



JOINT-STOCK COMPANY
URAL ELECTROCHEMICAL
INTEGRATED PLANT

ASC "ROSATOM" COMPANY



SC UEIP
ENVIRONMENTAL
SAFETY REPORT
2017



FOREWORD

Public Environmental safety report 2017 is the tenth environmental report prepared on a voluntary basis by Stock Company Ural Electrochemical Integrated Plant and addressed to the wide range of the concerned parties. The report includes data on SC UEIP environmental activities, production environmental safety and environmental impact.

One of the Company key tasks remaining constant for many years is to ensure the parity between the economic and environmental values. Practically it is ensured by implementation of corporate programs focused on technical upgrade, retrofit and energy saving. Moreover, SC UEIP management understands the need for keeping a balance between strategic objectives of corporate business development and environmental safety being critically important for life and health of present and future generations.

This report was prepared in accordance with the Sustainability Reporting Guidelines i.e. Global Reporting Initiative GRI G4 Core.

Finally, it's worth remarking that 2017 is the year of the 100th anniversary of the Great October Socialist Revolution!

This event may be treated in different ways, but it is quite clear that October 1917 has drastically changed the course of world history. New esthetics, new styles of art, painting, architecture, poetry were created in the storm of revolution. Developed early on in the Soviet era, and fully subordinate to Soviet ideology, the Constructivist movement was intended to form the foundations of a brave new world. The introduction of the Five-Year Plans coincided with the time when constructivism was adopted as the official architectural style in the USSR. All that allowed many architects to implement daring projects across the Soviet Union. Ural became one of the biggest attractions for them. Constructivism is undoubtedly regarded as one the brands of modern Yekaterinburg. More than 500 buildings were built in the city during the period 1920-1940. A new building construction occurred every two weeks and today almost every fourth building is considered to be a monument. Such intensive development of the city occurred neither before, nor after this period.

Constructivism is the main architectural feature of modern Yekaterinburg. That's why we chose constructivism to be the revolutionary style of Environmental report 2017. The report contains the information concerning not only UEIP and its environmental safety but also main architectural monuments of the capital of the Urals. And you'll consider how we managed.

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In 1945 the USSR Soviet of People's Commissars took the decision to start the construction of gas diffusion plant in Sverdlovsk-44 located in Sverdlovsk region. The Plant was designed for producing highly enriched uranium (HEU) under the Soviet nuclear weapons program. In 1949 Ural Electrochemical Integrated Plant was put in operation. It was the first in the USSR industrial company providing commercial uranium isotope separation using gas diffusion method. To meet the needs of nuclear power industry (reactors, offshore power plants, research reactors and nuclear power plant reactors) the production of low enriched uranium (LEU) was started in 1954. In 1962 the first in the world centrifuge uranium enrichment plant was commissioned, being an important step towards increasing efficiency of UEIP enrichment production. UEIP experts and qualified specialists promoted development and provided the advanced level of enrichment production. In 1966 the plant reconstruction program was started and by 1988 the gas diffusion equipment has been completely replaced by the centrifuges. It made possible to reduce the power consumption of separation production by a factor of 10 resulting in twofold or threefold increase in enrichment capacity. In the early seventies UEIP entered the international market and since then, it has exported low enriched uranium to the companies in France, Germany, Belgium, England, the USA, South Korea, Sweden, Spain, Finland, Switzerland, Italy, Argentina. In 1989 UEIP ceased generation of weapon-grade uranium. Pursuant to intergovernmental agreements on reduction of nuclear weapons UEIP initiated reprocessing HEU into fuel for nuclear power plants in 1995. For this purpose UEIP developed and introduced the special HEU-LEU technology.

On August 15, 2008 Federal State-owned Unitary Enterprise Ural Electrochemical Integrated Plant was transformed into Joint-Stock Company Ural Electrochemical Integrated Plant. An important milestone became UEIP incorporation into ROSATOM TVEL Fuel Company in 2010. TVEL Fuel Company comprises separation-sublimation combine, gas centrifuge production, fabrication of nuclear fuel and research & development cluster. It enabled further effective development of the Company, its production facilities, infrastructure and human capital. According to the Russian Federation legislation since 2015 Stock Company Ural Electrochemical Integrated Plant (SC UEIP) is the full commercial name of the Company. SC UEIP is located in the industrial area of Novouralsk city in Sverdlovsk region 80 km north-west of Yekaterinburg. Two settlements share borders with the Company: Novouralsk city (about 81 000 residents) and Verkh-Neivinsky settlement (about 5 000 residents). SC UEIP is one of the key players in the Russian nuclear fuel cycle, holding intermediate position between uranium mining and fuel fabrication for nuclear reactors.

At present SC UEIP is the largest uranium enrichment company not only in Russia, but also in the world. The Company enrichment production applies highly effective and reliable gas centrifuge technology. The following companies represent enrichment production of Russia and apply the same technology:

- Joint-Stock Company Electrochemical Plant (ECP), Zelenogorsk, Krasnoyarsk region
- Joint-Stock Company Siberian Chemical Enterprise (SChE), Seversk, Tomsk region
- Joint-Stock Company Angarsk Electrolysis Chemical Combine (AECC) Angarsk, Irkutsk region.

The majority of nuclear power reactors run on uranium fuel enriched in U-235. The Russian enriched uranium export contributes to a balanced global energy mix and is of the same importance as the Russian gas and oil export.

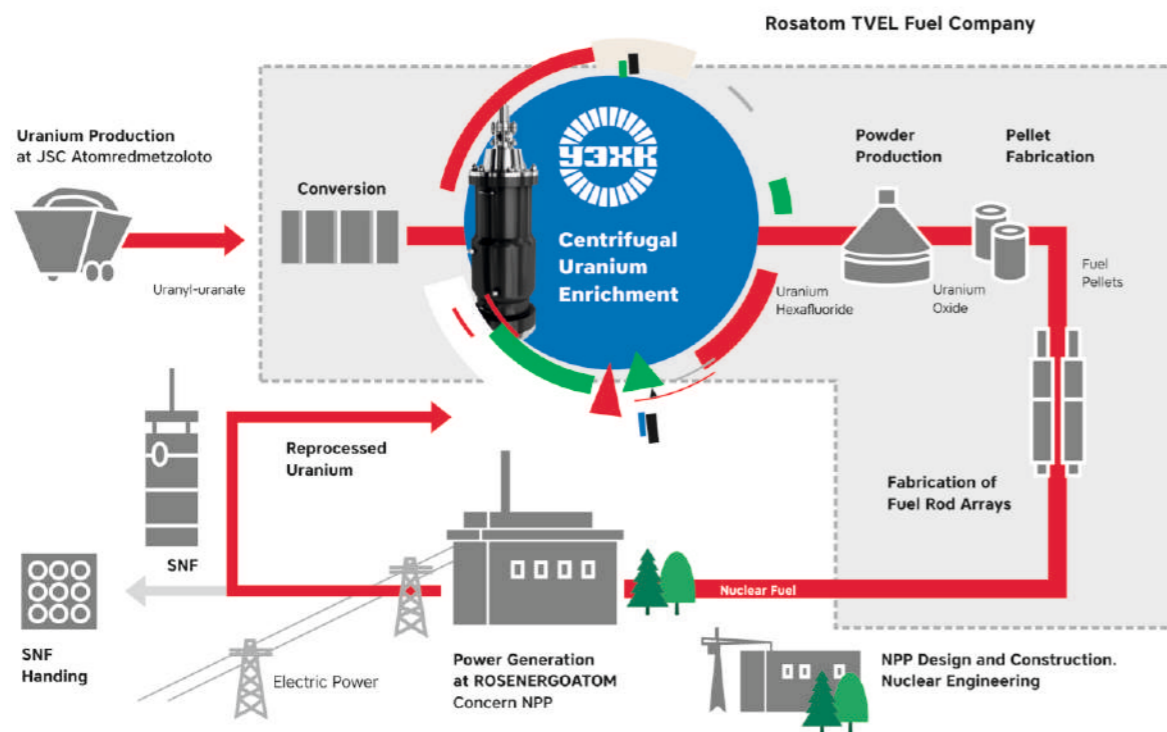
The key element of SC UEIP structure is the production unit consisting of process shops 53, 54, 87, and directly associated subdivisions: Analytical center (department 16), chemical metallurgical shop (shop 70), machinery revision shop (shop 19) and department of special product storage, transportation and control (department 7). The gas centrifuge cascades are installed in shops No.53, 54, 87. "Chelnok" facility located in shop 54 is used for transferring uranium hexafluoride of specified U-235 assay into the cylinders of foreign customers.

