnadzor Mining Supervision Department reviewed 129 applications from organizations with the purpose of granting/renewing the licenses for activity associated with handling of industrial-purpose explosive materials (116 of them - for renewing the licenses, and 13 - for granting the licenses).

Rostechnadzor territorial bodies issued four licenses for handling industrial-purpose explosive materials (for use and storage of industrial-purpose explosive materials). During the checks of license requirements Rostechnadzor territorial bodies imposed 13 administrative penalties.

In 2012, no cases of temporary suspensions or annulments of licenses were registered.

In 2012, 84 document packages regarding execution of Rostechnadzor permits for application of novel explosive materials and technical devices were reviewed. Following the reviews, 57 permits to use technical devices were issued, on six occasions organizations were denied permits. Besides, 21 permit for use of explosive materials were issued.

9. GENERAL INDUSTRIAL SUPERVISION

General Industrial Supervision Department exercises monitoring and supervision in the area of industrial safety at the chemical industry enterprises (including chemical disarmament facilities), during transportation of hazardous substances, at vegetable raw material storage and processing facilities.

Supervision over Chemical Complex Enterprises

Chemical supervision was conducted in more than 6,680 organizations. The total number of supervised organizations operating hazardous production facilities exceeds 4,600.

In 2012, 3,851 checks were conducted, in the course of which 22.25 thousand violations were revealed. 1,779 persons were brought to administrative responsibility (1,688 persons - in 2011), which is 5.4% more than in 2011. Administrative suspension of activity was imposed in 80 occasions, which is practically identical to 2011 indicators. The total sum of fines amounted to 104.3 million rubles, which is 30.5% higher than the sum of fines imposed in 2011.

In 2012, the accident rate at chemically hazardous production facilities decreased as compared to 2011. Six accidents were registered, eight accidents occurred in the previous year. Seven persons were fatally injured.

Production monitoring is the primary element affecting the industrial safety level, the effectiveness of which is assessed by the state of industrial safety of organizations. At large enterprises having well-developed production control structure, industrial safety control systems have been established and are effectively functioning.

The state of industrial safety at chemically hazardous facilities in 2010 is assessed as satisfactory; no major man-induced accidents or acts of terrorism were registered.

In 2012, participation was taken (within the scope of established authority) in monitoring and supervisory activities during the works aimed at implementation of the Federal Target Program "Elimination of chemical weapons stocks in the Russian Federation", which made it possible to gradually and timely commission chemical weapons disposal facilities.

Supervision over Transportation of Hazardous Substances

The total number of organizations involved in production safety activity associated with transportation of hazardous substances at hazardous production facilities is about 6 thousand.

Rostechnadzor bodies conducted more than 2.5 thousand checks of legal entities and individuals, 894 juridical persons and officials were brought to administrative responsibility. During the checks about 10 thousand violations of the established

requirements of industrial safety were revealed, the total sum of fines amounted to 26.5 million rubles. Administrative suspension of the activity in the organizations was imposed in 33 cases, which is 19% greater than in 2011.

In 2012, in hazardous substances transportation facilities four accidents took place, the primary causes of which consisted in violations of industrial safety requirements during discharges from transportation means.

For the purpose of increasing safety level during discharging-filling operations, measures are taken for equipping discharging-filling gantries and specially equipped platforms for monitoring the parameters that define explosive hazard of the process with registration of readings and pre-emergency signalization of their values, as well as with automated control and accident protection means, in addition the requirements to transportation means designed for transferring hazardous substances are toughened.

Explosion-Hazardous Facilities of Vegetal Raw Material Storage and Processing

In 2012, there were 4,612 organizations (juridical persons) engaged in the sphere of industrial safety at explosion and fire hazardous facilities for vegetal raw material storage and processing.

In 2012, no accidents occurred at the mentioned facilities (in 2011 one accident occurred involving an explosion of air-dust mixture at provender milling). Two fatal incidents were registered, three persons were killed.

In 2012, Rostechnadzor territorial bodies conducted 3,010 verifications of compliance with the industrial safety requirements established for the hazardous process facilities of vegetal raw material storage and processing.

Revealed and ordered for correction were 14,387 violations, 1,328 administrative penalties were imposed, including 84 administrative suspensions of the activity. The amount of the fines totaled 34,692 thousand rubles.

Among major problems arising in the industrial safety assurance of the hazardous facilities for vegetal raw material storage and processing are insufficiently fast pace of modernization of the existing production plants and renovation of basic assets of the supervised enterprises, as well as, in some cases, lack of financial resources for ensuring

the adequate level of industrial safety.

At major enterprises production inspection is adequately arranged.

One of the basic areas of industrial safety assurance at the supervised facilities for vegetal raw material storage and processing is the development and introduction of up-to-date technologies, equipment and instrumentation for monitoring process parameters and emergency protection that make it possible to minimize the risk of emergencies.

10.CONSTRUCTION SUPERVISION

The Construction Supervision Department arranges and exercises State construction supervision during construction, modernization, overhaul of nuclear facilities (including nuclear installations and nuclear and radioactive material storage facilities) hazardous production facilities, communication lines (including line and cable structures) determined in accordance with the legislation of the Russian Federation, defense and safety facilities, the information on which presents state secret, exceptionally hazardous, technically complex and unique facilities, excluding military infrastructure facilities of the Russian Federation Armed Forces, as well as arranges scientific and methodical support of the State construction supervision in the Russian Federation. It arranges and exercises within the frameworks of State construction supervision, verification of compliance of performed works, used construction materials, and of the results of such works with sanitary-epidemiological regulations and standards, fire safety and environmental protection requirements.

It arranges and exercises State monitoring (supervision), within its competence, over activities of self-regulating organizations in the field of engineering surveys, civil-structural and architectural design, construction, modernization, overhaul of the capital construction facilities, as well as keeps the State register of the mentioned organizations.

It arranges and exercises State monitoring and supervision of compliance with the industrial safety requirements pertaining to hazardous production facilities in which the following is used: stationary hoisting devices, moving staircases, aerial cableways, funiculars, equipment operating under pressure exceeding 0.07 MPa or with water heated above 115 degrees centigrade, systems, devices and means of accident protection, alarms

and monitoring used during operation of the mentioned equipment, as well as automation devices and means used in hazardous production facilities (devices used for monitoring and control of processes, software-hardware complexes for automated systems, including devices for non-destructive examination, machines and devices for measuring mechanical and chemical values, safety automation devices, pressure controllers, meters).

State Civil Construction Supervision during Construction and Modernization of Capital Construction Facilities in 2012

Within the framework of State supervision over construction and modernization, the State fire supervision, State sanitary and epidemiological supervision, as well as State monitoring in the field of environment protection (State ecological control) are exercised.

State supervision over construction is exercised by Rostechnadzor territorial technological and environmental supervision departments and by interregional territorial departments for nuclear and radiation safety supervision.

In 2012, the number of supervised facilities of State civil construction supervision amounted to 13,841, 64 out of them were nuclear facilities.

As regards juridical persons, individual entrepreneurs, within the framework of the State civil construction supervision, Rostechnadzor territorial technological and environmental supervision departments and interregional territorial departments for nuclear and radiation safety supervision conducted 14,889 checks including 12,613 checks of construction facilities, 2,256 checks of modernization facilities, 20 checks of overhaul facilities.

441,874 malefactions were revealed. Based upon the results of 3,374 checks and administrative investigations, suits on administrative malefactions were filed, and 4,864 administrative penalties were imposed. The amount of the imposed administrative fines totaled 450,784.2 thousand rubles.

In addition, 2,216 violations of environmental legislation, 1,169 violations of sanitary-epidemiological legislation, and 218 violations of fire safety requirements were revealed.

7,461 conclusions on compliance of capital construction facilities with the requirements of the technical regulations (codes), other regulatory legal acts and design

documentation were issued, including 6,806 - for construction facilities, 634 - for modernization facilities, and 21 - for overhaul facilities.

Basic indicators of exercising State civil construction supervision during construction of Olympic facilities as of December 31, 2012 are as follows: total number of facilities, where State civil construction supervision is conducted, is 247; conclusions of compliance (CoC) issued for facilities, where State civil construction supervision has been terminated, is 116; for facilities, where State civil construction supervision is conducted, is 131, total number of checks, conducted at facilities being constructed, is 1,633 (including the checks of fulfillment of orders).

In 2012, within the framework of the Federal State civil construction supervision 627 checks were conducted at Olympic facilities under construction, among them: 131 concluding checks, and 199 checks of fulfillment of orders.

2,925 violations were found by the Rostechnadzor's inspectors.

In order to eliminate the revealed violations, in 2012, 207 orders for elimination of the revealed violations and 25 orders on elimination of the causes and conditions, contributing to committing malefactions, were issued to the managers of various organizations participating in construction of Olympic facilities. In the past year the requirements of 185 orders were fulfilled completely.

For failure to timely fulfill the legitimate order of the body (official), exercising State civil construction supervision, in accordance with part 6 of article 19.5 of the Code of Administrative Offenses, 8 protocols were compiled in 2012. The cases were handed over to the arbitrage, and decisions on to calling the guilty persons to account were taken.

As a result of the activities carried out in 2012, 725 administrative suits were filed, 388 of them - against juridical persons, and 337 - against officials.

As a result of legal administrative investigation of the mentioned malefactions, the sum of fines imposed in 2012 amounted to 38,203.5 thousand rubles. The amount of collected fines was 31,670.5 thousand rubles.

In 2012, 22 violations of fire safety regulations, 22 sanitary-epidemiological requirements, and 18 environmental protection requirements were revealed at Olympic facilities under construction.

The results of the state civil construction supervision during construction of APEC-2012 summit infrastructure facilities as of December 31, 2012 are as follows: total number of facilities subject to state civil construction supervision (with due account of the stages) - 39; compliance reports issued (with due account of the stages) - 33; total number of facilities, at which state civil construction supervision was terminated (with due account of the stages) - 34; facilities, at which state civil construction supervision is being exercised - 5; total number of inspections conducted at the facilities being under construction - 232.

During the entire period of construction of APEC-2012 summit infrastructure facilities, in the course of conducted checks, Rostechnadzor Far Eastern Department revealed 1,417 violations of the design requirements and other requirements of currently valid regulatory documents. 76 juridical persons and 85 officials were called to administrative responsibility. The amount of the fines totaled 110,030 thousand rubles.

In 2012, the Administrative Regulations for interaction between Rostechnadzor and Federal Service for Supervision in the Field of protection of Consumer Rights and Human Well-Being in the part of the State sanitary-epidemiological supervision during construction, and the Administrative Regulations for interaction between Rostechnadzor and Main Department of Special Programs of the President of the Russian Federation during Execution of the Federal State Supervision as well as in the area of conducting Federal State supervision over industrial safety and safe operation of electric power installations were consummated.

Supervision over Activities of the Self-Regulating Organizations in the Field of Engineering Surveys, Civil-Construction and Architectural Design, Construction, Modernization, Overhaul of the Capital Construction Facilities, as well as Keeping the State Register of the Indicated Organizations in 2012

By the end of 2012, 471 self-regulating organizations were registered in the State Register of self-regulating organizations. Among them: 37 were based on the membership of persons performing engineering surveys, 179 were engaged in preparation of the design documentation, 255 - in construction activities.

In 2012, Rostechnadzor conducted 79 checks of compliance of self-regulating organizations with the requirements to self-regulating organizations and of their activities

established by the legislation of the Russian Federation, which included 10 scheduled checks and 69 unscheduled checks, seven of which were conducted on the site, and 13 dealt with documents.

The grounds for conducting unscheduled checks consisted in the following:

within the framework of orders issued earlier following the results of previously conducted checks - 9;

on the basis of Order of the Government of the Russian Federation - 60.

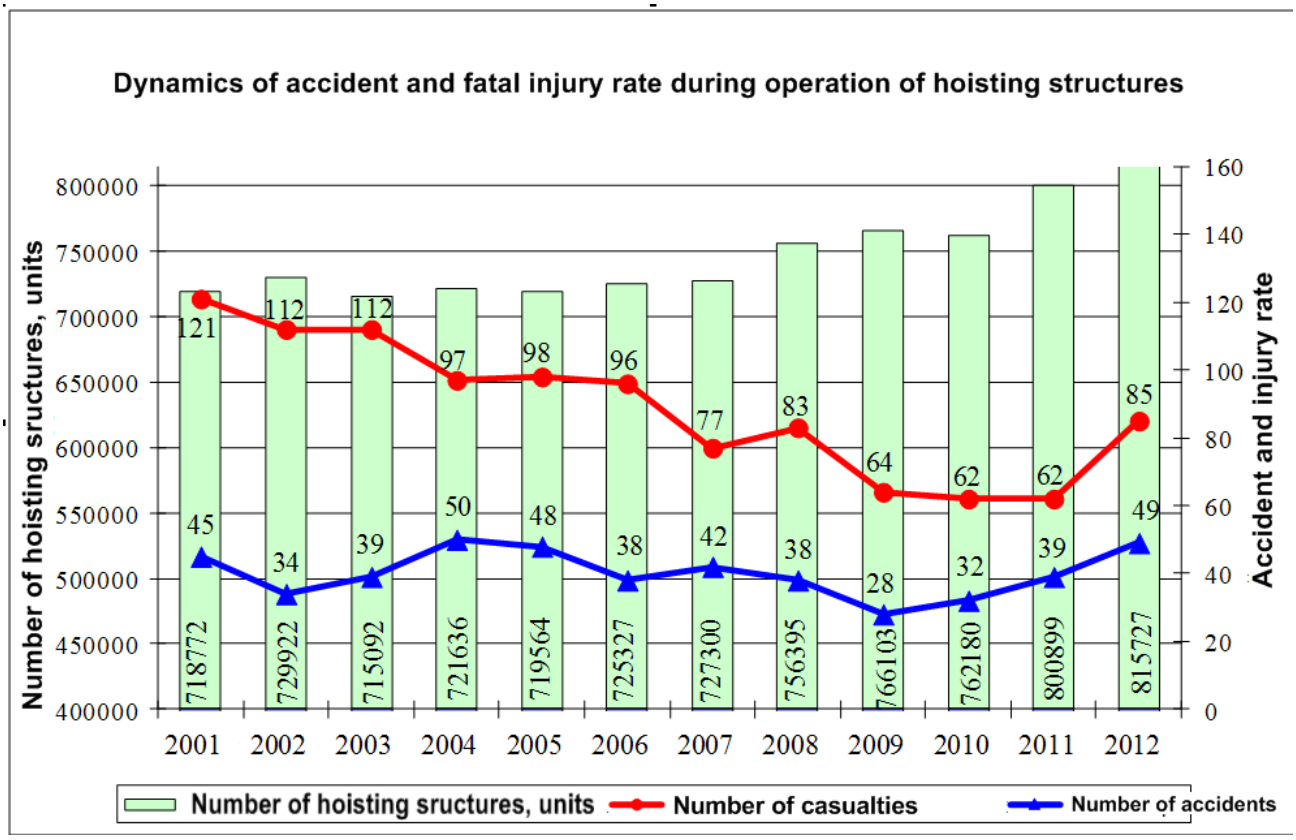
Following the checks of self-regulating organizations, 227 violations of mandatory requirements set forth by the legislation in the sphere of self-regulation were revealed.

The following activities were carried out by Rostechnadzor in 2012:

- more than one thousand of prescriptive letters on elimination on violations of legislation in the field of self-regulation, including those ones, revealed during layout of information on the activities of self-regulated organizations and of their members, were sent to self-regulating organizations;
- routine inspections of official sites of self-regulating organizations in the Internet were conducted, including those based on the information presented by National Associations of Self-Regulating Organizations.

Supervision over Facilities Whereat the Permanent Hoisting Mechanisms and Elevating Structures are Used

More than 815 thousand of elevating structures are operated at 83,921 supervised load-lifting enterprises and organizations, (which includes more than 243,952 load-lifting cranes, 24,259 automatic car lifts (towers), 530,519 elevators, 128 overhead ropeways, 427 towing ropeways, 3 funiculars, 10,185 moving staircases, and more than six thousand of cargo-passenger civil construction elevators and elevators for disabled persons).



The information on changes in the total number of technical devices in 2012 as compared to 2011 is provided in the Table below:

Name of technical devices	Total quantity of technical devices in 2011	Total quantity of technical devices in 2012	Increase, % (units)
Cranes	241,903	243,952	0.8% (2,049 units)
Hoisters (towers)	23,090	24,259	4.8% (1,169 units)
Elevators	520,562	530,519	1.9% (9,957 units)
Overhead ropeways	126	138	8.7% (12 units)
Towing overhead ropeways	461	427	-8% (-34 units)
Funiculars	3	3	0% (0 units)
Moving staircases	9,365	10,185	8% (820 units)
Construction hoists;	3,175	3,697	14.1% (522 units)
Hoisting platforms for disabled persons	2,214	2,557	13.4% (343 units)
TOTAL	800,899	815,737	1.8% (14,838 units)

The information of average wear of technical devices as of 01.01.2013 is provided in the Table below:

Name of technical devices	Total quantity of technical devices (units)	Number of devices that worked their rated resources (units)	Average percentage of wear, %

Cranes	243,952	162,047	66.4
Hoisters (towers)	242,259	11,026	45.4
Elevators	530,519	143,580	27.1
Overhead ropeways	128	45	35.2
Towing overhead ropeways	427	69	16.2
Funiculars	3	3	100
Moving staircases	10,185	37	0.36
Construction hoists;	3,697	916	24.8
Hoisting platforms for disabled persons	2,557	2	0.08
TOTAL	815,727	317725	39

49 accidents occurred in 2012 at the enterprises, where hoisting structures are being operated, which is 10 accidents more than in 2011.

58 persons were injured in 32 out of 49 accidents; 30 persons were fatally injured. As a result of 12 accidents there were group casualties.

Out of 49 accidents 47 (96%) occurred during operation of the hoisting cranes, and 2 accidents - during the use of hoisters (towers).

One third of the accidents at hoisting structures was caused by technical reasons, primarily - by malfunction of technical devices or malfunction (absence) of safety instruments, the same number of accidents occurred due to ineffective production control. Among the primary organizational causes of the accidents are violations of process and labor discipline, erroneous or uncoordinated actions of the servicing personnel, and poor arrangement of the work process.

In 2012, the inspectors of the territorial bodies conducted 24,649 checks of the supervised organizations that operate hoisting structures; 15,280 of them were scheduled and 9,369 unscheduled ones. In 2012, in the course of the checks, in 55.5% of all checked organizations violations of the regulatory document requirements in the area of industrial safety were revealed and orders for elimination thereof were issued with the indication of specific deadlines.

10,254 administrative penalties were imposed for the violations, of which:

- 9,427 administrative fines for the total sum of 284.01 million rubles (79% of the total number of imposed fines were collected);

- administrative suspension of the activity was imposed in 793 cases;

- 1 disqualification;

- 32 warnings.

Within 12 months of 2012, the employees of the Department of supervision over hoisting structures reviewed 256 industrial safety review reports, 243 of which were approved, and 13 were left without approval.

The main problems and risk factors affecting the status of industrial safety remain as follows:

1. High wear factor of basis production assets of equipment and technical devices applied at hazardous industrial facilities.

2. Low level of industrial and process discipline.

3. Lack of qualified specialists, poor level of the specialists' training and advanced training, insufficient knowledge of industrial safety requirements and practical skills.

4. Unstable financial position of a number of organizations, insufficient owners' appropriation of funds for taking measures aimed at enhancement of industrial safety status, training and advanced training of personnel, engagement of qualified specialists and employees and creation of favorable working conditions.

Supervision over Facilities Operating under Pressure Exceeding 0.07 MPa or with Water Heated above 115 Degrees Centigrade

Hazardous industrial facilities using (operating) high pressure equipment are present in all industry branches of the Russian Federation.

Supervision over facilities using high pressure equipment is exercised by the inspectors of Rostechnadzor territorial bodies.

The inspectors of territorial bodies are responsible for 24,606 supervised organizations (juridical persons) conducting the activity in the field of industrial safety, including those for: operation of hazardous industrial facilities (HIF) - 21,852, HIF designing - 509, HIF construction - 562, manufacture of technical devices used at HIFs - 396, mounting and adjustment of technical devices in HIFs - 910, servicing and repair of technical devices - 753, conducting industrial safety reviews - 766, training and advanced training of HIF personnel in non-educational institutions - 596.

The number of equipment operated in the enterprises and organizations amounts to 382,870 pieces, which includes: boilers - 73,388, including 6,416 foreign-made boilers,

pressure vessels - 276,510 (including those with fast-removable heads - 5,333), including 50,690 foreign-made (including those with fast-removable heads - 1,019), steam and hot-water pipelines - 31,167 with a total length of 9,666.32 km, gas-filing and gas-cylinder test stations - 1,805.

The condition of industrial safety in boiler equipment supervision in the supervised facilities is, on the whole, satisfactory.

In 2012, the inspectors of the territorial bodies conducted 12,531 checks of the supervised organizations, 6,010 of which were scheduled and 6,521 - unscheduled. Average percentage of fulfillment of the annual work plan amounted to 99%.

In the course of checks, conducted in 2012, in 46% of checked organizations violations of the regulatory document requirements in the area of industrial safety were revealed and orders for elimination thereof were issued with the indication of specific deadlines.

4,300 administrative penalties were imposed for the violations, of which:

- administrative fines - 4,031 for the total sum of 173,898,000 rubles (74% of the total number of imposed fines were collected);

- administrative suspension of the activity was imposed in 236 cases;

- 1 disqualification;

- 32 warnings.

In 2011, 3,554 administrative penalties were imposed for the total sum of 130,189,000 rubles.

For the purpose of assurance the preparedness for accident localization and elimination actions at boiler equipment supervision facilities, the supervised organizations have scheduled and is taking measures aimed at accident localization and elimination in the hazardous industrial facility.

During the checks, the inspections of the condition of automated process control systems, fulfillment of emergency drills, their subjects, and completeness of the scope of involvement of operating personnel in emergency drills is subject to verification by the inspectors. Revealed violations are reflected in the Statements of checks and orders.

Assurance of safety and emergency resistance of the supervised enterprises is inseparably linked with the fulfillment by the supervised organizations of organizational measures for resistance to terrorist acts, the fulfillment of which is monitored by the state inspectors of the territorial bodies in the course of conducting examinations of supervised enterprises and organizations.

11. ENERGY SUPERVISION

Electrical Power Plants, Boiler Houses, Electrical and Thermal Installations

Analysis of Basic Indicators of Supervisory Activity

The State power engineering supervision department fulfills the tasks of arrangement and exercising of monitoring and supervision over observance of the requirements for safe operation of electrical and heat power generating, electric and thermal grids, power consuming installations, for observance of safety of hydraulic engineering structures at industrial and power-generating facilities, as well as of the requirements in the field of energy saving and efficiency.

The number of power engineering facilities subject to supervision by Rostechnadzor in 2012 was above 3.2 million including: 556 electric power plants; 149 block-stations, more than 116 thousand boiler houses, more than 5 million km of power transmission lines, more than 854 thousand transformer substations; over 1.8 million electric power consumers; over 490 thousand thermal power consumers.

In 2012, the inspectors of State power engineering supervision department conducted and participated in 4 comprehensive and 2 target checks of power engineering organizations: JSC TGK-2, JSC Rus-Gidro, JSC Krasnoyarsk HPS, JSC RJSC of the East, LLC Transmashholding, LLC Business Project.

In 2012, the inspectors of the Rostechnadzor territorial offices conducted more than 160 thousand examinations to check the arrangement of safe operation and technical condition of equipment and main facilities of the power plants, electrical and heat networks of the power supply organizations, electrical and thermal consumer installations.

In the course of Rostechnadzor inspections of 60 thousand juridical persons and individual entrepreneurs, more than 880 thousand of malefactions were revealed by the inspectors. The amount of fines imposed was more than 241 mln rubles. During the reporting period, based on the results of conducted examinations, more than 60 thousand administrative penalties were imposed, including 757 administrative suspensions of the activity. The inspectors allowed the operation of more than 59 thousand of new and modernized power-engineering installations.

During the autumn-winter period of 2011-2012, 132 electrical power plants, 7,523 heating and 816 heat-production boiler houses, and 262 electrical grid organizations were examined.

In the course of inspections more than 19 thousand violations of the safety codes and regulations during operation of heat-power equipment were revealed; 620 juridical persons and 1,603 individuals were subjected to prosecution.

It was revealed in the course of inspections that the production control was unsatisfactory at the 184 supervised power supply organizations; 219 organizations were not completely staffed with the trained and qualified specialists.

During preparation for work in the autumn-winter period of 2012-2013, Rostechnadzor territorial bodies, during the period of May through November, 15 of 2012, conducted examinations of 485 power plants, 26,982 heating, and 1,915 heat-production boiler houses, 855 electrical grid and heat grid organizations.

In the course of inspections conducted by the Rostechnadzor territorial bodies, more than 64 thousand violations of the safety codes and regulations during operation of power equipment were revealed within the reporting period; 3,682 individuals and 950 legal entities were subjected to prosecution. Therewith it was found that production control was unsatisfactory at 268 supervised organizations; 519 organizations were not completely staffed with the trained and qualified specialists.

In 2012, 181 accidents occurred at power engineering facilities.

By the Order of the Government of the Russian Federation No.318, dated 25.04.2011, Regulations for State Control of Observing the Requirements of the Legislation on Energy Saving and Enhancement of Power-Engineering Efficiency were

approved, in accordance with which the examinations of power generating equipment are conducted by Rostechnadzor since January 1, 2013.

Hydraulic Engineering Structures

State supervision and monitoring of HES safety was conducted by 31 Rostechnadzor territorial departments in 83 subjects of the Russian Federation and in eight territorial regions.

Total number of the HES systems, power engineering and water utilization systems, supervised by Rostechnadzor, is 29,964, including:

844 HES of liquid industrial wastes including: 365 HES systems of tailing pits and slurry pits of the mineral resource industry; 377 HES of the waste storages of the chemical, petrochemical and refinery industries; 102 HES systems of waste accumulators of the metallurgy industry;

568 HES of the Fuel and Energy Complex, including: HPP - 218, state district power stations - 80, central heating and power plants - 256, pumped storage power plants - 3; NPP - 11;

28,552 HES of the water utilization system.

According to SNiP 33-01-2003 "Hydraulic engineering structures. General Provisions", HES are classified depending on their elevation and foundation soil types and divided as follows:

class I - 116 complexes;

class II - 332 complexes;

class III - 669 complexes;

class IV - 28,847 complexes.

According to the Russian HES Register, the safety level of the supervised HES has been assessed as follows:

39.4% of the total number of HES systems are at normal safety level where HES have no defects and damage which may, as they evolve, lead to an accident, and HESs are operated in accordance with the safety regulations;

43.4% of the HES systems are at a lower safety level where the structures are in normal technical state but with violation of operation regulations;

12.5 % of the HES systems are at unsatisfactory safety level which is characterized by an increased first (preventive) level of the values of safety criteria and limited function of the structures;

4.7 % of the HES systems are at the hazardous safety level characterized by increased maximum allowable values of the safety criteria, loss of function and inoperability.

In 2012, Rostechnadzor reviewed and approved 242 declarations of HES safety (HES complexes) and expert reports on HES declarations of safety.

In 2012, Rostechnadzor performed 4,055 activities related to the state control and supervision over the owners and operating organizations' observance of the HES safety codes and regulations in the supervised organizations, which was 5% less than in 2011 (4,284).

At the same time, 15,305 violations of codes and regulations on HES safety have been revealed and subjected to be eliminated, which is 8% more than in 2011 (14,188).

As a result of conducted measures, 1,827 legal entities and officials were imposed to penalties, which is 18% more than in 2011 (1547), the total sum of fines amounted to 26,785 rubles, which is 2% higher than in 2011 (26,279), in 6 cases administrative suspension of the activity was imposed, 13 materials were handed over to the law machinery.

12.SUPERVISION IN COAL MINING INDUSTRY

The Department for supervision of coal industry (hereinafter - the Department) participates in exercising monitoring and supervision in the area of industrial safety and safe conduct of works in coal-mining industry, associated with mineral wealth use.

The scope of activities of the Department includes the arrangement of control and supervision of the requirements of the standards of the Russian Federation legislation (Codes) for the field of industrial safety and safe operations of works related to establishment, operation and liquidation of hazardous production facilities of coal mining industry. The Department participates in performing the functions of development and implementation of the State regulatory and legal policy in the sphere of industrial safety

during coal production, enrichment and reprocessing in hazardous industrial facilities of the Russian Federation.

Regulatory and Legal Activities

Since 2010, Rostechnadzor has been engaged in the work related to upgrading federal norms and regulations in the field of mining operation safety. Branch research and development institutes, experts of coal-mining companies and of Rostechnadzor are involved in developing regulatory documents. Regulatory documents are based on R&D results.

In 2012, the Department for Coal Mining Industry Supervision developed and approved 16 regulatory documents in the field of fire safety, prevention of dust-and-gas-and-air mixture explosions, ventilation and operation of equipment. The documents were registered in the Ministry of Justice of Russia according to the established procedure.

State Control and Supervision

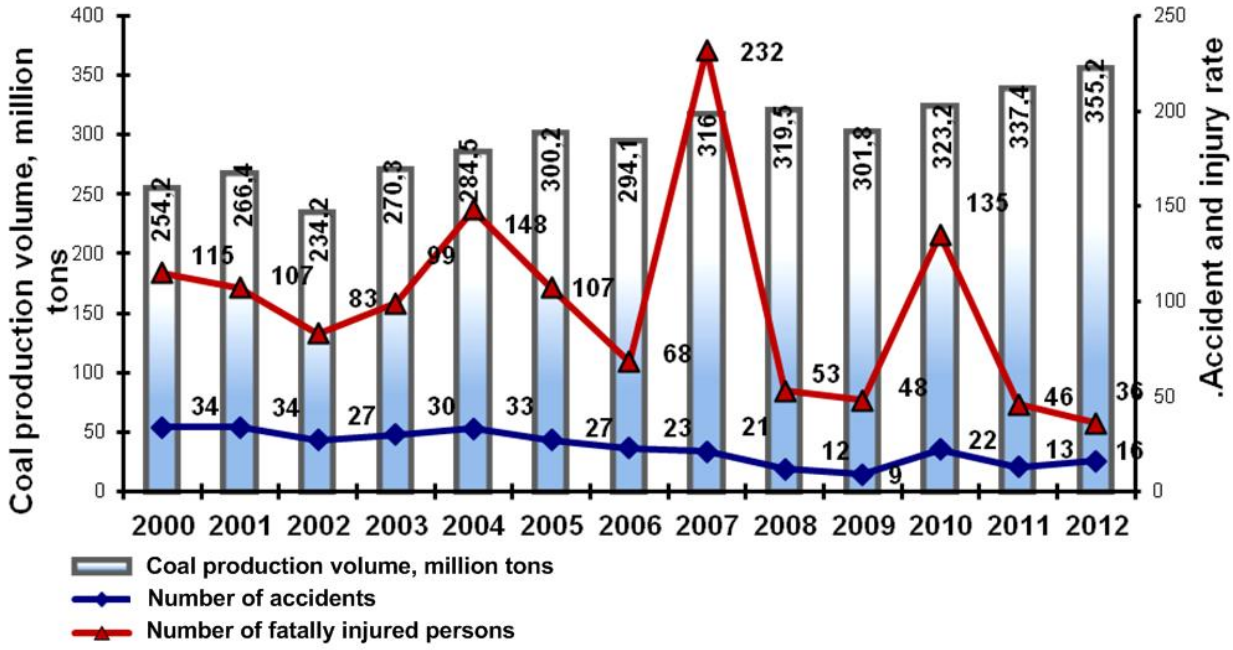
In 2012, 119 mines, 224 open pit mines, and 69 enrichment factories were subject to the state control in the field of industrial safety. All coal mines, excluding 14 mines in the Rostov region, are hazardous due to coal dust explosiveness. Out of 119 mines, 16 are not hazardous by methane, 21 mines belong to Category I by methane, 12 - to Category II, 19 - to Category III, 21 are not categorized, and 15 are hazardous due to unexpected outbursts. In 10 mines coal is mined in beds prone to bounces. The overall coal production (Table 1) in 2012, as compared to 2011, increased by 17.78 million tons and amounted to 355,182 million tons (105.3% of 2011 production), including:

- in mines– -112,913 million tons (112 % of 2011 level);
- in open pits – 242,269 million tons (103.3 % of 2011 level).