Natural uranium consists of three radioactive isotopes:

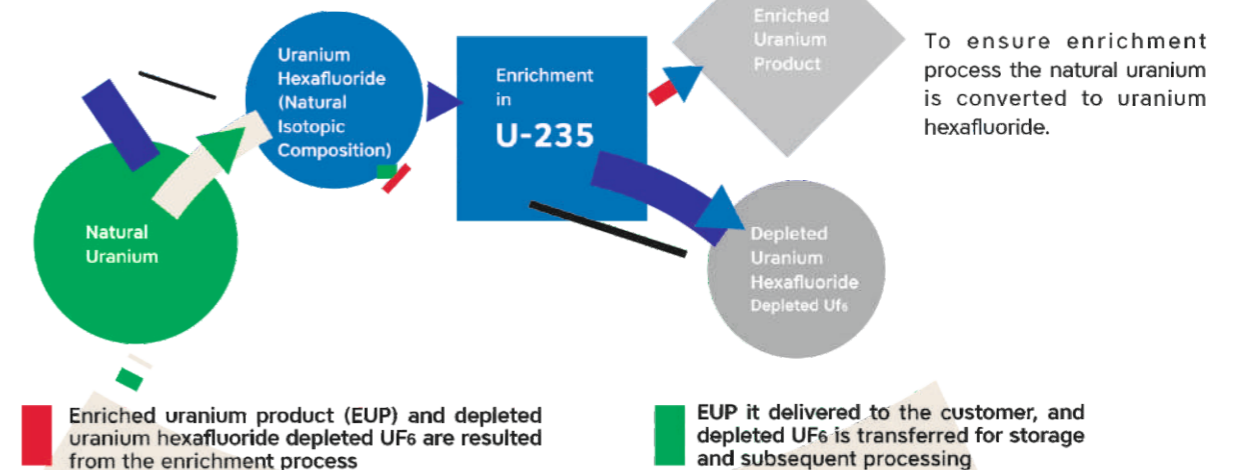
- U-238 ~ 99,28%
- U-235 ~ 0,71%
- U-234 ~ 0,01%

Enrichment production waste processing (extraction, precipitation, vessel washing, uranyl-uranate fluorination, solid radioactive waste conditioning, metal waste preparation), operation of process pulp filtration unit, preparation of solid radioactive waste delivery to State Unitary Enterprise "National operator for radioactive waste management" (SUE NO RWM) are performed in the chemical metallurgical shop. Equipment decontamination and main equipment repair are conducted in the machinery revision shop. Analytical Center performs analytical procedures and produces uranium isotopic and chemical composition certified reference materials. Department of special product storage, transportation and control ensures nuclear material storage and transportation and performs some operations related to nuclear material control and accounting.

SC UEIP Position in the Rosatom Nuclear Fuel Cycle



Uranium Isotope Separation Flow Chart



The technology for enriched uranium transfer into the transport cylinders of international customers was developed in 1973. Since then, the company products have been supplied to the customers in France, Spain, Great Britain, Germany, Sweden, Finland, Netherlands, USA, Republic of South Africa, South Korea, Japan and China.

OVER THE WHOLE PERIOD OF EXPORT ACTIVITIES THE COMPANY RECEIVED NO CLAIMS ON THE SUPPLIED PRODUCTS



ENSURING SAFE AND SUSTAINABLE DEVELOPMENT, MITIGATION OF ENVIRONMENTAL IMPACT

SC UEIP management system is certified against the standards

- ISO 9001:2008;
- ISO 50000:2011;
- ISO 14001:2004;
- OHSAS 18001:2007

in the framework of Rosatom TVEL Fuel company integrated management system

STRATEGIC GOAL

INTEGRATED MANAGEMENT SYSTEM

2

ENVIRONMENTAL MANAGEMENT

is a part of corporate governance system that involves well-defined organizational structure and is addressed to achievement of environmental policy objectives by implementing environmental programs.

Its concept is based on sustainable development. In 1992 in Rio de Janeiro the summit of state heads was held. It was devoted to human society and nature sustainable development, and adopted Agenda 21 with general provisions of the new concept being suggested to all countries of the world. The summit concluded that environmental management shall be treated as key dominant of sustainable development and as the highest priority for industrial operations and business. In 1993 in the course of the Uruguay Round negotiations devoted to establishment of the World Trade Organization, it was decided to introduce the new environmental international standards.

International Standardization Organization (ISO) issued ISO 14000 standards establishing the concept of environmental management system. One of the key parameters of the Company sustainable development is the effectiveness of Quality management system (QMS) that covers the whole life cycle of the products from their development to implementation, and ensures the faultless operation of all process chains. SC UEIP QMS is being constantly improved: from zero-defect production, comprehensive quality control system to QMS implementation, certification and performance since 2004 according to ISO 9001.

SC UEIP ensured introduction and successful performance of Environmental management system (EMS). A comprehensive certification audit for conformity to ISO 14001 and ISO 9001 was conducted at SC UEIP in 2010. The audit conducted at SC UEIP subdivisions resulted in the issuance of Certificate of conformity which proved the compliance of SC UEIP production management with QMS and EMS requirements. In 2011-2012 the Company was audited for conformity to ISO 9001 and ISO. The audit results proved the conformity of SC UEIP QMS to the issued TUV CERT certificate. In July 2012 SC UEIP Environmental management system was successfully audited by "Vattenfall Nuclear Fuel AB", Sweden.

A comprehensive certification audit was conducted at SC UEIP in July 2013. The audit confirmed the compliance of QMS performance with the issued Certificate of conformity. In October 2013 SC UEIP was audited in the framework of JSC TVEL Integrated management system under the requirements of three international standards: ISO 9001 (Quality management system), ISO 14001 (Environmental management system) and OHSAS 18001 (Occupational health & Safety assessment scheme). In 2013 SC UEIP Environmental management system was also successfully audited by the Swedish company «Vattenfall Nuclear Fuel AB». The audit results convinced the Swedish customers of SC UEIP being a reliable and safe business partner.

In 2014 JSC TVEL Integrated management system was successfully audited. Besides, in 2014 SC UEIP was given a Certificate of QMS conformity to ISO 50001 (Energy management system). Therefore, at present SC UEIP Integrated management system includes:

ENVIRONMENTAL MANAGEMENT SYSTEM INTENDED TO IMPROVE PROCEDURES THAT ENSURE ENVIRONMENTAL SAFETY

QUALITY MANAGEMENT SYSTEM INTENDED TO IMPROVE PROCEDURES THAT ENSURE HIGH QUALITY OF RELEASED PRODUCTS

OCCUPATIONAL HEALTH & SAFETY ASSESSMENT SCHEME ESTABLISHED FOR THE COMPANY EMPLOYEES

ENERGY MANAGEMENT SYSTEM INTENDED TO IMPROVE PROCEDURES THAT ENSURE ENERGY SAVING AND CONSERVATION OF NATURAL RESOURCES.