The average headcount of the employees involved in the coal industry amounted to 166,347 persons.

The status indicators of industrial safety in the coal industry facilities for 2012 underwent only some minor changes as compared to 2011. In 2012, 16 accidents occurred, among them 3 accidents involving group casualties, and 1 group casualty without accidents. 33 persons suffered from accidents and group casualties, 6 of them were fatally injured. The total number of fatally injured was 36 persons.

The dynamics of coal production, fatal injuries and accident rates within the stated period is reflected in the chart presented below.



Among operating production facilities the most dangerous ones are mines, where coal is mined underground.

In the reporting period, 11 out of 16 accidents occurred underground, 3 accidents - on the surface, and 2 accidents - in open-pit mine. The number of accidents related to endogenous fires increased (Table 2).

Distribution of accidents by types and fatal injuries by injury factors within 2011/2012

Table 2

Pos. No.	Accident type, see injuries	2011-2012 accidents		+/-	2011-2012 see injuries		+/-
1	Explosion (burning, flashes) of gas and carbon dust	2	2	-	-	1	+1

2	Fire (endogenous, exogenous)	4	9	+5	-	-	-
3	Bounce	-	-	-	-	-	-
4	Coal, rock, gas bursts	-	-	-	-	-	-
5	Destruction of buildings, structures, technical devices	1	2	+1	1	4	+3
6	Transport	1	-	-1	11	6	-5
7	Electric current	-	-	-	3	4	+1
8	Machines and mechanisms	-	-	-	10	3	-7
9	Falls	-	-	-	4	4	-
10	Flooding of mine openings, inrush of water, clay	1	-	-1	4	-	-4
11	Sloughing, collapse of lining	4	1	-3	13	10	-3
12	Poisoning, suffocation	-	-	-	-	-	-
13	Other types of accidents and injuries	-	2	-2	-	4	+4
14	**Total:**	13	16	+3	46	36	-10

Practically in all cases, the commissions, investigating the causes of casualties, noted low level of production control over observance of industrial safety requirements at operated hazardous industrial facilities on the part of the persons responsible for exercising production control.

Basic indicators of supervisory and monitoring activity of territorial bodies in the sphere of industrial safety of hazardous production facilities in coal-mining industry

Table 5

Indicators of supervisory and monitoring activity	2011	2012
Number of inspectors (actual), persons	143	158
Number of inspections conducted	9,071	8,067

Number of violations revealed	59,441	50,727
Administrative penalties imposed, total	6,679	7,014
including:		
administrative suspension of activities including	328	561
temporary ban of activities	152	161
administrative fine	6,351	6,453
Total sum of fines imposed, thousand rubles	182,600.2	330,856.0

Licensing and Permitting Activity

In 2012, 16 applications for obtaining/renewal of licenses for industrial safety review in coal-mining industry were reviewed (7 - for obtaining a license, one of them was turned down due to the license applicant non-compliance with licensing requirements; 9 - for license renewal, one of them was turned down due to presentation of inadequate information by the licensee) and 2 licenses were granted for operation of explosion and fire hazardous production facilities.

In 2012, the Coal-Mining Industry Supervision Department developed and handed over to Rostechnadzor Department for Supporting Permitting and Supervision Activity 391 permits for using technical devices in hazardous production facilities for preparation and issue of them to the applicants. 15 applicants were rejected.

13.SUPERVISION OF OIL AND GAS INDUSTRY FACILITIES

The scope of activity of the Department for Supervision of Oil and Gas Industry includes all enterprises of oil-and-gas complex of Russia, including the enterprises of oil-and-gas production, oil, gas, and petroleum product reprocessing and storage facilities, trunk pipeline transport facilities, gas distribution and gas consumption facilities.

Regulatory and Legal Activities

In accordance with the order of the President of the Russian Federation, and for the purpose of perfecting the Russian Federation legislation in the sphere of safety assurance in oil and gas industry, the Department, in 2012, developed and approved five regulatory

technical documents. Two projects of Federal codes and regulations in the field of industrial safety, approved by Rostechnadzor orders (registered with the Ministry of Justice) were developed and put into effect.

State Control and Supervision

Facilities of Oil and Gas Producing Industry

The total number of organizations engaged in the field of industrial safety activity amounts to 1,926. The number of supervised organizations, operating hazardous production facilities in oil and gas production facilities in 2012 amounted to 948.

In 2012, 18 accidents occurred at oil and gas industry production facilities and geological survey facilities; the number of fatal and group injuries in 2012 amounted to 19 cases.

In the course of the year, Rostechnadzor territorial bodies conducted 2,165 examinations of oil and gas production organizations under supervision. In the course of examinations, 10,122 violations of industrial safety requirements, prescribed for elimination by the orders, were revealed.

The total number of administrative penalties, imposed following the examinations, amounted to 1,141. The total sum of administrative fines amounted to 62,843.5 thousand rubles, including those imposed on juridical persons - 46,718 thousand rubles, on officials - 15,926.5 thousand rubles, on individuals - 190 thousand rubles. Administrative suspension of the companies' activities was applied in 28 cases. 4 cases were handed over to law-enforcement bodies against infringers of industrial safety requirements.

Permitting Activity

In 2012, 107 checks of compliance with license requirements and conditions were conducted. 138 violations of the license conditions and requirements were revealed and prescribed for elimination. No licenses were annulled or suspended at oil-and-gas production and geological survey enterprises in 2012.

In 2012, territorial bodies and the Department for supervision over oil-and-gas production facilities reviewed and registered 45,060 industrial safety review reports.

Petrochemical, Oil and Gas Refining Industry Facilities, and Petroleum Product Supply Facilities

In 2012, the number of supervised organizations operating hazardous production facilities of oil-refining industry, petrochemical industry and petroleum product supply facilities amounted to 6,789.

In 2012, Rostechnadzor territorial bodies conducted 4,693 verifications of observation of industrial safety requirements during operation of oil and gas refining and petrochemical production facilities and petroleum product supply facilities, during which 30,190 violations of industrial safety requirements were revealed. The total number of administrative penalties imposed as a result of verifications amounted to 2,297. The total sum of administrative fines amounted to 123,119.4 thousand rubles, including 88,019.8 thousand rubles, imposed on juridical persons, and 34,729.6 thousand rubles - on officials.

Permitting activity

In 2012, the territorial bodies and the headquarters reviewed 645 applications (materials) for the right to execute the activities in the field of industrial safety of hazardous industrial facilities of petrochemical and oil refining industries. 635 licenses were granted following the review results. Licenses to 102 organizations were rejected. Besides, within the reporting period 538 inspections of license requirements and conditions were performed. 1,092 violations of the license conditions and requirements were revealed and prescribed for elimination.

In 2012, 60,709 industrial safety review reports were reviewed and registered by territorial bodies and the Department for supervision over petrochemical, oil and gas refining industry facilities, and petroleum product supply facilities, including reports on: design documentation - 3,964 (28% of the total number of review reports); technical devices - 53,710 (27.9%); buildings and structures - 2,978 (15%); declarations of industrial safety - 58 (-27%); operational documentation - 2,517 (5.1%). 2,801 industrial safety review reports were not approved (4.6% of the number of registered reports).

Gas Distribution and Gas Consumption Facilities

In 2012, the number of organizations supervised by Rostechnadzor, engaged in the activity in the field of industrial safety of hazardous production facilities of gas

distribution and gas consumption facilities amounted to 51,515, among them - 422 gas distribution organizations operating the networks.

In 2012, Rostechnadzor territorial bodies conducted 24,649 verifications of industrial safety requirements during operation of gas distribution and gas consumption facilities. 93,424 violations of the norms and regulations were revealed. Following the verifications 5,782 officials and 1,641 juridical persons were summoned to administrative responsibility. The amount of the imposed administrative fines totaled 342,865 thousand rubles.

Permitting activity

In 2012, the number of applications (materials) for the right to perform the activities of explosion and fire hazardous production facilities, submitted to Rostechnadzor central office, amounted to 6,896. Following the application documentation review, 4,059 licenses were issued, 2,313 licenses were renewed, and refusals for granting licenses were given in 524 cases.

In 2012, Rostechnadzor territorial bodies and the Department for supervision over gas distribution and gas consumption facilities reviewed and registered 46,632 industrial safety review reports, including: 15,033 reports on the design documentation, 21,067 reports on technical devices, 6,392 reports on buildings and structures, 11 reports on industrial safety declarations, 4,129 reports on operational documentation. On 2,325 occasions approvals of industrial safety review reports were denied.

Trunk Pipeline Transport and Gas Underground Storage Facilities

The total number of organizations (juridical persons) engaged in the field of industrial safety of trunk pipeline transport and storage facilities amounts to 642. In 2012, the number of supervised trunk pipeline transport facilities amounted to 5,233. The total length of trunk pipelines exceeds 250.6 thousand km.

Within the reporting period, the inspectors of the Rostechnadzor territorial offices conducted more than 999 checks. 6,764 violations of industrial safety requirements for hazardous production facilities were revealed. As a result of the inspections, conducted in 2012, 891 administrative penalties were imposed; the total sum of imposed fines amounted to 31,744 thousand rubles.

Permitting Activity

In 2012, the territorial bodies and the central office reviewed 49 applications (materials) for the right to perform the activities in the field of industrial safety of hazardous production facilities of trunk pipeline transportation. Following the review, 43 licenses were granted, 3 licenses were renewed. For 3 organizations the licenses were refused (which amounts to 6% of applications for licenses).

In 2012, the territorial bodies and the Department for supervision over pipeline transportation facilities reviewed and registered 15,107 industrial safety review reports, including: 1,206 reports on the design documentation (8.4% of the total number of reports); 12,520 (83%) reports on technical devices, 1.090 (7.3%) reports on buildings and structures, 37 (0.3%) reports on industrial safety declarations, 128 (1%) reports on operational documentation. 1,463 review reports (9.7% of the registered number) were not approved.

14. LICENSING ACTIVITY

In accordance with the legislation on licensing of specific activity types, during the reporting period, Rostechnadzor granted and renewed altogether 9,437 licenses. Refusals for granting the licenses were issued in 1,034 cases.

In accordance with the legislation of the Russian Federation on the use of nuclear power, Rostechnadzor granted 1,410 licenses in 2012. Refusals for granting the licenses were issued in 54 cases.

Industrial Safety Review

According to Federal Law No. 116-FZ of 21.07.1997 "On Industrial Safety of Hazardous Industrial Facilities" (hereinafter referred to as FZ-116), the industrial safety review belongs to activities in the field of industrial safety. The purpose of industrial safety review is to determine whether a facility reviewed complies with the industrial safety requirements imposed thereon.

The organizations having a relevant license for a specified review conduct the industrial safety review at the expense of an organization, which intends to operate or operates the hazardous industrial facility.

In 2012 Rostechnadzor issued 498 licenses to conduct industrial safety reviews, and also 698 checkups were conducted of the license applicants and licensees in the field of industrial safety review.

In 2012 the Federal Environmental, Industrial and Nuclear Supervision Service approved and registered approval of 356,935 industrial safety review reports, and approval of 22,970 review reports was denied as they did not comply with the established requirements.

Distribution of the approved review reports versus subject matters of industrial safety review is shown in the diagram.

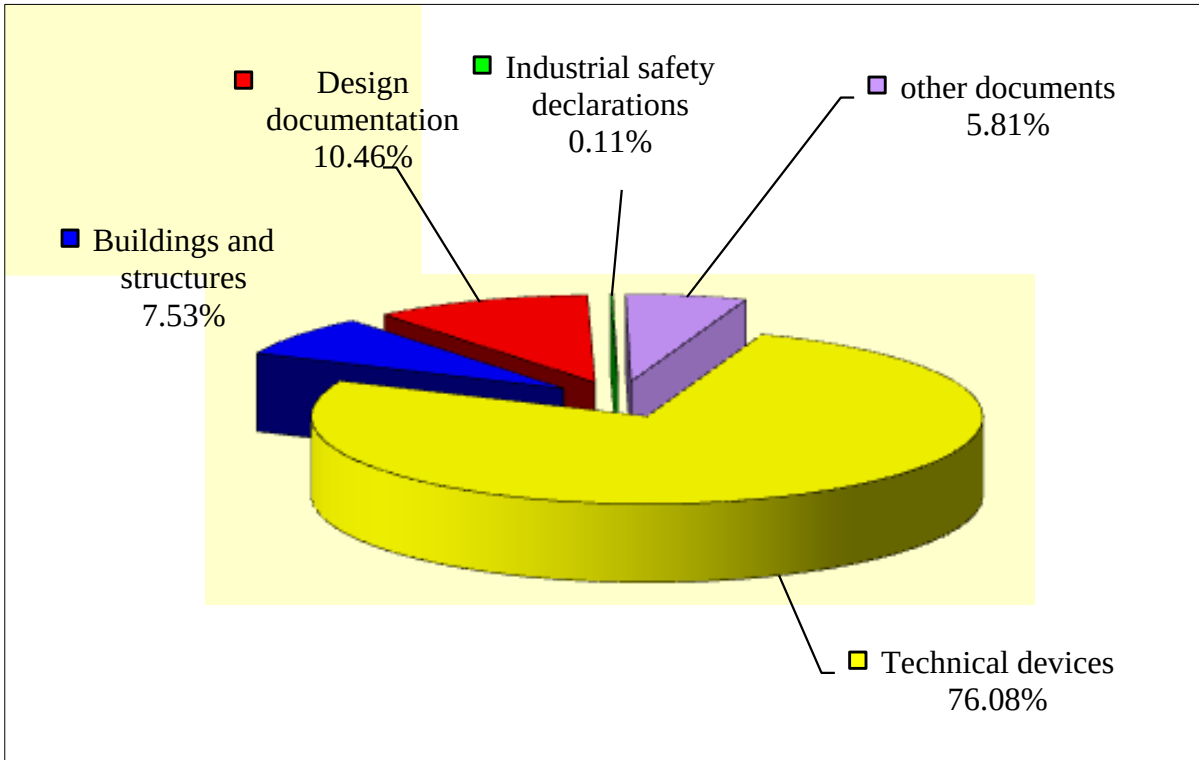


Fig. Distribution of Approved Review Reports Versus Subject Matters of Industrial Safety Review