INTEGRATED MANAGEMENT SYSTEM WAS INTRODUCED IN ALL SC UEIP SUBDIVISIONS PROVIDING QUALITY AND OPERATIONAL SAFETY AT ALL PRODUCTION STAGES.



SC UEIP ENVIRONMENTAL POLICY

Constant mitigation of environmental and social impact is the highest priority of SC UEIP environmental policy. When planning its activities, the Company takes into consideration the interconnection of environmental and production issues. SC UEIP employees understand their responsibility for ecological implications of production process and constantly work for decreasing the man-made impact on the environment.

Pursuing ROSATOM State Corporation environmental policy SC UEIP management is committed to the following principles:

- meeting the statutory and regulatory requirements and standards in the field of radiation and nuclear safety, environmental protection, sanitary-and-epidemiological well-being of the population, civil protection in emergency situations of natural or man-caused origin
- mitigating and preventing the Company environmental and social impact by prioritizing environmental aspects and further control thereof
- maintaining high level of environmental safety by using advanced environmental technologies, equipment and methods
- ensuring the management and personnel readiness to prevent and mitigate emergency situations and other incidents
- ensuring transparency and availability of information concerning SC UEIP environmental protection and ecological safety activities.

To achieve the objectives and implement the main principles of environmental policy SC UEIP undertakes the following obligations:

- perform effective environmental monitoring and industrial ecological control in order to meet statutory and other requirements in the field of ecological safety and environmental protection
- ensure permanent readiness to accident prevention and effective management
- improve the personnel environmental skills and knowledge
- keep an open dialogue with all interested parties on the Company operations.

The first SC UEIP environmental policy was introduced on April 22, 2008 by SC UEIP General Director order. The Company environmental policy was annually revised and updated.

The current revision of SC UEIP environmental policy was introduced on July 7, 2016 by SC UEIP General Director order and was approved by ROSATOM State Corporation and JSC TVEL. The Company environmental policy was published in mass media and is available at SC UEIP web-site.



4

BASIC DOCUMENTS REGULATING SC UEIP ENVIRONMENTAL ACTIVITY

- Constitution of the Russian Federation
- Federal Law on Environmental Protection No 7-FZ of January 10, 2002
- Federal Law on Ecological Assessment No 174-FZ of November 23, 1995
- Federal Law on Ambient Air Protection No 96-FZ of May 4, 1999
- Water Code of the Russian Federation No 74-FZ of June 3, 2006
- Federal Law on Production and Consumption Waste No 89-FZ of June 24, 1998
- Federal Law on Sanitary and Epidemiological Well-being of Population No 52-FZ of March 30, 1999
- Federal Law on Radiation Safety of Population No 3-FZ of January 9, 1996
- Federal Law on Nuclear Energy Use No 170-FZ of November 21, 1995
- Federal Law on Radioactive Waste Management and Amendments to Certain Legislative Acts of the Russian Federation No 190-Z of July 11, 2011
- Federal Law on Underground Resources No 2395-1 of February 21, 1992
- Sanitary Rules SP 2.6.1.2523-09 of July 7, 2009 «NRB-99/2009 Radiation Safety Standards»
- Sanitary Rules SP 2.6.1.2612-10 of April 26, 2010 «Basic Sanitary Rules for Radiation Safety» (OSPORB-99/2010)

Furthermore, the Company activities in the field of radiation, nuclear and environmental safety are regulated by the Russian Federation governmental rules, statutory standards, sanitary rules, norms, guidelines and other regulatory documents, issued by the government of the Russian Federation, ministries, departments, state regulatory authorities within their competence.

THE LIST OF THE COMPANY MAIN PERMITS IN THE FIELD OF ENVIRONMENTAL PROTECTION

SC UEIP obtained all necessary permits in accordance with the effective environmental legislation of the Russian Federation, including:

- certificates of public registration of environmentally hazardous facilities
- permits for emissions and discharge of polluting chemical substances and radionuclides
- limit for production and consumption waste disposal
- certificates for hazardous production and consumption waste
- water use agreement
- decisions on the granting of water bodies for use
- licenses for use of nuclear energy
- other documents.

Contractors providing services and performing works at the Company site also have the complete set of necessary permits and licenses.

Monuments of constructivism in Yekaterinburg.



Iset Hotel

Iset Hotel is the Soviet-era city's landmark, and its image was often printed on the "USSR Cities" cards. It was initially designed and built as a dormitory for young NKVD officers with small families. It is commonly believed that semi-circle shape of the building reminds a sickle, though it's quite evident, that the project designer Ivan Antonov created the front of the building ensuring optimal lighting conditions in the dormitory rooms, at least with windows looking to the south. Upon collapse of the USSR Iset Hotel existed as three-star hotel, being the object of cultural heritage of federal importance. In 2003 – 2006 the hotel's first-eighth floors were totally renovated with replacement of all utility systems. In 2008 – 2009 repairs, restoration, and accident-prevention works were performed across the front of the building, followed by reconstruction of the roof coating and replacement of wooden beams with metal ones. The hotel was closed in 2013 for security reasons. At present Iset Hotel is a multi-purpose hotel complex. There are guestrooms and conference halls. The famous restaurant "Uralskie pelmeni" occupied the ground floor of the building for many years. Then another sign over the entrance appeared.

5

INDUSTRIAL ENVIRONMENTAL CONTROL & AMBIENT MONITORING

5.1 G4-EN24 G4-EN11

SC UEIP site environment

The following monitoring objects within SC UEIP impact area are:

- water bodies of an open hydrographic network, including bottom deposits and higher aquatic vegetation
- atmospheric air
- soil and vegetation
- atmospheric precipitation (snow)
- radiation environment
- meteorological parameters.

There are no areas polluted by radionuclides at SC UEIP site and sanitary protection area. Gamma-radiation equivalent dose rate does not exceed the natural background. The average value makes 0.06 μSv/hour. Over the whole period of SC UEIP activity there was no environmental contamination arising from emergencies, spills, etc. Pursuant to the "Decision on establishing category of SC UEIP potential radiation hazard as per Principal Sanitary Radiation Safety Rules (OSPORB-99/2010)" approved by the RF FMBA territorial body, SC UEIP is referred to the III category of potential radiological hazard. Therefore, the observation area for SC UEIP is not determined. The sanitary protection area for SC UEIP, as the nuclear hazardous facility, is established by "Project for SC UEIP sanitary protection area" and approved by the Head of Novouralsk urban district and SC UEIP General Director. The Company site total area makes 512.3 hectares. The Company land assets do not include the conservation areas and valuable biodiversity territories.