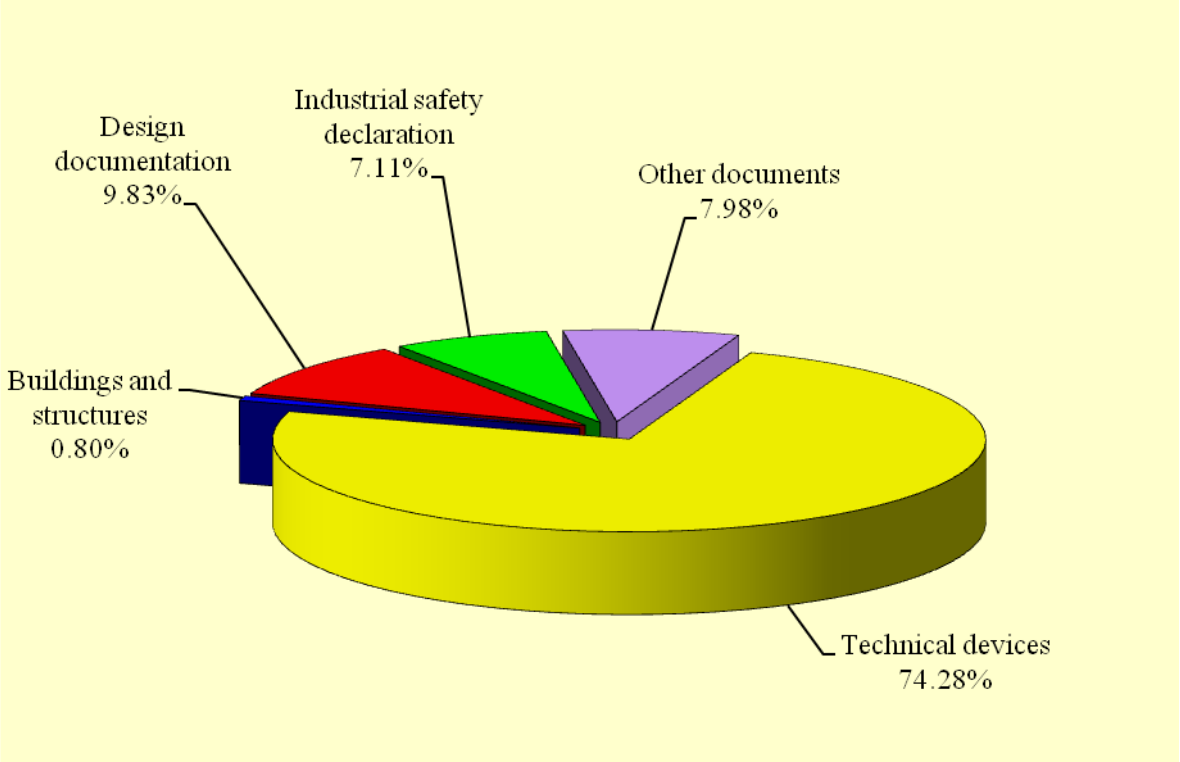


Fig. Distribution of Approved Review Reports Versus Subject Matters of Industrial Safety Review in the Rostechnadzor Headquarters

The main scope of review covers the technical devices used in hazardous industrial facilities.

The principal deficiencies found in expert review reports are:

absence of analysis and conformity assessment of the adopted design solutions;

reduction in the volumes of expert examination of technical devices;

absence of analysis and assessment of previous reviews and incidents connected with the operation of technical devices;

absence of completed structural check analyses of technical devices, buildings and constructions considering the deviations, defects and damage found by the examination;

under-estimated lifetime extension, etc.

Safety Review of Nuclear Facilities

Safety review in the framework of the licensing procedure conducted by Rostechnadzor in the field of atomic energy use is intended to assess the safety analysis submitted by a license applicant or license holder (licensee) (hereinafter referred to as applicant) for a nuclear facility (nuclear installation, radiation source, nuclear materials, radiation substances, radioactive waste storage facility, etc.), information of its actual

status, safety analysis of the declared type of activity in the field of atomic energy use for conformity with the legislation of the Russian Federation, regulations in the field of atomic energy use, state of the art scientific, technical and industrial developments. Safety review serves to assess completeness of the technical and administrative measures envisaged by the applicant to ensure nuclear and radiation safety during the activity applied for.

Safety review is conducted according to Rostechnadzor's requirements specification, which includes topical questions of review, requirements for the expert review report and its submission to Rostechnadzor, and also a list of the applicant's documents to be reviewed.

Requirements for the content and composition of these documents are established by the Administrative Regulations.

Safety review is conducted by the expert organizations holding Rostechnadzor licenses for the right to conduct safety reviews (safety analysis reviews) of nuclear facilities and (or) types of activities in the field of atomic energy use. According to the Administrative Regulations information about the expert review companies having relevant licenses of Rostechnadzor is placed on the Internet site www.gosnadzor.ru.

Applicants select an expert organization from those holding appropriate Rostechnadzor licenses. The persons that were involved in the preparation of the documents submitted to Rostechnadzor by the applicant to justify safety assurance of the nuclear facility and (or) type of activity in the field of atomic energy use cannot be employed for the expert review. In case the documents to be reviewed contain the information constituting state secret, such documents are reviewed by the expert organizations that have the right to work with such information.

Basing on the results of safety review the expert organization makes an expert review report on safety analysis of the nuclear facility and (or) types of activities in the field of atomic energy use. The expert review report is approved by the head of the expert organization, certified by the organization's stamp and submitted to Rostechnadzor, where it is assessed for compliance with the requirements specification for the review,

and after that Rostechnadzor sends a written notice to the expert organization about acceptance or refusal of the expert review report.

The date of review completion is the date of written notice given by Rostechnadzor about acceptance of the expert review report.

The system of safety review acting in Rostechnadzor is an entirety of review process, technical experts, assessment rules and assessment criteria, methods and instruments used in the course of review.

Rostechnadzor controls the safety review system through

the development of regulatory documents and safety guides;

issuing licenses for the right to conduct expert review to organizations;

regular efficiency assessment of the safety review system;

organization of scientific survey for development of review methods;

organization of data bases for nuclear facilities;

taking into account international experience in conducting safety reviews.

Summary of Nuclear Facilities Safety Review in 2012

Safety reviews organized by the Department for Safety Regulation of Nuclear Power Plants and Nuclear Research Facilities of Rostechnadzor Headquarters (the 5th Department)

The number of expert review reports, which were organized and considered by the department, in respect of the documents provided by organizations in support of their applications for licenses or amendments to license conditions prepared by expert organizations, totaled 270.

Safety reviews organized by the Department for safety regulation of nuclear fuel cycle facilities, nuclear power units of vessels and radiation hazardous facilities, supervision over control and accounting of nuclear materials and radioactive substances and their physical protection (the 6th Department)

In 2012 basing on the results of completed reviews the Department made two decisions to refuse licenses (applications of LLC "UNIKA engineering" for a license to design and engineer radiation sources, and LLC "MMTsRDiLOZ" for a license to operate radiation sources).

Safety review in Interregional Territorial Departments on nuclear and radiation safety supervision

In 2012 the Interregional Territorial Department for nuclear and radiation safety supervision (hereinafter referred to as ITD NRS) in the framework of fulfillment of the state function of licensing the activity in the field of atomic energy use organized reviews of the documents provided by the organizations that filed applications for licenses or amendments to license conditions. The number of expert review reports prepared by expert organizations and reviewed by ITD NRS totaled 1165.

Nuclear facilities' safety review problems and solutions thereto

The main problem related to ensuring a required level of safety review in the field of atomic energy use remains shortage of qualified technical experts. This is caused, in particular, by the following circumstances:

limited number of highly qualified specialists in a middle age category, who professionally use special knowledge and can act as experts in the field of atomic energy use;

high employment of highly qualified specialists working in leading organizations of the industry, which limits their availability for safety reviews in the time required.

15. RESEARCH AND DEVELOPMENT

Research in the Field of Industrial Safety

In 2012 Rostechnadzor participated in the fulfillment of federal target programs.

The Federal target program "Fire safety in the Russian Federation for the period till 2012"

The main results of the program implementation in 2012:

in the framework of the activity "Development of training programs, teaching and methodical aids on arrangement and conduct of inspection and supervision of fire safety assurance at nuclear facilities, underground facilities and during blasting operations" works were performed to develop draft manuals and guides for the employees of Rostechnadzor territorial departments on the issues of arrangement and conduct of inspection and supervision of fire safety assurance at underground facilities and during blasting operations;

In the framework of the activity "Development of new technical decisions relating to purification of air in mine works to exclude generation of fire-hazardous concentrations of gases and dusts, development of systems and technical facilities for remote availability control of environment and equipment status monitoring sensors at fire-hazardous facilities, as well as "black boxes" for environment and equipment status monitoring":

in-mine testing was developed and conducted for self-contained independent air and gas control instruments APNK and dust accumulation rate monitoring gauge DPK. The following documents were received: ROST R conformity certificates with the indication of blast protection markings of equipment, certificate of approval for the type of measurement instruments and Rostechnadzor permit to use APNK instruments and DPK gauge. Documents were submitted to the Federal Executive Authority on Intellectual Property (Rospatent) for issuance to the Russian Federation of a patent for APNK instrument and DPK gauge.

For the purpose of introduction of APNK instruments and DPK gauge Rostechnadzor reworked in 2012 the "Instruction for air and gas control in mines", which contains the requirements for automatic control (measurement) of concentrations of methane, carbonic oxide, other dangerous and harmful gases, oxygen and dust in the atmospheric air of mines and availability as part of the air and gas control system of a long term data storage facility for data from the main instrument channels (here below called recorder).

In the framework of the activity "Development and improvement of regulatory legal basis on the issues of fire safety at nuclear facilities, underground facilities and execution of blasting operations":

draft amendments were developed to the federal regulations in atomic energy use "General Safety Assurance Provisions for Nuclear Fuel Cycle Facilities" (NP-016-05) with regard to requirements to explosion safety of chemical processes at nuclear fuel cycle facilities.

Draft instruction was prepared for defining the coal self-ignition delay period.

In 2011-2012 Rostechnadzor developed and prepared for approval Methodological recommendations for performing expert works in investigating technical causes of accidents in coal mines. The document was approved by Rostechnadzor order No. 743 of December 20, 2012.

The Federal Target Program “Reduction of risks and mitigation of consequences of natural and man-induced emergencies in the Russian Federation up to 2015”

The main results of the program implementation over the year 2012:

analysis and typification of man-induced hazards was made for different types of hazardous industrial facilities;

analysis and typification was made of natural hazards in different regions of the Russian Federation;

specific and limit parameters were defined of man-induced and natural factors that have effect on hazardous industrial facilities;

suggestions were developed for zoning the territory of the Russian Federation by levels of exposure to man-induced and natural factors (hazards);

draft regulations were developed for accounting of man-induced and natural external effects on hazardous industrial facilities;

draft first revision was prepared of the federal regulations "Safety assurance of power engineering facilities at earthquakes and earthquake related associations of processes, phenomena and factors of natural and man-induced origin" and their review was conducted;

draft safety guide was developed "Minimization of secondary contamination of territories, transport routes, and transport vehicles for rectification of the accident consequences at nuclear facilities. Procedure for arrangement of the traffic flow charts and decontamination centers in the areas with various contamination levels".

The Federal Target Program "Elimination of chemical weapons stockpiles in the Russian Federation" (hereinafter called as the Program)

The main aims and objectives of the program was to carry out activities connected with the safe implementation of conventional obligations to destroy poisonous substances, which made it possible, under the control of Rostechnadzor bodies, to

commission chemical weapons destruction capacities stagewise within the established dates.

The measures that were taken by Rostechnadzor to control the implementation of safety conditions, with the elimination of violations found by inspections, allowed to substantially minimize the threats of accidents and personnel injuries at chemical weapon destruction facilities, and ensure the implementation of programmed measures for the sake of fulfillment by the Russian Federation of international obligations to destroy chemical weapons, with stagewise commissioning of startup complexes and at design operation modes of processing capacities.

The Federal Target Program "Industrial disposal of weapons and military equipment for 2011-2015 and the period till 2020" and the Federal Target Program "National system of chemical and biological safety of the Russian Federation (2009-2014)" (direction of the Government of the Russian Federation of 13.04.2012 No.RD-P7-2054 of 26.06.2012 No.RD-P7-303)

In the framework of the above mentioned programs control and supervision actions were taken in respect of weapons and special chemical facilities, taking into account the assessment criteria developed, and also facilities at the supervised enterprises engaged in industrial disposal of weapons and their constituent parts.

The strategy of railway transport development in the Russian Federation till 2030 (approved by resolution of the Government of the Russian Federation No.877-r of June 17, 2008)

In the framework of implementation of the Strategy representatives of Rostechnadzor take part in acceptance tests and issuance of authorization documents for transport, which serve as a basis for the use of transport at hazardous industrial facilities.

Technical documentation was considered and acceptance tests were attended to test special wagons designed for mineral fertilizers, caustic ash, tank cars for chemical products (caustic soda, sulphuric acid, phenol, oil products, liquefied hydrocarbon gas).

The work was fulfilled on the subject: "Development of criteria for categorizing industrial facilities as hazardous facilities under the supervision of Rostechnadzor, their classification depending on the risk rate and identification for the purposes of registration".

The work was fulfilled on the subject: "Development of the methodology for planning supervision and control activities and efficiency assessment of the activities of territorial bodies".

A report was prepared in the process of work containing suggestions for the methodology of planning Rostechnadzor supervision and control activities and proposals for the methodology of efficiency assessment of the supervision and control activities of Rostechnadzor territorial bodies.

The results of the work are aimed in general at the improvement of the regulatory basis of the state regulation in the sphere of industrial safety.

The work was fulfilled on the subject: "Development of scientific and methodological support for the analysis of protection status of hazardous industrial facilities" in the framework of the Federal Target Program “Reduction of risks and mitigation of consequences of natural and man-induced emergencies in the Russian Federation up to 2015”.

In the course of the works in 2012 a report was prepared containing the analysis and typification of man-induced threats for various types of hazardous industrial facilities, analysis and typification of natural hazards in different regions of the Russian Federation, specific and limit parameters of man-induced and natural factors having effect on hazardous industrial facilities, proposals for zoning the territory of the Russian Federation by levels of effects of man-induced and natural factors (hazards), a draft code of regulations for accounting of external man-induced and natural effects on hazardous industrial facilities.

The results of the work in general are designed to ensure protection of hazardous industrial facilities against natural and man-induced threats.

The work was fulfilled on the subject: "Development of Federal regulations for manufacture, installation, repairs, maintenance, adjustment and safe operation of hoisting structures".

In the framework of this research work draft Federal regulations in the sphere of industrial safety were prepared "The rules of safe operation of hazardous industrial facilities where hoisting structures are used" (here below called the Federal Regulations).

The draft Federal Regulations developed as a result of this research work are currently under the process of internal state approval.

The work was fulfilled on the subject: "Development of methodological approaches to the organization and conduct of supervision (control) of the operation of hazardous industrial facilities". The need to conduct this research work is dictated by the on-going reform of the system of state regulation in the sphere of industrial safety, which is directed at using differentiated regulation methods in respect of different threat category facilities and reducing administrative burden on business.

The aim of fulfillment of this research work was to develop methodological approaches to the organization and conduct of supervision (control) of the operation of hazardous industrial facilities.

The work was fulfilled on the subject: "Development of regulations for safety assurance of survey activities in construction of underground structures not related to extraction of mineral deposits".

The aim of fulfillment of this research work was to analyze the standards and practices of application of departmental regulatory legal acts in the sphere of mining and industrial safety for compliance with the requirements of the acting legislation of the Russian Federation, bring the requirements of industrial regulatory legal acts in conformity with the legislation of the Russian Federation on subsoil and industrial safety, enhance safety of the works connected with the use of subsoil, reduce excessive administrative barriers.

The work was fulfilled on the subject: "Development of proposals for the methodological support of control and supervision over the implementation of requirements of process specifications in the established sphere of Rostechnadzor activities taking into account the principles and rules of technical regulation of the Customs Union".

The aim of fulfillment of this research work was to develop proposals for conducting control and supervision over the implementation of requirements of process specifications in the established sphere of Rostechnadzor activities taking into account the provisions of technical regulations of the Customs Union.

The results of the work in general are aimed at the improvement of the organization and conduct of control and supervision over the implementation of requirements of process specifications in the established sphere of Rostechnadzor activities.

The work was fulfilled on the subject: "Development of draft decree of the Government of the Russian Federation "On licensing the operation of explosive, fire and chemically hazardous industrial facilities of threat category I, II and III".

In the process of work analysis was made of legislative and other regulatory legal acts in the sphere of state services related to licensing the activities in the field of industrial safety and draft decree of the Government of the Russian Federation was developed on the approval of the Provisions for licensing the operation of explosive, fire and chemically hazardous industrial facilities of threat category I, II and III, and the above mentioned Provisions.

Research in the Field of Safety of Electrical and Heat Installations and Grids

In 2012 Rostechnadzor headquarters together with JSC "STC "Industrial Safety" carried out 6 research works in the sphere of competence of the Department.

1. "Development of methodological instructions for checking safety criteria of hydraulic engineering structures of power engineering facilities".

2. "Scientific and technical support of safety supervision of power engineering projects under construction".

3. "Development of methodological instructions and type program for inspection of power supply units at railway transportation enterprises".

4. "Development of methodological instructions for control of the implementation of investment programs of power engineering entities".

5. "Development of methodological instructions and type program for checking the preparedness of municipalities for heating season".

6. "Development of methodological instructions and type programs for checking power grid systems for the purposes of monitoring safe operation, reliability and technical condition of power supply units".

At the same time in 2012 Department 10 together with the Federal Budgetary Enterprise "Scientific and Engineering Center "Energobezopasnost" conducted research work on the following subjects:

Federal Target Program "Reduction of risk and mitigation of consequences of natural and man-induced emergencies in the Russian Federation up to 2015"

In the framework of the subject of research the fourth stage of research was completed in 2012: "Scientific and methodological support of development of draft federal regulations "Safety assurance of power engineering facilities at earthquakes and earthquake related associations of processes, phenomena and factors of natural and man-induced origin"; first revision was developed of draft federal regulations "Safety assurance of power engineering facilities at earthquakes and earthquake related associations of processes, phenomena and factors of natural and man-induced origin"; review was arranged and conducted of the first revision of draft federal regulations "Safety assurance of power engineering facilities at earthquakes and earthquake related associations of processes, phenomena and factors of natural and man-induced origin" with the participation of interested departments and organizations and a summary of comments was prepared; second revision was developed of draft federal regulations "Safety assurance of power engineering facilities at earthquakes and earthquake related associations of processes, phenomena and factors of natural and man-induced origin", which was circulated for comments in 2012.

In 2012 a draft document was prepared in two revisions, which sets out all the necessary requirements for assuring seismic resistance of different types of power engineering facilities during their siting, design, operation considering current knowledge of earthquakes, seismic hazards, external effects associated with earthquakes, experience in seismic stability and safety assurance of nuclear facilities and capital construction projects.

In 2012, the following draft methods for application of multifactor research results to ensure safety of HES and safety control were developed:

1. Handbook on "Safety of Hydraulic Engineering Structures. Multifactor Research. Concepts, terms and definitions".

2. Draft first revision of federal codes and regulations "Requirements for the Program on Multifactor Research of the Technical State and Safety of High Pressure Hydraulic Engineering Structures".

3. Draft first revision of federal codes and regulations "Requirements for Multifactor Research of High Pressure Hydraulic Engineering Structures and Equipment of Hydraulic Power Plants to Assess the Possibility of Lifetime Extension".

In 2012, a draft first revision of federal codes and regulations "Requirements for Multifactor Research of High Pressure Hydraulic Engineering Structures and Equipment of Hydraulic Power Plants to Assess the Possibility of Lifetime Extension" was developed. It is planned to continue development of this document in 2013 and submit it for approval.

"Scientific and technical support of safety supervision of power engineering projects under construction"

The following draft regulatory documents were developed under this topic in 2012:

1. Provisions on procedure of arrangement and implementation of state civil construction supervision at power generating facilities.

2. Requirements for the form and content of information justifying issuance of a Compliance Report for the constructed power generating facility.

Application of these documents shall ensure efficiency of control and supervisory activities of Rostechnadzor at power generating facilities being constructed and modernized.

"Development of proposals to enhance efficiency of investigation on the accident causes in the power industry affecting the interests of its various legal entities as well as emergency response measures aimed at preventing emergencies by means of innovation techniques"

Two stages of research work were completed in 2012:

analytical research of process violations and prerequisites for accident development in the united power system of Russia based on registration of frequency deviations; proposals on technical decision for establishment of a monitoring system for power non-balances and frequency deviations in the united power system of Russia;

draft first revision of regulatory document "Recommendations on investigation on the causes of accidents related to deviation of the current frequency in the power system exceeding the allowable safety limits".

The research work under the following topic was performed in 2012: "Development of proposals on improvement of the legislation in the field of the power industry in terms of regulation of safety and reliability in the power industry as well as exercising of the state energy supervision".

Research work on "Development of methodological instructions for checking safety criteria of hydraulic engineering structures of power engineering facilities"

the methodological instructions for checking safety criteria of hydraulic engineering structures of power engineering facilities were developed in 2012 with the status of a Rostechnadzor's regulatory document. The work was performed in three stages: draft document, document review, draft final revision of the document submitted for approval by the Rostechnadzor's order.

Scientific and Technical Support of Regulatory Activity

Research in Nuclear and Radiation Safety

In 2012 the FBE SEC NRS rendered the scientific support in the regulatory activity of Rostechnadzor in the framework of:

the state order financed from the federal budget;

the Federal Target Program "Nuclear and Radiation Safety Assurance for 2008 and for the Period up to 2015" (FTP NRSA);

the Federal Target Program "Fire safety in the Russian Federation for the period till 2012";

the Federal Target Program “Reduction of risks and mitigation of consequences of natural and man-induced emergencies in the Russian Federation up to 2015”;

the international cooperation agreements and contractual work with nuclear sector organizations.

State Order to FBE SEC NRS (SO-2012).

In 2012, the FBE SEC NRS in the framework of the state order carried out the activities in two directions and five sections envisaged by the "Departmental list of the state services (activities) rendered (performed) by federal state enterprises within the

jurisdiction of Rostechnadzor as main activity types" (hereinafter referred to as Departmental List).

Direction I of the Departmental List "Goal-oriented scientific research in the following field:

Section 1.1 regulation of nuclear and radiation safety, physical protection of nuclear facilities, accounting and control of nuclear materials and radioactive substances".

Direction II of the Departmental List "Activities on examinations, investigations, testing, reviews and other types of assessment, as well as generation and maintenance of databases pertaining to:

Section 3.2 support of safety assurance measures for nuclear facilities;

Section 3.5 collection, storage, processing and analysis of the information pertaining to the lists of hazardous industrial facilities, granted licenses and permits, results of control and supervisory activities, data on incidents, accidents, casualties, other occurrences at the facilities being supervised;

Section 3.6 collection, storage, processing and analysis of the information pertaining to the use of atomic energy, radioactive materials and substances, results of supervision over accounting, storage and physical protection of nuclear materials;

Section 3.8 collection, storage, processing and analysis of the information on implementation of international commitments of the Russian Federation in the field of ensuring safety in atomic energy use and industrial safety".

In the framework of implementation of 21 subject areas of research and development work, 94 reports containing the research work results as well as draft regulatory documents (federal codes and regulations and safety guides) were issued.

FBE SEC NRS activity in the framework of Federal Target Program "Nuclear and Radiation Safety Assurance for 2008 and for the Period up to 2015"

The main purpose of the Federal Target Program "Nuclear and Radiation Safety Assurance for 2008 and for the Period of up to 2015" (hereinafter referred to as the Program) is a comprehensive solution to the problem of nuclear and radiation safety assurance in the Russian Federation.

In the framework of Activity 50 "Scientific and informational/analytical support in the field of safe management of spent nuclear fuel and radioactive waste" second revisions were developed of proposals to revise the documents (federal regulations):

"Collection, treatment, storage and conditioning of liquid radioactive waste. Safety requirements", NP-019-2000;

"Collection, treatment, storage and conditioning of solid radioactive waste. Safety requirements", NP-020-2000;

"Gaseous radioactive waste management. Safety requirements", NP-021-2000;

"Safety regulations for handling radioactive waste of nuclear power plants", NP-002-2004.

Final revisions of draft safety guides were developed, and namely:

Recommendations on development of quality assurance programs for radioactive waste management;

Provisions for safety assessment of near-surface radwaste disposal facilities.

In the framework of Activity 267 "Scientific and informational/analytical support for solving the problems accumulated in the field of nuclear and radiation safety" recommendations were developed for establishing priorities in safety regulation of FSUE "RosRAO" facilities.

Assessment was made of maximum individual radiation risks caused by removal of spent fuel from the sites of RBMK-1000, VVER-1000, VVER-440, EGP6 and nuclear research installations.

The final revision was developed of draft federal regulations "Periodical safety assessment of nuclear research installations (NRI)".

Second revision was developed of proposals to revise the document NP-009-04 "Nuclear safety regulations for research reactors".

In the framework of Activity 321 "Justification of principles and development of recommendations for optimizing environment radiation monitoring regulation at nuclear facilities" the final revision was developed of the provisions "Recommendations for safety assurance in returning spent fuel assemblies to the supplier state" (safety guide); a set of documents was prepared for submission of the safety guide for approval.

In the framework of Activity 322 "Development of the elements of state nuclear material, radioactive substances and radioactive waste control and accounting systems" the final revision was developed of the provisions for investigation and accounting of abnormalities in nuclear materials control and accounting at nuclear facilities (safety guide).

In the framework of Activity 323 "Development of methodology and construction of information support computer system regulating activities at normal operation of nuclear facilities and at accidents":

- A full-scale calculation for one operating nuclear power unit with RBMK-1000 reactor was made; an album of design basis and beyond design basis accident modes of VVER-1000 NPPs was compiled basing on the software of the Rostov NPP Unit 1 analytical simulator.

- Methodological recommendations were developed for comparison of measurements and calculations of the effective multiplication factor of subcritical systems with deep subcriticality.

- Analysis of the aging predictive models was made based on the example of radiation embrittlement of VVER pressure vessels taking into account the results of sample testing and pressure vessel irradiation.

In the framework of Activity 324 "Regulatory control in assuring physical protection of nuclear materials" the final revision was developed of draft safety guide "Assessment of the status of physical protection system at a radiation hazardous facility".

In the framework of Activity 343 "Development of the methodology and assessment of the status of radiation safety at radiation hazardous facilities related to historical and current activities of mining and processing mineral and organic raw materials with high concentrations of natural radionuclides" the final revisions were developed of draft provisions (safety guides):

provisions for assessment of the current safety level at nuclear facilities;

provisions for the structure and content of report on the results of integrated engineering and radiation survey for decommissioning of a NPP unit.

In the framework of Activity 344 "Development of safety assessment methods for nuclear fuel cycle facilities":

- Second revision was prepared of the proposals to revise the document NP-053-04 "Safety rules for transportation of radioactive material" (federal regulations).

- Final revisions of draft provisions (safety guides) were developed, and namely:

"Content and composition of annual nuclear and radiation safety report for nuclear fuel cycle facilities" RB-043-08;

"Recommendations for assuring reliability of equipment at nuclear facilities".

In the framework of Activity 353 "Development of the methods of integrated analysis for safety assessment of nuclear and radiation hazardous facilities":

Safety guide "Provisions for the recommendations on comparison of calculated and measured radioactivity in the analysis of nuclear safety of VVER reactor plants".

The final revision of the draft safety guide "Recommendations for the structure and content of beyond design basis accidents including severe accidents management guidelines" was developed.

The final revision was developed of draft federal regulations "Requirements for life time management of equipment and pipelines of nuclear power plants". Basic provisions.

An engineering estimate was made of fracture possibilities in equipment and pipelines with the most dangerous of observed defects and an engineering estimate of suitability for operation of austenitic pipelines Dnom300 and pipelines Dnom800 of RBMK forced circulation coolant circuit with the largest of previously selected defects, information was collected and systematized of defects in welded joints and base metal of NPP equipment and pipelines.

In the framework of Activity 354 "Creation of data base on the use of federal regulations and on the assessment of operational occurrences for scientific analysis, development of criteria, principles and basic requirements to nuclear and radiation safety assurance":

The work was continued to develop a full-text data base - legal and regulatory technical documentation in nuclear and radiation safety regulating life cycle of nuclear facilities - "RIS-2".

Proposals were prepared to develop regulatory legal documents and make amendments in regulatory legal documents in connection with the introduction of Federal Law dated 30 November 2011 No.347-FZ "On introduction of changes in some legislative acts of the Russian Federation for the purpose of safety regulation in the field of atomic energy use".

In the framework of Activity 356 "Improvement of informational/analytical support to specialists in terms of the data on nuclear and radiation safety status of nuclear facilities":

Safety guide "Main recommendations on development of Level 1 probabilistic safety analysis for NPP unit for initiating events associated with in-site fires and flooding",

Exemplary list of beyond design basis accidents which should be considered in a NPP design and exemplary assessment of occurrences at a NPP using instructions that contain a formalized PSA model were prepared.

Analysis was made of regulatory documents of France, Germany and USA regulating requirements to in-service non-destructive inspection of NPP equipment and pipelines.

A Russian segment (NNRP – National Nuclear Regulatory Portal) was developed with the international regulatory network (RegNet) located in the Global Nuclear Safety and Security Network (GNSSN) of the international network of nuclear safety regulatory bodies.

In the framework of Activity 357 "Formation of independent safety assessments of nuclear facilities", for the purpose of participation in the activities to create unbiased public opinion on the issues of atomic energy use, three manuals were developed for the specialists of Rostechnadzor and nuclear industry:

"Control of arrangement, conducting, results analysis of the monitoring of subsidence and tilting of nuclear facilities buildings and structures and their use for safety demonstration";

"Control of arrangement, conducting, results analysis of the meteorological and aerological monitoring at nuclear facilities location sites and their use for safety demonstration";

"Regulatory control of NPP safety structures considering seismic effects".

Activity in the framework of the Federal Target Program "Reduction of risks and mitigation of consequences of natural and man-induced emergencies in the Russian Federation up to 2015"

In 2012, the draft safety guide was developed on "Minimization of secondary contamination of territories, transport routes, and transport vehicles for rectification of the accident consequences at nuclear facilities. Procedure for arrangement of the traffic flow charts and decontamination centers in the areas with various contamination levels".