SC UEIP performs monitoring of radiation, ecological situation and natural environment using three systems:



5.2 ARMS Radiation monitoring and meteorological observations

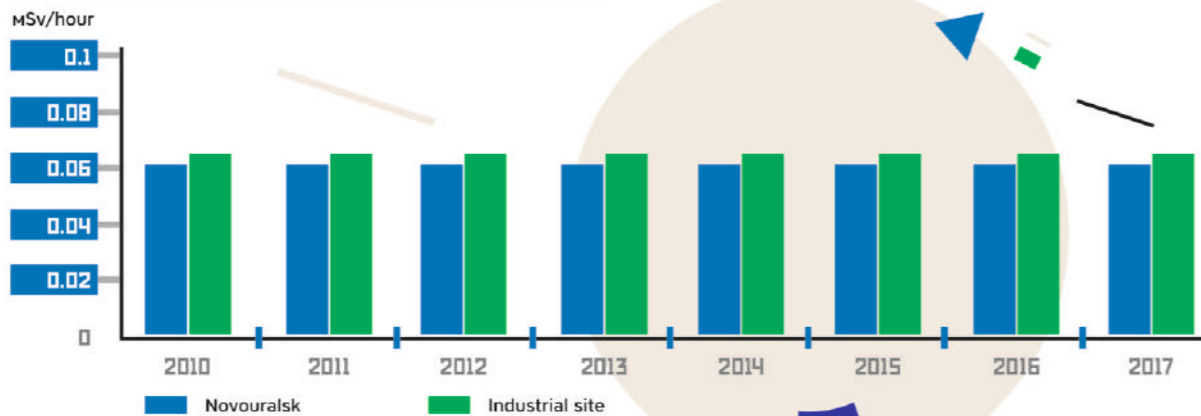
Control of radiation situation is ensured by Environmental Protection Department (EPD) by means of automated radiation monitoring system (ARMS), being a part of ROSATOM unified state automated radiation monitoring system. The system is intended for ensuring continual automatic monitoring of radiation and meteorological conditions in monitoring stations connected with the control panel. At present SC UEIP automated radiation monitoring system is equipped with the most advanced equipment.

Six monitoring stations (eventually their number shall be increased up to nine in 2018) cover all industrial sites of the Company. The measuring data of equivalent gamma-radiation dose rate received by SC UEIP automated radiation monitoring system are daily transferred to FSUE «ROSATOM Situation-crisis center». Thereafter these data shall be available at web-site www.russianatom.ru.

The exposure dose rate at the Company industrial sites and in Novouralsk does not exceed 0.15 µSv/hour, which is well below the standard values and background exposure dose rates specified for Urals region.



Diagram 1. Average equivalent dose rate



In 2016 SC UEIP brought on line an automatic weather station and upgraded the automated radiation monitoring system allowing applying environmental monitoring methods that ensure achievement and maintenance of environmental safety level as per modern requirements.

64-EN12 Description of existing impact of activity, products and services on biological diversity in conservation areas outside their territories

SC UEIP makes no impact on biodiversity of conservation areas. Pollutant emissions from SC UEIP sources make no impact on atmospheric air ($C_{max} < 0.05$ parts of maximum permissible concentration). Under the applicable regulatory documents it is not required to monitor the content of chemical pollutants at the boundary of SC UEIP sanitary protection and residential area.

5.3 Monitoring of the natural environment

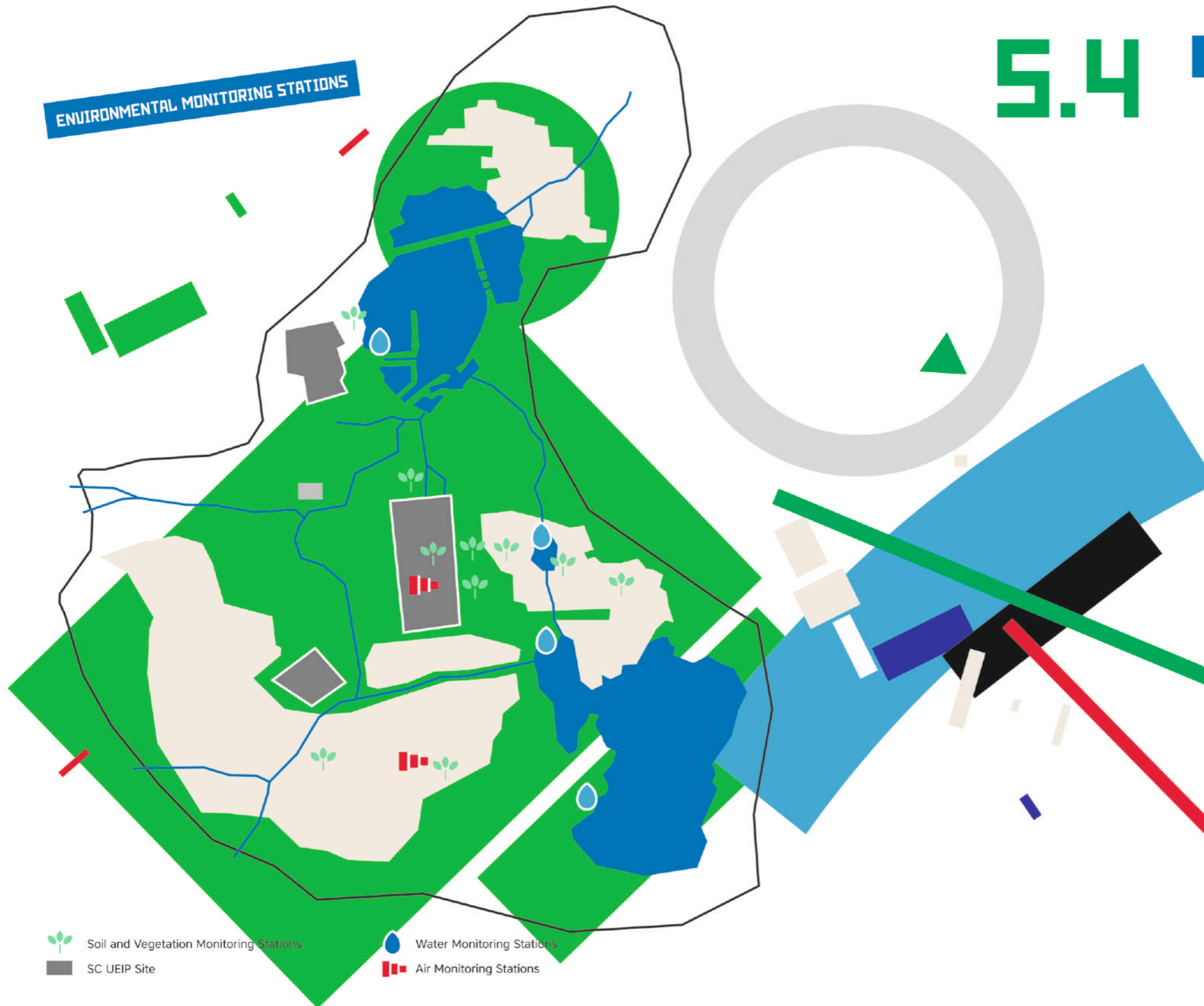


Industrial environmental control and ambient monitoring is carried out by the Company Environmental protection department. The monitoring activity shall be performed by SC UEIP Analytical center and several organizations dealing with environmental sampling and analytical control. These organizations have got the relevant accreditation certificates and are authorized to perform such activities:
 №POCC RU.0001.510905; №RA.RU.21YA04; №RA.RU.511612;
 №POCC RU.0001.214436; №RA.RU.29AH08.

SC UEIP Analytical center is equipped with the most advanced instruments, equipment and measuring devices for sampling and analysis of environmental samples. For example, determination of uranium isotope content in the natural environment locations shall be performed by mass-spectrometric analysis using modern mass-spectrometers manufactured by the leading global producers of analytical equipment.

Results of long-term measurements confirm that:

- the content of radionuclides in ambient waters is approximately 150 times below the sanitary limits
- the content of radionuclides in the atmospheric air of Novouralsk and SC UEIP site does not exceed the background level and is approximately 270 times below permissible limit
- the radionuclide content in soil does not exceed the background level.