The main challenges in scientific support of nuclear and radiation safety regulation important for the future prospect comprise:

development and scientific and technical justification of new approaches to governmental regulation of nuclear and radiation safety in the conditions of accelerated development of nuclear power engineering including gradual transition to establishment of licensing and supervisory procedures adequate to potential hazard of the activities in the field of atomic energy use, as well as removal of superfluous administrative barriers during unconstrained safety assurance at nuclear facilities;

development of lines of the regulatory document system's improvement ensuring nuclear facilities' safety regulation;

improvement of the methodology for assessment of nuclear facilities' nuclear and radiation safety, including the lessons learned from the NPP Fukushima accident.

16. INTERNATIONAL COOPERATION

The scope of the international cooperation in 2012 was defined by the main lines of activities carried out by Rostechnadzor and the Plan of International Cooperation for 2012.

45 receptions of foreign delegations from 21 countries were arranged in Rostechnadzor in 2012; 239 representatives of foreign institutions and organizations took part therein.

At the same time 443 employees of Rostechnadzor were sent on an assignment abroad to participate in 211 international events.

International cooperation in the field of nuclear supervision

Multilateral cooperation

Cooperation with IAEA

Participation in IAEA policy making bodies

IAEA General Conference

Rostechnadzor delegation headed by the Service Chairman - Deputy Head of the Russian Federation delegation took part in the 56th session of IAEA General Conference, which was held on September 17-21 in Vienna, Austria. The session agenda covered the implementation of IAEA Action Plan for nuclear safety.

Bilateral meetings with the management of the IAEA Secretariat and the managers of the IAEA member-states safety authorities were arranged and held during the General Conference. A bilateral agreement was signed with South Africa national nuclear and radiation safety authority (NNR) on cooperation in the field of nuclear and radiation safety regulation in peaceful use of atomic energy.

During the meeting of nuclear and radiation safety regulatory bodies managers held within the framework of the 56th session of IAEA General Conference, the participants discussed the issues related to rehabilitation of contaminated territories and uranium legacy facilities.

Board of Governors

In 2012 Rostechnadzor representative was regularly participating in Board of Governors meetings as a deputy of the Russian Federation representative. During the Board of Governors meeting held early September 2012 information was presented on implementation of Action Program on participation of concerned Russian entities and

organisations in realization of IAEA nuclear safety Action Plan, whose development had been initiated by Rostechnadzor.

Participation in IAEA international conferences, symposia on the issues of licensing and supervision over nuclear and radiation safety in peaceful use of atomic energy

In 2012 representatives of Rostechnadzor participated in the following international conferences, symposia and forums held under the aegis of IAEA.

- The 14th annual conference of the international group for research reactors and the 16th topical meeting on research reactors fuel management (Czech Republic, Prague).

International conference on NPP life management (USA, Salt Lake City). A report titled "Analysis of justification for VVER type reactors life extension in terms of VVER RPV radiation embrittlement".

- Annual forum of the International Decommissioning network (Austria, Vienna).

- The high level Conference on nuclear safety was held on December 15-17 (Japan, Koriyama). A Report titles presented "Lessons learned from NPP Fukushima-Daiichi accident: actions taken, being implemented and planned" was presented.

IAEA technical and consulting meetings on the issues of licensing and supervision over nuclear and radiation safety in peaceful use of atomic energy

Within the framework of this IAEA activity direction Rostechnadzor's representatives participated in more than 30 events in 2012.

In particular, Rostechnadzor's representative took part in the first meeting of the Steering Committee of the Global Nuclear Safety And Security Network. He made a report on national recourses related to nuclear safety issues, as well as on the Russian segment of Information Regulatory Network (RegNet) as a part of the Global Nuclear Safety And Security Network. In the course of the meeting the participants exchanged information on the knowledge networks for nuclear safety, they defined intermediate and long-term strategy on improvement of the Global Nuclear Safety And Security Network.

Participation in the Regulatory Cooperation Forum activity

In 2012 within the framework of the Regulatory Cooperation Forum, the activity on support of the Jordan nuclear and radiation safety infrastructure establishment was

being continued. Discussed was similar assistance to the Vietnam regulatory body, as well as potential increase of the Forum member-states, recipients of assistance (Poland and subsequent Belorussia joining).

Participation of technical support organizations (TSO) in Forum activities

FBE SEC NRS Representatives participate in the TSO Forum under the IAEA aegis.

Participation in Safety Standards Commission and committees

Rostechnadzor's Deputy Chairman is a member of the IAEA Safety Standards Commission and participate in its activity of a regular basis. A representative of FBE SEC NRS takes part in safety standards committee as a member, and representatives of FBE SEC NRS participate in committees for radiation safety, safe transport and waste safety standards as observers.

Participation in technical cooperation Program activities

Activities within the framework of IAEA regional and national projects on the issues of licensing and supervision over nuclear and radiation safety in peaceful use of atomic energy

In 2012 representatives of Rostechnadzor and subordinated organizations took part in activities implemented within the framework of the following IAEA regional and interregional projects.

"Improvement of capabilities on NPP operational life for long term operation";

"Assistance in decommissioning of facilities using radioactive material";

"Improvement of safety regulatory bodies potential in the conduct of inspections";

"Improvement and harmonization of safety assessments, synergy of probabilistic and deterministic safety analyses".

"Return, management and placement of fresh and/or spent nuclear fuel of research reactors";

"Improvement of safety assessment through the Safety Assessment Education and Training Programme"

"Improvement and harmonization of the national potential in response to nuclear and radiological emergency";

"Improvement of regulatory body capabilities in licensing new NPP designs and exercising relevant supervision";

"Improvement of potential in radioactive waste management";

"Enhancement of NPP operational safety";

"Establishment of robust national infrastructure for nuclear and radiation safety regulation";

"Support of activities on preparation to rehabilitation of abandoned uranium mines";

"Increase of efficiency of use and safety of research reactors with the help of associations, coalitions and exchange of best practice".

In 2012 Rostechnadzor's representatives and FBE SEC NRS participated in the implementation of Armenia's national project on IAEA technical cooperation ARM9020 "Strengthening Armenian national regulatory infrastructure of nuclear and radiation safety". In accordance with 2012 cooperation Plan the following activities were carried out within the framework of indicated project:

- working meeting on NPP operational life extension (April 16-26, Russia, Moscow);

- inspection of the Armenian NPP, wherein Rostechnadzor's representatives took part as observers (June 11-15, Armenia, Metsamor).

Convention on Nuclear Safety

Rostechnadzor delegation headed by Service Chairman- Deputy Head of the Russian Federation delegation - participated in the second unscheduled meeting of the Contracting Parties on review of national reports in accordance with the provisions of the Convention on Nuclear Safety held on August 27-31, 2012 in Vienna, Austria. During the meeting the Contracting Parties discussed the lessons learned from the Japanese NPP Fukushima-Daiichi, taken and planned actions to enhance NPP safety, as well as to analyse the efficiency of Convention on Nuclear Safety provisions.

Joint Convention on Safe Management of Spent Nuclear Fuel and Safe Management of Radioactive Waste

The representatives of Rostechnadzor as part of the delegation of the Russian Federation participated in the Forth Meeting of the Contracting Parties on review of national reports on fulfillment of obligations in the framework of the Joint Convention on Safety of Spent Fuel Management and on Safety of Radioactive Waste Management held within May 14-23, 2012 in Vienna, Austria.

The Federal Environmental, Industrial and Nuclear Supervision Service of Russia and the State Nuclear Energy Corporation "Rosatom" presented the third national report of the Russian Federation.

Participation in activities arranged under the aegis of the Nuclear Energy Agency of Organization for Economic Cooperation and Development (OECD/NEA)

Participation in activities on implementation of the Joint Declaration on Cooperation between the Government of the Russian Federation and the Organization for economic cooperation and development (OCDS) in the field of atomic energy use.

Rostechnadzor representatives take part in the meeting of the OECD NEA Nuclear Regulatory Committee on a regular basis. Rostechnadzor's representative made a report on the safety regulation authority role, when obtaining information on events abroad, at the workshop held in Madrid, Spain, on informing and cooperation in the crisis situation within the framework of OECD NEA Nuclear Regulatory Committee activity.

In the framework of the next meeting of OECD NEA Nuclear Legislation Committee Rostechnadzor's representative reported on the latest changes in the Russian legislation in atomic energy use regarding nuclear and radiation safety regulation.

Rostechnadzor's representative took part in the meeting of the inspection practices working group.

Also the representative of FBE SEC NRS participated in the activity of high level Group on consequences of NPP Fukushima-1 accident. The above Working Group is set up to coordinate Nuclear Regulatory Committee working groups activity, exchange of information on international activities in respect to lessons learned from NPP Fukushima Daiichi events.

Participation in activities in the framework of the Multinational Design Evaluation Program

Rostechnadzor participates in the Multinational Design Evaluation Program (MDEP) along with nuclear and radiation safety authorities of Great Britain, France, Finland, USA, China, South Africa, Japan, South Korea, Canada, India and UAE as associated member of MDEP, working in Steering Technical Committee, Vendor Inspection Cooperation WG, Digital Instrumentation and Control WG and Regulations WG.

Cooperation with the European Commission

In 2012 Rostechnadzor completed cooperation with the European Commission in the framework of the TACIS Program on "Nuclear Safety" in the field of support of Rostechnadzor's licensing and supervisory activities during cooperation of Russian and West-European scientific engineering companies.

Participation in activities carried out within the Eurasian Economic Community (EurAsEC)

The representatives of Rostechnadzor took part in the 9th session of the Council for Cooperation in Peaceful Use of Atomic Energy under the Integration Committee of the Eurasian Economic Community, as well as in the meeting of experts on finalising agreement upon of the Council session materials held on October 22-23, 2012 in the Kyrgyz Republic, Bishkek.

Participation in activities carried out within CIS

In 2012 representatives of Rostechnadzor took part in the sessions of the following working groups of CIS member-states in the field of atomic energy use for peaceful purposes:

- expert group for coordination of priority actions Plan to realize Framework Program for cooperation of CIS member-states in the field of peaceful use of atomic energy for the period of up to 2020 "Cooperation Atom - CIS" (February 28-29, 2012,

Moscow, December 04, 2012, Minsk);

- working group for shaping a comprehensive system to maintain safety of research nuclear installations and for the issues of Coalition of nuclear research reactors of CIS countries (April 17, 2012, November 22, 2012, Baku);

- working group on development of the basic components of the Concept on Ensuring Nuclear, Radiation and Radioecological Policy of CIS Member-States (December 4, 2012, Minsk), as well as the thirteenth session of the CIS Member-States Committee on Peaceful Use of Atomic Energy. In the course of the session, the proposals were discussed on fulfillment of the Primary Action Plan on implementation of the Frame Program on Cooperation of CIS Member-States in Peaceful Use of Atomic Energy for the Period up to 2020 "Cooperation "ATOM - CIS" adopted by Decision of the Council of the Government Heads of the Commonwealth of Independent States on May 19, 2011.

Besides, on December 5, 2012 the representatives of Rostechnadzor took part in the Conference "15 Years of Activities of the CIS Member-States Committee on Peaceful Use of Atomic Energy" held in the Republic of Belarus, Minsk.

Participation in activities in the framework of the VVER Regulators Forum

The delegation of Rostechnadzor headed by the Service Chairman took part in the 19th annual meeting of the VVER Regulators Forum held in the Czech Republic, in June of 2012.

The Forum participants discussed most important and interesting from the safety view point occurrences in the VVER NPP operation as well as exchanged information on the changes, which occurred in their countries in the past year and which were affecting the regulatory activity. Presented were reports of activities of working groups on the issues of PSA application, safety culture and requirements to manufacture quality and safety analysis of VVER type reactors nuclear fuel.

Participation in activities in the framework of the West European Nuclear Regulators Association (WENRA)

Rostechnadzor representatives took part in a plenary meeting of WENRA, in WENRA WG meeting on reactor nuclear safety requirements harmonization, in WENRA WG meeting on management of radwaste, spent fuel and facilities decommissioning.

Cooperation in the framework of G8

3 meetings of the working group for nuclear safety and security were held under the US chairmanship in 2012: March 7-8 (Washington), April 18-19 (Washington) and October 17-16 (Argonne national laboratory, Argonne, Illinois). The Russian Federation delegation headed by Rostechnadzor and made up of Ministry of Foreign Affairs and State Corporation Rosatom representatives participated in the above events.

Participation in other activities (Assemblies, conferences, symposia, workshops, exhibitions, etc.) pertaining to the jurisdiction of Rostechnadzor

Representatives of Rostechnadzor, FSUE VO "Safety", FBE SEC NRS took part on the annual conference "Eurosafe" held November 5-6, 2012 in Brussels, Belgium.

By the invitation of the World Association of Nuclear Operators (WANO), FBE SEC NRS experts took part in peer review of safety at the following NPPs: the Paksh NPP , Hungary (18.02-03.03) and the Dukovany NPP, Czechia 17-27.09).

FBE SEC NRS took part in the session of the European Technical Safety Organisation Network (ETSON) in Helsinki, Finland on June 28. FBI SEC NRS was admitted as ETSON associate member at the session.

Bilateral Cooperation

Cooperation with the USA

Cooperation with the US Nuclear Regulatory Commission (USNRC)

On March 13-15, 2012 Rostechnadzor's delegation took part in USNRC Annual Conference held in Washington.

On March 13-15, 2012 FBE SEC NRS attended a seminar arranged by NRC on comparison of approaches to extending NPP operational life. In the course of the seminar they discussed the issues of NPP Units life prolongation, procedures of Operators' submission of support documentation and review thereof.

On December 4-6, 2012 Rostechnadzor's delegation attended the international conference on nuclear security arranged by USNRC. The Service representative made a report on Rostechnadzor activity on supervision over nuclear security.

An activity was carried out to agree upon draft Agreement between Rostechnadzor and USNRC on cooperation in safety regulation in peaceful use of atomic energy and technical information exchange.

Activities on implementation of Agreement with the US Department of Energy (DOE) in the field of nuclear material control and accounting and physical protection.

The meeting of the Joint Coordination Committee (JCC) was held on June 7-8, 2012 in Munich in the framework of the interdepartmental agreement with the US DOE on improvement of the national systems for control, accounting, and physical protection of nuclear materials, where results of bilateral cooperation were considered and the program of 2012-2013 cooperation was discussed at the following directions: improvement of guidelines and methodical documents; training and refresher of Rostechnadzor territorial bodies inspectors; improvement of measurement techniques, maintaining operability of engineered features for nuclear material control; nuclear security culture.

Rostechnadzor's representative attended the 20th JCC meeting held in the framework of the Agreement between the Russian Federation Government and the US Government in the field of nuclear materials physical protection, control and accounting; he made a report on the program of works in the framework of the Agreement between Rostechnadzor and the US DOE in the field of improvement national systems of nuclear material control, accounting and protection for the period of up to 2017. At the 21st JCC meeting Rostechnadzor's representative made a report on results and prospects of Rostechnadzor and US DOE cooperation in the above area.

Within 2012, 9 meetings were held in Moscow of the joint project group on cooperation in the field of accounting, control and physical protection of nuclear materials, radioactive substances and radiation sources, in particular, on improvement of the supervisory activities and regulatory documents in the mentioned area.

Cooperation with Germany

Activities on implementation of the Agreement with the Federal Ministry for the Environment, Nature conservation and Nuclear Safety (Germany) (BMU) on cooperation, exchange of information and experience in licensing, supervision and review of nuclear and radiation safety.

Bilateral cooperation between Rostechnadzor and BMU was carried out in accordance with the action plan agreed at the annual meeting (February 14, 2012, Ukraine, Kiev). Workshops and working meetings on the following subjects were held in 2012:

"Integrated systems of management and safety culture at the operating organizations. Capabilities of regulatory supervision over implementation thereof" (Slovakia, Bratislava, March 13-16, 2012).

"Safety requirements during licensing and operation of interim storage facilities of irradiated fuel assemblies, radioactive waste and spent ionizing radiation sources" (Russia, Saint Petersburg, July 23-27, 2012).

"Exchange of NPP safety regulation experience in terms of lessons learned from NPP Fukushima-Daiichi accident (Ukraine, Khmelnitskaya NPP, December 3-7, 2012).

Besides, FBE SEC NRS representative attended the workshop on development of national safety authorities portals in peaceful use of atomic energy within the framework of the Global Nuclear Safety and Security Network (GNSSN).

On the invitation of the Society of Nuclear Installations and Reactors Safety (GRS), Rostechnadzor's delegation headed by Service Chairman took part in the managerial workshop "Activity of nuclear and radiation safety regulatory authority based on transparency principles. Introduction and implementation of openness mechanisms. German experience (Germany, Munich, September 29-30, 2012).

Cooperation with France

On April 05, 2012 a meeting was held in Moscow between Rostechnadzor representatives and a delegation of the High Committee for Transparency and Information on Nuclear Security (HCTINS) of France. The meeting major objective was

to present information on Rostechnadzor's activity in the field of safety regulation in NPP operation extension, regulation of nuclear fuel cycle facilities safety. Rostechnadzor representatives gave replies to various questions of the above Committee, including those on the procedure of inspection conduct at nuclear facilities, level of Rostechnadzor's jurisdiction, on distribution of the state regulation of nuclear and radiation safety in Russia.

On July 11-12, 2012 a seminar was held in Rostechnadzor for employees of Russian and Frenche nuclear safety regulators and operators - JSC Concern Rosenergoatom and Electricite de France (EDF). The seminar objective was to exchange information on NPP stress-tests conducted in Russia and France and on review of the following result reports. During the seminar they discussed tasks and problems found in Russia and France based on NPP stress-tests, an agreement was reached to hold a similar activity in Paris in June-July of 2013 for arranging measures aimed at enhancing safety of Russian and French NPPs.

Within the reporting period 2 joint comprehensive NPP inspections were conducted with the participation of parties experts as observers:

- on July 23 - August 03, 2012 Rostechnadzor was conducting a scheduled comprehensive inspection of the Balakovo NPP, wherein inspectors of ASN - French nuclear and radiation safety authority - took part. On October 08-12. 2012 Rostechnadzor's delegation took part as an observer in a scheduled comprehensive inspection of the Chinon NPP conducted by the French regulatory body. During both events the invited party was preparing an unofficial observation report based on result of the work by inspection commission, which conducted the inspection. The report with ASN observations is available at the Rostechnadzor site, and Russian delegation observations of ASN inspection commission work and on the Chinon NPP condition were finalized as a separate document and were handed over to the French party through the routine procedure.

In 2012 representatives of the Russian and French regulators took part in the following joint comprehensive emergency exercises at NPP:

- on October 3-5, 2012 specialists of ASD Department for environmental

protection and emergency response were observing the comprehensive emergency exercises at the Kursk NPP. Besides, on October 2, 2012 an induction meeting was arranged in Rostechnadzor for the French colleagues. Rostechnadzor presented information on emergency response for the case of emergencies at Russian NPPs, on division of powers of concerned organization in this area;

- on November 19-20, 2012 Rostechnadzor specialists were participating in emergency response exercises at the French Blayais NPP. The Russian specialist made presentations on emergency response at Russian NPPs within the framework of induction meeting in ASN, and on November 20 they took part in exercises in the ASN crises center and in the EDF crises center.

On October 5, 2012 a working meeting was held in Moscow to discuss possible development of bilateral cooperation on elaboration of regulatory documents and review of nuclear and radiation safety analysis documents in the course of licensing within the framework of the Agreement of cooperation in the field of nuclear safety between IRSN and FBE SEC NRS. On June 12-16 a workshop was held in Paris, France, to present results of PHEBUS FP research program on experimental simulation of severe BDBA at NPP with light water reactors. A specialist of FBE SEC NRS attended the meeting on IRSN invitation.

Cooperation with Norway

Participation in the activities related to implementation of the Agreement on Cooperation with the Norwegian Radiation Safety Agency (NRSA).

On January 25-26, 2012 a joint meeting of Russian and Norwegian regulators was held in Moscow. Representatives of Rostechnadzor, Department of Defence, Federal Medical and Biological Agency of Russia, as well as State Corporation Rosatom took part in the meeting. During the meeting they exchanged information on bilateral and multilateral cooperation in regulatory oversight over nuclear legacy, discussed the expediency to create an international working group for coordination of activity within the frame of joint projects with NRSA in this field.

Cooperation with Finland

Meetings and workshops on implementation of the Agreement with the Radiation and Nuclear Safety Authority of Finland (STUK)

Bilateral cooperation with Finland was continued according to the Program of cooperation agreed on at the annual meeting (Helsinki, Finland, February 19-20, 2012). 2 workshops were held as per the 2012 program of cooperation: in respect to issues of radiation safety regulation in the national economy with participation of STUK experts as observers in the Rostechnadzor's comprehensive inspection of FSUE RosRAO (June 4-8, 2012, Sosnovy Bor); on conducted in Russia and Finland stress-tests of NPP and review reports made based on tests results (November 21-22, 2012, Helsinki, Finland).

In 2012 in the frame of information exchange among Rostechnadzor and STUK inspectors at the LNNP and Kola NPP, representatives of the North-European and Don ITD for supervision over nuclear and radiation safety took part in joint meetings twice (March 16 and September 20 in Helsinki, Finland), where they presented reports on safety supervision in operation of the Leningrad and Kola NPPs.

Besides, upon the invitation of the Finnish side Rostechnadzor's representatives participated in activities within the frame of the Finnish side cooperation with concern Rosenergoatom: a workshop on arrangement of repair works at operating units (March 12-16, 2012, the Olkiluoto NPP, Finland), a workshop on pre-commissioning at a now unit (April 16-20, 2012, Sosnovy Bor, the Leningrad NPP).

Cooperation with Sweden

On May 27-31 Rostechnadzor's representatives took part in the meeting (Stockholm, Sweden) on planning joint activities with the Swedish Radiation Safety Agency regarding safety regulation in spent nuclear fuel and radwaste management, where the program of joint actions and the list of priority directions of bilateral cooperation were agreed upon. A visit to Forsmark radwaste storage facility was arranged in the frame of the meeting. In 2012 in the frame of cooperation with the Swedish Radiation Safety Agency representatives of FBE SEC NRS took part in the meeting on presentation of independent safety analysis documentation review results for

the spent nuclear fuel final repository in Sweden done by OECD NEA expert group (June 12-15, 2012, Stockholm, Sweden).

Cooperation with Ukraine

On November 20, 2012 Rostechnadzor's delegation took part in the State Nuclear Regulatory Inspectorate of Ukraine. During the meeting participants addressed the issues of taking actions following results of stress-tests at operating Ukrainian NPPs in light of the Fukushima-Daiichi NPP accident lessons.

Cooperation with Spain

On October 8-10, 2012 a delegation of the Spanish Nuclear Safety Commission (CSN) headed by its President visited Russia.

The Spanish delegation visited the shop for the manufacture of reactor pressure vessels and steam generators at JSC Izhorskie Zavody in Kolpino of the Leningrad region, and in GUP MosNPO Radon in Sergiev Posad, Moscow region, where they got familiarized with the system of long term isolation of radwaste and the enterprise security system.

During bilateral negotiations held on October 09, 2012 CSN delegation got to know the system of the state nuclear and radiation safety regulation in the Russian Federation. The Spanish side provided information on the Spanish nuclear organisations and enterprises; CSN structure and functions, NPPs and nuclear fuel cycle facilities safety assurance activity, safety of installations and personnel.

Cooperation with countries developing and building systems of licensing, control and safety supervision in peaceful use of atomic energy

Cooperation with the Republic of Belorussia

The IV International Exhibition "ATOMEXPO-Belarus 2012" and the practical conference "Prospects of nuclear power development in the Republic of Belarus" were held in Minsk within March 20-22, 2012 with participation of the Rostechnadzor's

representative, who made a report on the topic "Normative and legal regulation in the field of atomic energy use in the Russian Federation" in the framework of the round table discussion "Generation of the regulatory and legal database and licensing in the field of nuclear power engineering".

Representatives of the Department of Nuclear and Radiation Safety of the Ministry of Emergency Situations of the Republic of Belarus (Gosatomnadzor of Belorussia) made a scientific-purpose visit to Rostechnadzor within May 21-28, 2012. In the framework of the visit the Belorussian party was provided with the detailed information on the NPP safety regulation in Russia (normative and legal regulation, licensing and supervision), as well as a visit to the Don Interregional Territorial Department for Nuclear and Radiation Safety Supervision of Rostechnadzor and a visit to the site of the Novovoronezh NPP accompanied by Rostechnadzor inspectors were arranged.

The delegation of Gosatomnadzor of Belorussia headed by its Chairman visited Rostechnadzor within August 21-22. During the visit the Belorussian delegation had a meeting with the Rostechnadzor's deputy chairman, as well as visits to scientific and technical support organizations of Rostechnadzor were arranged (FBE SEC NRS and FSUE VO "Safety").

The II International Conference "Nuclear Technologies of XXI Century" was held in Minsk within October 23-26, 2012; a representative of Rostechnadzor took part in this conference with a report on the nuclear and radiation safety regulation system in the Russian Federation, which also reflected information about the changes introduced into the Federal Law "On the use of atomic energy".

A workshop on the problems pertaining to civil construction supervision and nuclear and radiation safety supervision during NPP construction was held by Rostechnadzor in Minsk within December 4-5 for the specialists of Gosatomnadzor of Belorussia and other Belorussian ministries and departments concerned.

Cooperation with Iran

The delegation of the Iranian Nuclear Regulatory Authority (INRA) visited Rostechnadzor on May 21, 2012 in order to hold a meeting on training of the INRA specialists in the Russian Federation to be started in the IV quarter of 2012.

Training of INRA specialists group in the subjects pertaining to safety supervision during NPP operation was held in October-December of 2012 in the "Training and Methodological Center for Nuclear and Radiation Safety" (TMC NRS NEI). Some part of the training was conducted at the Kalinin NPP Training Center.

During the year the specialists of FSUE VO "Safety" came on to Iran to visit the Bushehr NPP site to render consulting services to the Atomic Energy Organization of Iran during inspections of the nuclear safety requirements' fulfillment.

Cooperation with Turkey

A meeting of the Licensing Working Group with participation of the Rostechnadzor's representatives was held on June 20 in Ankara. The representatives of the Turkish Atomic Energy Agency (TAEK), Akkuyu NPP JSC, JSC Concern Rosenergoatom and JSC Atomtechenergo took part in the meeting.

A meeting among the technical experts was held on July 16 in Ankara in the TAEK headquarters to discuss the problems of interdepartmental cooperation between nuclear and radiation safety regulatory authorities of Russia and Turkey. The parties discussed possible lines for cooperation development; thus in particular, the Turkish party drew attention to the advisability of arranging training of the TAEK specialists in the framework of the IAEA national project.

Cooperation with Vietnam

A meeting between the Rostechnadzor's deputy chairman and the deputy director general of the Vietnam Agency for Radiation and Nuclear Safety (VARANS) was held on February 22, 2012 in Rostechnadzor, during which the parties discussed their cooperation plans for 2012. Thus, in particular, the parties came to a preliminary agreement about arranging of two practical workshops and two scientific visits for the VARANS specialists within 2012.

The international Consultation Meeting on the Vietnamese nuclear safety regulation with participation of the Rostechnadzor's representatives was arranged by the Vietnamese Ministry of Science and Technologies on March 8-9 in Hanoi. The

representatives of supervisory authorities and technical support organizations from Great Britain, Germany, Slovakia, USA, France, Japan and South Korea also took part in the mentioned meeting.

On May 28-29, 2012 the VARANS delegation headed by the Agency Director General made a working visit to Rostechnadzor. The VARANS delegation was received by the Rostechnadzor's Chairman in the framework of the visit. During the meeting, the parties summarized the intermediate results of bilateral cooperation and agreed on conducting of a number of arrangements by Rostechnadzor specialists for the VARANS in the second half of 2012. On completion of the meeting, the Vietnamese delegation made a visit to the Training and Methodological Center for Nuclear and Radiation Safety, where it was provided with the information about the training programs for the specialists of nuclear safety regulatory authorities, as well as to the FBE SEC NRS, where they discussed the plans on rendering assistance to the Vietnamese party in development of national regulations in the field of nuclear and radiation safety.

The Mission on Independence and Competence of a Nuclear Safety Regulatory Authority arranged by the IAEA jointly with the OECD Nuclear Energy Agency (NEA) under the aegis of the IAEA Regulatory Cooperation Forum on cooperation of regulatory bodies with participation of Rostechnadzor's representatives as international experts was held within June 26-28, 2012 in Vietnam. In the framework of the mission a workshop was also held on the stated subject, at which a representative of Rostechnadzor made a report on: "Technical competences for efficient regulation and independence in decision making".

On September 24-28, 2012, the VARANS Deputy Director General made a scientific visit to Rostechnadzor. The main subject of the visit held in the framework of the IAEA Technical Cooperation Program consisted in familiarization of the Vietnamese regulatory authority representative with the software tools used by Rostechnadzor for verification of technical solutions adopted by the designer in the NPP project.

The International Exhibition on Nuclear Energy and the relevant workshop on nuclear energy development following the accident at the Fukushima-Daiichi NPP were held in Hanoi within October 25-27, 2012. The delegation of Rostechnadzor headed by

the Service's Deputy Chairman took part in the exhibition. During the meeting the Service's Deputy Chairman presented a report on the changes introduced in the Russian regulatory system following the accident at the Japanese NPP. Rostechnadzor was represented at the exhibition by the information stand in the exposition combined with the State Corporation Rosatom.

The practical workshop was held by Rostechnadzor (in the FBE SEC NRS) within November 26 - December 14, 2012 for 6 employees of the VARANS on the aspects pertaining to use of software tools for verification of technical solutions applied in the NPP project.

Within December 3-14, a two-week training of ten Vietnamese specialists in the general aspects of safety regulation in atomic energy use was held in the FBE SEC NRS (in the framework of a basic 15-week training course in the field of the safe use of atomic energy conducted jointly with the State Corporation Rosatom).

Cooperation with Bangladesh

The delegation of the People's Republic of Bangladesh headed by the Minister of Science and Technologies visited Rostechnadzor on February 27, 2012. Following the results of negotiations, an Agreement was signed between the Federal Environmental, Industrial and Nuclear Supervision Service of Russia (the Russian Federation) and the Ministry of Science and Technologies (the People's Republic of Bangladesh) on cooperation in the field of nuclear and radiation safety regulation in peaceful use of atomic energy.

International Cooperation in the Field of Industrial Supervision

Multilateral cooperation

In the framework of the Interstate Council on Industrial Safety (ICIS) to enable formation of common approaches and procedures on implementation of the industrial safety requirements, Rostechnadzor made a comparative analysis of the fundamentals of state regulation in the field of industrial safety in the coal industry of the CIS countries; the generalized information on the circumstances, causes and consequences of the man-

induced accidents and the employees' injury rates was analyzed; functioning of the ICIS Internet-site was ensured.