5.4

SC UEIP subsurface monitoring

The need for determining the laws of dynamics, the structure and chemical composition of underground waters to control the quality of the Company's ambient waters and technical water supply to process facilities, resulted in establishing the network of monitoring wells and stations keeping track of the hydrodynamic status and water quality of water-bearing layers. Methods, techniques and means for monitoring wells' installation, procedures for sampling, laboratory analysis of water samples and other operations were tested.

At present the introduction of brand new subsurface monitoring system makes it possible to obtain true and complete information on the state of underground hydro-sphere. At the same time the system serves as a resource for establishing a basis of the future integral information-analytical system of radiation ecological monitoring (IAS REM) at ROSATOM State Corporation enterprises.

Organization of subsurface state monitoring system included geologic and geodesic researches of SC UEIP radioactive waste storage facilities' locations, cameral treatment of researches performed during the previous years. The research of change in geocological indicators was conducted, the analysis of the site geological and hydro-geological structure was performed, geological and hydro-geological cross sections were prepared. This work resulted in establishing SC UEIP underground water observation well network comprising 38 wells. The geoinformation system was created.

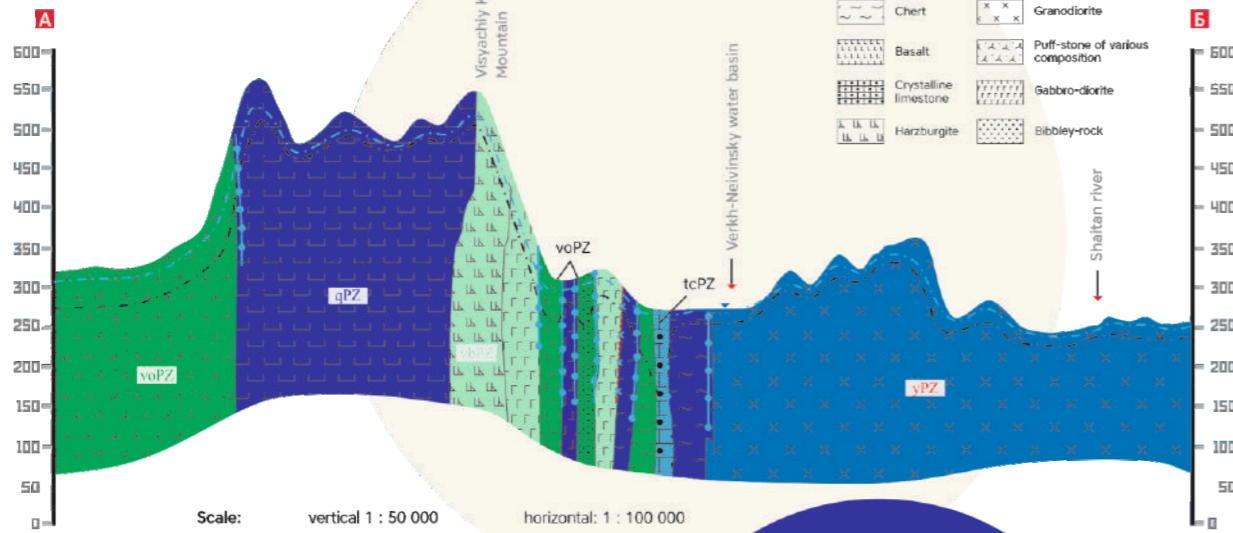
The goal of the research conducted and being conducted is to confirm that SC UEIP nuclear hazardous facilities do not have negative impact on the underground waters, and that the underground waters' impact on these facilities will not result in population and personnel radiation and toxic exposure, and natural environment radioactive and chemical contamination.

Results of monitoring the area outside SC UEIP site confirm the absence of exceeding intervention limits for uranium isotopes and therefore the absence of radioactive waste storage facilities' impact on the underground waters.

Over the long-term period of monitoring (since 1960) the content of chemical pollutants (including uranium compounds and other heavy metals) as well as radionuclides in SC UEIP ambient environment has not exceeded the background level and has no tendency to increasing.

Hydrogeologic cross section in SC UEIP and Novouralsk urban district location area

HYDROGEOLOGIC CROSS SECTION



LEGEND

HYDROGEOLOGICAL AREAL CLASSIFICATION

- voPZ** Paleozoic water-bearing zone of igneous-sedimentary rock fracturing. Volcanic sandstone, bibbley-rock, puff-stone, basalt, tuff siltstone, tuff sandstone, carbon-bearing cherts.
- tcPZ** Paleozoic water-bearing zone of tenuous-carbonate rock fracturing. marmorized limestone, crystalline limestone.
- yPZ** Paleozoic water-bearing zone of intrusive felsic rock fracturing. Granodiorite, tonalite, diorite.
- vbPZ** Paleozoic water-bearing zone of basic and medium intrusive rock fracturing. Gabbro-diorite, harzburgite.
- qPZ** Paleozoic water-bearing zone of ultrabasic intrusive rock fracturing. Dunite, serpentinite, pyroxenite.

The population is free from radiation exposure

In 2014 the Company experts developed the science-based reference levels. Meeting these levels absolutely confirms the absence of the Company environmental impact ('zero' environmental impact). These reference levels were not exceeded in any of environmental components.

Table 1. Main monitoring objects within SC UEIP zone of influence

Natural Environment	Zero Level	Actual Content
Ambient waters, kg/l	2.2	0.02-0.03
Ambient air, Bq/cubic meter	0.33	< 0.13
Vegetables – potatoes, kg/kg	2.4	0.2-0.9
Vegetables – except potatoes, kg/kg	1.7	0.3-0.6
Grassland, kg/kg	135	0.015-0.021

Monuments of constructivism in Yekaterinburg.

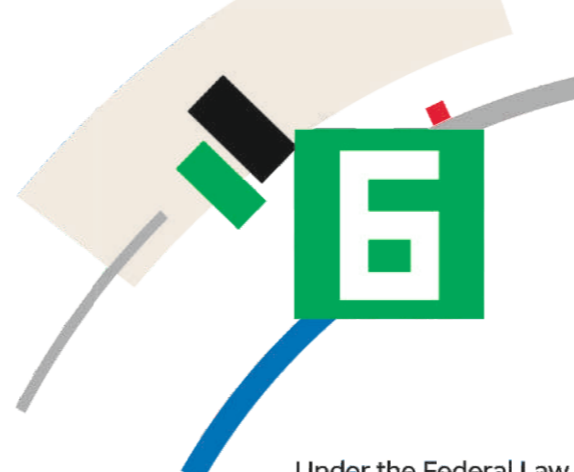


Central post office

When we look at the building of Central Post Office, formerly known as Communication House, it's hard to believe that it was built during the 1930s. The building was designed in the shape of a tractor, and it can be seen quite distinctly, especially now, when the building is free from advertising banners. It is considered to be one of the rare examples of large public & industrial buildings of constructivism era.

This simple shape building appeared in 1933 on the Lenin Avenue, where two merchant mansions were situated. At that time there was a fantastic building boom in the country and constructivism was adopted as the official architectural style in the USSR. During this period several brilliant architects worked in Sverdlovsk (the city name from 1924 till 1991) who got a chance to implement their daring projects.

The city post and telegraph office was too small to meet the demands of growing industrial center. That's why on behalf of the People's Commissariat for Post and Telegraph of the USSR the city public utilities initiated the construction of new post and telegraph office. The project was developed by the Moscow architect Konstantin Solomonov and the Saint-Petersburg architect Veniamin Sokolov, Veniamin Sokolov being a contractor of People's Commissariat for Communications made the set of working drawings and designed the interior. The building named Communication House was constructed in full compliance with constructivism style.