The 10th meeting of the ICIS with participation of the Rostechnadzor's delegation headed by Service's Deputy Chairman was held in Yalta (Ukraine) on October 10-11. In particular, during the meeting the ICIS Work Plan for 2013 and the members of the ICIS working groups were approved; the problem of the ICIS site operation improvement was discussed.

In the framework of the CIS Electric Power Council, an Agreement on Cooperation of the State Energy Supervision Authorities of CIS Member-States was signed in the course of its 41st session on May 25, 2012 in Ashkhabad (Turkmenistan). The purpose of the Agreement is to enhance efficiency of the state energy supervision authorities due to determination of common approaches to supervisory activities, exchange the leading experience and develop common regulatory documents in the field of the state energy supervision of the CIS member-states. In the course of the 42nd meeting held on October 19, 2012 in Minsk (Republic of Belarus), the Provisions on the Commission on Coordination of Cooperation of the State Energy Supervision Authorities of the CIS Member-States and the Program of Cooperation of the State Energy Supervision Authorities of the CIS Member-States were approved.

On May 31 - June 9, 2012 the delegation of Rostechnadzor took part in the activities of the 80th Annual Meeting of the International Commission on Large Dams and the 24th International Congress on Large Dams held in Japan (Kyoto).

The delegation of Rostechnadzor took part in the International Conference on Safety, Labor and Environmental Protection hosted by the International Society of Petroleum Engineers (September 8-15, 2012, Australia, Pert). The Conference was devoted to the aspects of safety assurance and regulation, labor and environmental protection during oil and gas production and processing.

In the framework of interfaces with the Chemicals Committee of the Organization for Economic Cooperation and Development (OECD), work was carried out to bring the national legislation in compliance with the OECD regulations in the field of the state regulation of chemical substances and mixtures' handling, as well as the requirements of

industrial safety on assessment of risks of chemically hazardous industrial facilities, prevention of chemical accidents and preparedness of the staff for activities related to confinement and elimination of the chemical accident consequences at hazardous industrial facilities.

The 48th meeting of the OECD Chemicals Committee was held within February 06-09, 2012 in Paris, France. A representative of Rostechnadzor was included into the Russian delegation.

The agenda comprised such measures as the issues related to conducting of joint activities on prevention of accidents at chemical industries.

During the meeting the working group on chemical accidents at industrial facilities presented the information comprising the data on improvement of the Manual on the Chemical Accidents Preparedness Efficiency Indicators developed by the working group, as well as on the new projects, and namely on the project of common chemical accident reporting.

During the meeting of the working group on chemical accidents at industrial facilities the Rostechnadzor's delegation presented information on the Russian legislative requirements in the field of industrial safety assurance (including control and supervisory functions of Rostechnadzor) imposed on production, storage, transportation of chemically hazardous substances at hazardous industrial facilities, including the requirements related to prevention of accidents at chemical industries.

Within November 13-15, 2012 the Russian delegation took part as an observer in the activities of the regular 49th meeting of the OECD Chemicals Committee and the Working Group on Chemicals, Pesticides and Biotechnologies (France, Paris).

The delegation of Rostechnadzor took part in the 7th meeting of the Sectoral Initiative on Equipment for Explosive Environments (Ex equipment) of the UN Economic Commission for Europe (UNECE) held in Calgary (Canada) within September 03-07, 2012. The meeting was arranged jointly with the sessions of the testing group and the steering committee of the IECEx international certification system (the system for certification of equipment for explosive environments of the International Electrotechnical Commission).

A large amount of the imported equipment, differences in the requirements of the existing regulatory documents and legislation in the field of industrial safety, technical regulation, assessment of compliance make it necessary to involve active participation of federal executive authorities including Rostechnadzor in the processes of harmonization of the national requirements, the requirements of the Customs Union and the requirements of the European Union.

A representative of Rostechnadzor took part in the meetings of the 22nd session of the Working Group of the UN Economic Commission for Europe (UNECE) on the policy in the field of standardization and cooperation in normative regulatory aspects (November 2012, Switzerland, Geneva) to discuss the problems of harmonization of the state system for regulation of safety for equipment working in explosive environments, which were developed by the UNECE and may promote convergence of the existing national regulations at the international level.

An expert of Rostechnadzor was regularly taking part in the sessions of the interim working group of the Transport Rights Committee of the Organization for Cooperation of Railways (OSJD) on the rights of transportation of hazardous cargoes. The meetings' participants reviewed the proposals prepared by responsible developers from Latvia and Russia on actualization of Appendix 2 to the Agreement on International Railway Cargo Communication in accordance with amendments and supplements made to the international regulations (UN Recommendations - 17th edition, RID regulations) on sections of Part 1 "General provisions", Part 3 "Dangerous goods list, special provisions" and Part 6 "Requirements for the construction and testing of packagings, intermediate bulk containers (IBCs), large packagings and tanks".

The draft Action Plan of the OSJD Committee on the Transport Right in the field of Hazardous Cargoes Transportation for 2013 was agreed.

Bilateral Cooperation

A working meeting among the delegation of Rostechnadzor and the management of the Ministry of Energy and Coal Industry of Ukraine and Gosenergonadzor of Ukraine, as well as the managers of the territorial bodies of Gosenergonadzor of Ukraine

in Donetsk, Poltava and Kharkov was held in June 2012 in Kiev (Ukraine). The delegation of Rostechnadzor was made familiar with the major aspects of arrangement and implementation of supervisory activities of Gosenergonadzor of Ukraine and its territorial bodies, as well as with the major aspects of activities and arrangement of the equipment operation of NEK Ukrenergo.

To enable exchange of the experience in application of the best practices in implementation of supervisory functions and get access to application of specific types of process devices at hazardous industrial facilities, cooperation was continued with the state supervisory authorities in the field of industrial safety of China, Norway, Poland and France.

During the meetings of the Rostechnadzor's delegation with the management and specialists of the Ministry of Transport, Innovation and Technologies of the Republic of Austria held in Austria in May 2012 (Vienna, Soelden) and in Russia in October 2012 (Sochi), the Parties were made familiar with the major aspects of safety regulation and regulatory and legal documents on arrangement of control and supervisory activities during construction and operation of the state-of-the-art cableways and cable roads.

A working meeting between the delegation of Rostechnadzor and the management and specialists of the Technical Supervision Department of Poland was held in May 2012 in Warsaw. The Russian Party was made familiar with the practical experience and regulatory and legal documents on arrangement of control and supervisory activities on observance of the safety requirements during operation of boiler facilities.

The delegation of the Technical Supervision Department of the Republic of Poland was received in Moscow in October 2012 to discuss the issues pertaining to control and supervision over observance of rules and regulations for the safety of hydraulic engineering structures by the owners of hydraulic engineering structures and operating organizations. The Action Plan for 2013 was agreed during the meeting. A meeting between the representatives of a Rostechnadzor and the delegation of the Chief Department for Risk Prevention of the Ministry of Ecology, Sustainable Development, Transport and Improvement of France was held in Rostechnadzor on invitation of the Russian party on April 5, 2012**.**

Based on the results of the negotiations, the parties agreed to keep on their working contacts in the interests of development of bilateral cooperation in the field of the high pressure equipment supervision and supervision of oil processing and pipeline transport facilities, as well as to plan technical visits of experts to the specific industrial enterprises of France and Russia to exchange experience over observance of the safety requirements at boiler supervision facilities.

A meeting between the delegation of Rostechnadzor and the representatives of the Ministry of Labor of Singapore was held on July 23-25, 2012 in Singapore. The Russian delegation studied the experience of Singapore in the field of supervision over observance of industrial safety requirements during operation of hazardous industrial facilities of oil refining plants, and paid a visit to the petrochemical plant "Shell Jurong Island" to examine and study the safety system organization and ensure failure-free operation of hazardous industrial facilities.

On November 14, 2012 the delegation of Rostechnadzor held a meeting with the Petroleum Safety Authority of the Kingdom of Norway, during which the parties exchanged information on execution of supervisory activities in the field of industrial safety by the authorized governmental bodies of Norway and the Russian Federation.

During the 6th International Forum on Industrial Safety in China, Rostechnadzor delegation met with the management and specialists of the State Industrial Safety Supervision of China and visited the iron mine Tsyuge Tsyuzan in the Miyun county in the north of Beijing (Beijing, September 16-22, 2012). During the meeting with the management of the State Industrial Safety Supervision of China the parties discussed the aspects of bilateral cooperation between the supervisory bodies. The Chinese party expressed interest in Russian experience in the field of safety assurance during the construction and operation of oil-trunk pipelines.

During the visit of the Russian delegation to the mine, the Chinese party arranged a meeting with the management of the mine and the representatives of territorial inspection supervising the facilities of coal-mining, metal mining and metallurgical industries. Rostechnadzor delegation got familiarized with the arrangement of open pit mining and

the arrangement of dispatcher center activities related to the management of the production process of iron ore underground mining.

17.PUBLIC AND MEDIA RELATIONS

Public Applications Treatment

In 2012 Rostechnadzor Headquarters and territorial departments received 20,233 applications from public, which is 35.8% higher than in 2011 (14,896). 7,978 (39.4%) out of the total amount of applications received were related to shared information systems (whereas, in 2011 the number of such applications was 4,807, i.e. 32.3%).

The territorial departments received 14,474 public applications during the reporting period. Rostechnadzor Headquarters received 5,759 applications (i.e. 28.5% of the total amount of received applications).

There were 1,515 personal visits to Rostechnadzor in 2012, 31 out of them took place in Rostechnadzor Headquarters, the rest of the personal visits, namely 1,484, took place at the territorial departments.

The following territorial departments received most of the public applications: Rostechnadzor Headquarters – 1,546, CisUral Department – 1,347, North Caucasus Department - 944, Ural Department - 840, North-Western Department - 787, Interregional Industrial Department - 760, West-Siberian Department - 720.

The analysis of applications, received by Rostechnadzor Headquarters, showed what issues were touched upon in the applications, and corresponding percentage of the issues. Therefore, 25.2% of applications deal with construction supervision, 19.4% - supervision over oil and gas industry facilities, 15.5% - energy supervision, 10.6% - legal issues. Besides, there were issues related to general industrial supervision, mining supervision, licensing and permitting activities, social issues.

In cases, envisaged by current legislation, in the process of applications consideration Rostechnadzor conducted 2,535 scheduled and unscheduled field inspections in order to perform an objective analysis of the legality of a public application, to take measures and implement preventive activities, to call the guilty persons to administrative account.

In 2012 Rostechnadzor Headquarters checked the work progress related to public applications consideration in Northern-Caucasus Department, Upper Volga Department, CisUral Department, Ural Department and Middle Volga River Basin (Middle-Povolzhiye) Department, as well as in Siberia and Far East Interregional Territorial Department of Rostechnadzor for nuclear and radiation safety supervision.

In September, 2012 officials of territorial departments responsible for public applications consideration and documentation maintenance took part in a workshop - Measures on Enhancement of Public Applications Treatment in Territorial Departments - Records Management.

In 2012 Rostechnadzor territorial departments held 91 meetings and a conference on the enhancement of public application consideration effectiveness.

147 information and reference documents and statistics materials, dealing with public application treatment, the results of their consideration and measures taken, were posted on Rostechnadzor website, namely, in Public Chamber section (in 2012 the number of such documents was 127).

In 2012 the number of visits to Public Chamber section of the website increased, in comparison with previous years. Thus, in 2010 the number of visits was 220,000, in 2011 - about 330,000, whereas, in 2013 - more than 450,000 visits.

Public Information

In accordance with Law No. 8-FZ dated February 9, 2009, "On providing access to information on the activities of the governmental bodies and local governing institutions", scheduled work on mass media informing about Rostechnadzor activities in the framework of the following four major directions was carried out in 2012:

1. Placing of information at the official website of Rostechnadzor according to the following topics:

- official events, including international level events, with the participation of Rostechnadzor management;

- scheduled and unscheduled inspections of enterprises;

- investigation of the causes of accidents and injuries (weekly updated information);

- Rostechnadzor activity in the framework of the fulfillment of the requirements of RF Government Decree "On providing access to information on the activities of the Government of the Russian Federation and federal executive authorities" dated November 24, 2009;

- independent review and independent anti-corruption review of draft regulatory legislative acts;

- meetings of Rostechnadzor Public Council, etc.

Cooperation with pressmen Treatment of inquiries

The inquiries received from the mass media during the past year were mainly related to several informational aspects:

- development of bill "On introduction of changes into Federal Law No. 116-FZ On Industrial Safety of Hazardous Process Facilities dated July 21, 1997 and other legislative acts of the Russian Federation";

- Rostechnadzor comments concerning the flood in Kuban.

In 2012 active cooperation with the leading Russian publishers and information agencies took place. Articles concerning the activities of Rostechnadzor were published in such newspapers as "Vedomosty", "Izvestiya", "Kommersant", "Russian Newspaper", "Komsomolskaya Pravda", etc., information agencies RIA Novosti, Interfax, ITAR-TASS, RBC, etc..

Regulatory acts and documents dealing with various aspects of nuclear and radiation safety were published in Rostechnadzor official publication Nuclear and Radiation Safety in 2012. The focus was on the protection of operating Russian NPPs from external impacts in the light of the Fukushima accident.

Besides, in 2012 the works of the leading specialists of Rostechnadzor and SEC NRS were published in monthly magazine about Russian nuclear industry ROSERGOATOM, in magazine Safety of Fuel and Energy Complex Facilities, in the collection of works dealing with the symposium on international nuclear law, held within

the framework of ATOMEXPO 2012, and in monthly scientific production magazine Industrial Safety, namely, in regular head Information from Rostechnadzor Press-service where data on current Rostechnadzor activities was provided.

Mass media materials concerning Rostechnadzor activity were followed up daily in 2012.

Mass media representatives were immediately informed about the activities of Rostechnadzor commissions in case of emergency situations at hazardous production facilities.

Mass media representatives were provided with information on occurrences at facilities by means of phone, clarification was provided upon operative requests sent by fax or email. Moreover, mass media agencies obtained immediate information on significant events related to Rostechnadzor activities.

TV reports on various issues related to Rostechnadzor activity were broadcasted by Channel 1, VGTRK, RBK-TV, Stolitsa, etc., radio reports were broadcasted by Vesti-FM, GRK Mayak, Business-FM, etc.

Participation of Rostechnadzor in Exhibitions

Rostechnadzor activity in the field of nuclear and radiation safety regulation was presented at the following international events:

The Fifth International Exhibition Workshop on Nuclear Energy (Vietnam, Hanoi, October 25-27, 2012);

International Forum Atomexpo 2012 (Russia, Moscow, June 4-6, 2012);

The 8th International Scientific and Technical Conference on Safety, Economy and Nuclear Energy Effectiveness (ISTC-2012) (Russia, Moscow, VNIIAES, May 23-25, 2012);

II International Exhibition the World Ocean 2012 (Russia, Moscow, International Exhibition Center Crocus Expo, November 29 - December 1, 2012);

The Eighth International Moscow Forum Accurate Measurement - Basis of Quality and Safety (Russia, Moscow, All-Russian Exhibition Center, May 23-25, 2012).

Rostechnadzor activity in the field of industrial safety was presented at the following international events:

The Third International Exhibition and Conference on safety and Labour Protection in TEK-SAPE 2012 (Russia, Moscow, April 10-12, 2012);

XVII International Forum Safety Technologies (Russia, Moscow, February 14-17, 2012);

V International Scientific and Practical Conference on Industrial Safety and Labour Protection- 2012. Problems and Perspectives (Ukraine, Yalta, October 8-12, 2012).