ENVIRONMENTAL IMPACT

Under the Federal Law No 7-FZ on Environmental Protection SC UEIP has made public registration of existing 2nd and 3rd category facilities having negative impact on the environment.

6.1 GH-ENB

Withdrawal of water from water sources

In the course of operation SC UEIP takes water from Verkh-Neivinsky, Neivo-Rudyansky and Ayatsky water basins and water supply system of MUP Vodokanal (Municipal unitary company). Water sources are used for the supply of the facility outer cooling circuit and may be also used as drinking and industrial water.

Recirculating water supply shall be performed as follows: upon equipment cooling the process water shall be discharged through the guide curves into the basins separated by dams from the main water bodies of Verkh-Neivinsky and Neivo-Rudyansky basins. Water in the basins shall be cooled and thereafter supplied again to the process facilities using pumping stations.

Characteristics of water sources

Verkh-Neivinsky water basin

is used for the supply of drinking water to Novouralsk urban district population and technical water to the Company facilities. Water withdrawal significantly impacts the water basin (makes over 5 % of average annual volume). The total capacity of Verkh-Neivinsky water basin makes 47.9 million cubic meters. The water body is not classified as national or international conservation area. In regard to biodiversity the water basin is not of special value. It serves as centralized drinking water supply and as recreation area for the residents of Novouralsk city and Verkh-Neivinsky settlement. The water consumption limit established for SC UEIP makes 8 329 thousand cubic meters per year.

Neivo-Rudyansky water basin

is used for the supply of technical water to the Company facilities. The total capacity of water basin amounts to 11.3 million cubic meters. Water withdrawal significantly impacts the water basin (makes over 5 % of average annual volume). The water body is not classified as national or international conservation area. In regard to biodiversity the water basin is not of special value. Generally it is used as waste water receiver for Novouralsk urban district industrial and public utilities (including SC UEIP). The water consumption limit established for SC UEIP makes 1 296 thousand cubic meters per year.

Ayatsky water basin

is used as a reserve water source for adding of water to Verkh-Neivinsky water basin in the low water years. It also serves for water supply to collective gardens. The total capacity of water basin makes 61.9 million cubic meters. Water withdrawal does not significantly impact the water basin (makes less than 5 % of average annual volume). The water body is not classified as national or international conservation area. In regard to biodiversity the water basin is not of special value.

Table 2. Water withdrawal from natural water sources

G4-EN8

Water source	Water withdrawal, thousand cubic meters/a									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Verkh-Neivinsky water basin	4 970	5 081	5 004	4 578	3 978	3 651	3 052	2 798	2 706	2 415
Neivo-Rudyansky water basin	1 733	1 364	1 459	1 243	1 178	1 171	638	540	585	542
Ayatsky water basin	34	26	48	5 483	32	26	17	7	31	11
Utility and drinking water supply to Tavatuy holiday camp	77	78	57	55	50	60	0	0	0	0
Artesian wells	506	459	658	616	655	0	0	0	0	0
Total	7 320	6 978	7 226	11 975	5 893	4 908	3 707	3 345	3 322	2 968

Table 3. Fresh water saving due to recycling and reuse of water supply

Consumption in recirculating water supply systems, thousand cubic meters/a									
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
194551	186824	187779	181942	182807	175298	160598	160723	155925	138609

6.2 G4-EN22 Discharge into open hydrographic network

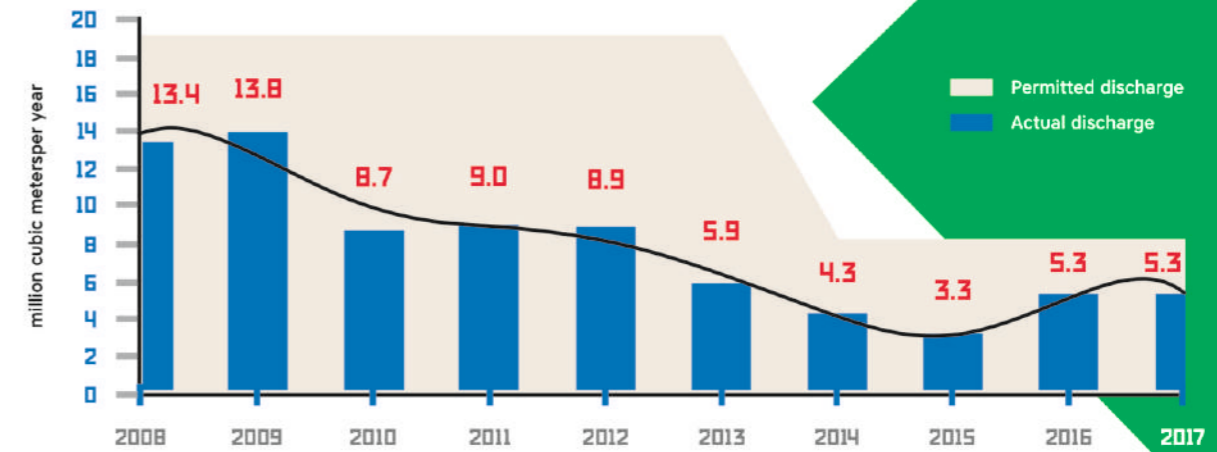
In 2017 SC UEIP discharged waste waters through 3 discharge outlets. Permissible discharge limits (PDL) were specified for every discharge outlet. Permits for discharge of pollutants with waste waters were obtained. The Ministry of natural resources of Sverdlovsk region issued "Decisions on the granting of water bodies for waste water discharge". In accordance with new «Decisions ...» approved in 2014 SC UEIP was permitted to discharge up to 8.3 million cubic meters of waste waters into the surface-water bodies. According to the in-process monitoring results the actual volume of discharge in 2017 made 5.3 million cubic meters. The waste water is classified as partially clean water. Off-schedule discharge is not performed. Pollutant content shall not depend on average dryness of the year. Discharge of polluting substances similar in concentration is performed during the year.

Table 4. Wastewater composition by priority pollutants in 2017

№	Priority pollutants	Class of hazard	ADL, t/a	Actual discharge in 2017	
				t/a	% of limit
1	Petroleum products	3	1,24	0,27	22
2	Suspended substances	4	87,2	30,8	35
3	Ammonia nitrogen	4	5,6	0,9	16
4	Nitrites	4	2,07	0,55	27
5	Phosphorus	4	0,69	0,35	51
Total, only by basic substances			96,8	32,87	34

ADL – Allowable Discharge Rate

Diagram 2. Waste water volume



6.3 Radionuclides discharge

SC UEIP completed package of measures focused on terminating discharge of waste waters, containing radionuclides. This work resulted in termination of radionuclide discharge into surface-water bodies since 2006.

6.4 G4-EN22 Chemical release

The authorized SC UEIP chemical release makes to 1745 tons per year. In 2017 the actual release made 42 tons. That is 2.5 % less than maximum allowable level. It should be noted that previously the most part of chemical release was made by SC UEIP thermal power plant (TPP).

The overall air emissions were reduced by a factor of 12 due to transfer of TPP assets to OTEK JSC branch in 2017.

The Company chemical release control shall be performed in accordance with annual "Chemical release control chart", approved by SC UEIP Technical Director. Hydrogen fluoride release from all emission sources of enrichment production shall be controlled by means of instrumental methods. The volume of other emissions shall be determined using duly approved procedures based on emission calculations as per specific values.

Diagram 3. Air Emissions

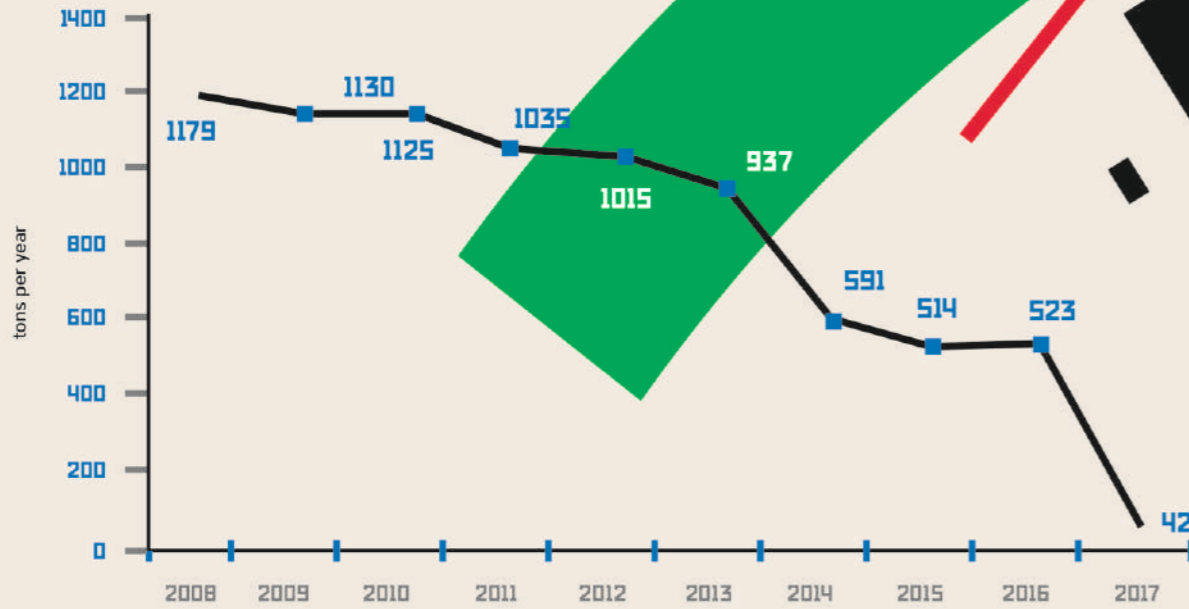


Table 5. SC UEIP chemical pollutant emissions

Pollutant	Measuring unit	Year						
		2011	2012	2013	2014	2015	2016	2017
Total	ton	1034.926	1015.793	937.187	591.035	513.624	523.008	41.757
Including controlled emission sources	ton	1000.330	975.694	879.550	525.671	478.820	491.091	21.215
Including non-controlled emission sources	ton	34.596	40.099	57.637	65.364	34.804	11.917	20.542
Solid	ton	15.262	2.297	1.124	1.074	0.857	0.898	0.714
Gas and liquid pollutants, among them	ton	1019.664	1013.496	936.063	589.961	512.767	522.110	41.043
Sulfur dioxide	ton	3.939	3.850	3.474	4.960	3.706	3.808	0.438
Carbonic oxide	ton	45.203	39.842	49.945	61.142	29.189	37.078	16.453
Nitrogen oxides (in-equivalent NO ₂)	ton	739.588	875.197	834.010	475.171	431.377	432.700	1.931
Hydrocarbons (without VOC)	ton	1.021	0.720	0.420	0.420	0.420	0.420	0
Volatile organic compounds (VOC)	ton	79.100	65.856	40.243	40.243	40.208	40.205	14.104
Other gas and liquid pollutants	ton	150.813	28.031	7.971	8.025	7.867	7.899	0
Persistent organic pollutants	ton	0	0	0	0	0	0	0

6.5 Greenhouse gas reduction initiatives and progress made

The Company implements the "SC UEIP Program for energy saving and energy efficiency improvement in 2011-2020". The Program effectiveness is confirmed by the yearly reduction in direct greenhouse gas emissions due to organic fuel combustion and indirect emissions due to energy consumption. The overall direct greenhouse gas emissions were reduced due to transfer of TPP assets to OTEK JSC branch in 2017.

Evaluation of SC UEIP contribution to reducing greenhouse gas emissions

In estimating greenhouse gas emissions by the nuclear industry companies it should be mentioned that atomic energy is classified as low carbon energy source. According to the forecast of International Energy Agency the share of low carbon sources in the global energy mix will make 40 % by 2040. Along with renewable generation resources, atomic energy will become the integral part of low carbon energy mix.

Interesting fact:

According to IAEA publication «Nuclear Power Reactors in the World» (Reference data series No. 2, 2017 Edition) the global nuclear power generation made ~ 2500 TW-h in 2016. It is commonly known that, to generate one thousand kWh of electric power using traditional sources, we need 393 kg of fuel equivalent (0.393 t). In this case the atmospheric emissions will make 920 kg (0.92 t) of carbon dioxide. Therefore, nuclear industry prevented releasing of about 2300 million tons of greenhouse gas!

SC UEIP covers ~ 20% of the global enriched uranium demand. SC UEIP ensures generation of every fifth nuclear power kilowatt on our planet, and thus the Company activity saves the earth atmosphere from releasing ~460 million tons of greenhouse gas!!!

Table 6. Direct & indirect greenhouse gas emissions

Material (substance)	Measuring unit	Greenhouse gas emissions						
		2011	2012	2013	2014	2015	2016	2017
Direct greenhouse gas emissions								
For all types of emissions in CO ₂ equivalent	ton	440140	417467	388065	385342	356986	356916	9
Indirect greenhouse gas emissions								
For all types of emissions in CO ₂ equivalent	ton	868184	847856	803195	792706	734215	723213	840648

Table 7. Intensity of greenhouse gas emissions

Material (substance)	Measuring unit	Greenhouse gas emissions						
		2011	2012	2013	2014	2015	2016	2017
Total direct and indirect greenhouse gas emissions	ton	1308324	1265323	1191260	1178047	1091201	1080129	840657
Annual products and services revenue	mln rubles	19 550	19 840	19 400	20 543	20 523	22 908	23 881
Intensity of greenhouse gas emissions / annual revenues from product sales	tons / mln rubles	67	64	61	57	53	47	35

6.6

Radionuclides release

Table 8 shows the results of radionuclide emission control. According to the Table, SC UEIP radionuclides release meets the specified limits. Thus, the population dose rate from radionuclide inhalation does not exceed 0.005 mZv/year, which makes 0.5% of population dose limit.

Table 8. Results of radionuclides release monitoring

Nuclide	Radionuclides atmospheric release						
	2011	2012	2013	2014	2015	2016	2017
Total atmospheric release of long-lived alpha-active radionuclides, Gbq/year	0.184	0.123	0.140	0.103	0.098	0.093	0.087
Allowable release level, Gbq/year	7.4	7.4	2.0	0.92	0.55	0.3	0.3

6.7

G4-EN23

Production and consumption waste management

The Company obtained all waste management permits for production and consumption waste management. There were no cases of exceeding the waste generation limits. The most part of waste is delivered for further processing to the authorized companies. Every year SC UEIP performs organizational and technical activities focused on waste reduction. As compared to 2016 the waste volume has become a third less due to:

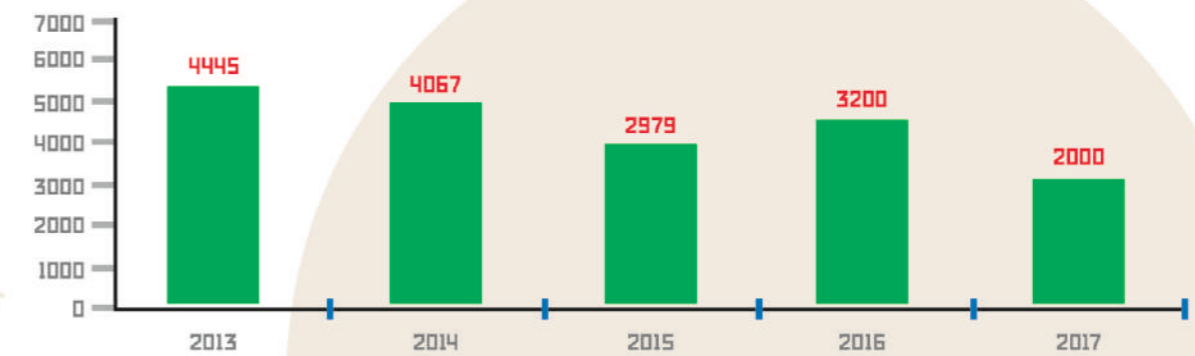
- **1st class waste reduction**
(mercury-filled lamps, thermometers, condensers containing "Sovol" dielectric liquid)
- **3rd class waste reduction**
(scrap and copper waste, wiping material, plastics scrap)
- **4th class waste reduction**
(consumption waste, garbage and sweepings from the site)
- **5th class waste reduction**
(no scrap, bronze and brass waste, ferrous scrap reduction).

It should be noted that, of 2000 tons of waste, generated in 2017, 1720 tons were ferrous scrap, steel, copper, aluminium waste being delivered for further processing and returned to production facilities as finished products.

Table 9 Dynamics of production and consumption waste generation, tons per year

Year	2013	2014	2015	2016	2017
Total waste generation, Including:	4445	4067	2979	3200	2000
1st class	5	29	8	30	3
2d class	1	0	0	0	0
3d class	320	114	19	73	<1
4th class	1510	1241	578	453	223
5th class	2609	2683	2374	2644	1773
Quantity of used in disposed waste	2690	2600	2400	2600	1720
Delivered for disposal	1755	1467	579	600	280
Waste generation limit	25930	4500			

Diagram 5. Generation of production and consumption waste, tons per year



6.8

Radioactive waste management

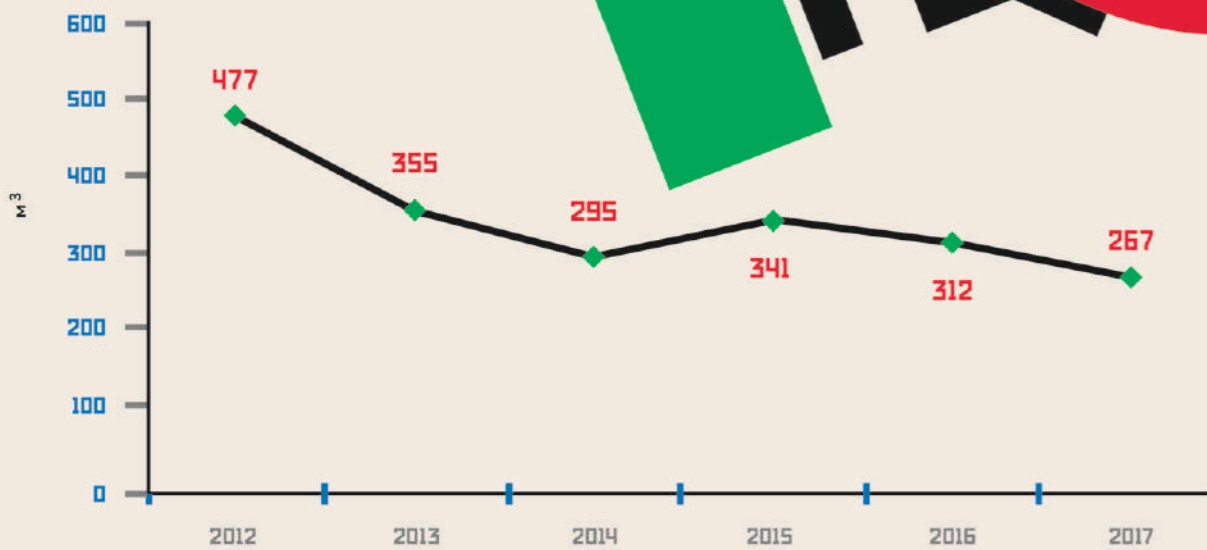
SC UEIP nuclear facility operation is followed by generation of Solid Radioactive Waste (SRW) at different stages of production process. SRW are classified as low-active waste. The most part of SRW volume collected at the Company facilities is subject to treatment and compacting. After treatment SRW packages shall be delivered to SC UEIP SRW storage facility, which is safe and isolated from the environment.

Decontaminating uranium-bearing solutions shall be processed by means of special technology. Improvement of uranium-bearing solution processing technology in 2005 ensured reduction of the content and activity of radioactive substances in such solutions to the levels which allow to classify them as nonradioactive discharged water.

The main SC UEIP principles and criteria for SRW management shall include ensuring the personnel, population and environment radiation safety with strict observance of radiation safety regulations and radiation protection requirements.

In 2017 continued delivery of low-active waste to Federal State Unitary Enterprise "National Operator for Radioactive Waste Management" for disposal in near-surface radioactive waste disposal facility.

Diagram 6. SRW generation



In process shop 54 the process units 51–56 were equipped with the system of automatic control of gas centrifuge energy saving mode at lower voltage due to overdrive of gas centrifuge driving motors. Activities on commissioning energy consumption metering units were performed. SC UEIP initiatives and activities relating to energy saving are conducted in accordance with Rosatom State Corporation long-term provisions. It should be noted that the reduction of power consumption is fulfilled under the stable capacity utilization owing to gradual complex optimization.

Table 10. Energy Consumption

	2011	2012	2013	2014	2015	2016	2017
SC UEIP power consumption, thousand kW/h	1190212	1156060	1095121	1068888	1006733	976161	979059
SC UEIP thermal energy consumption, Gcal	790081	712260	695726	667107	591284	604521	587907
Total energy consumption, GJ	7 595 203	7 146 185	6 857 528	6 643 175	6 101 719	6 045 161	5 985 584

6.9 Energy use

SC UEIP is committed to introduction of energy-saving technologies and cost saving. Based on the research findings made in 2010 "SC UEIP Program for energy saving and energy efficiency improvement in 2011-2020" was developed, approved and launched in 2011. The Program is mainly addressed to the effective use of energy resources and reduction of energy loss resulted from changes in personnel behavior, and production process improvements.

EFFECTIVE USE OF ENERGY RESOURCES & ENERGY LOSS REDUCTION

The energy saving plans were successfully fulfilled in all SC UEIP subdivisions. Energy saving plans for 2017 were developed and approved. The cost saving target indicators were included into the complex optimization plans developed by the Company subdivisions. The following organizational and technical activities were planned and are being conducted by the Company:

- optimizing (reducing) the power equipment being in operation depending on the demand of enrichment and non-core production
- ensuring transfer of process shop ventilation systems to the arrangements for using thermal energy resulted from process operations
- optimizing the vent modes
- changing the site and shop-floor lighting according to the working schedule of personnel.

SC UEIP introduced and ensured performance of Energy management system as per ISO 50001. SC UEIP Energy policy was developed and introduced. In terms of technical upgrade of enrichment production main process equipment the process unit 60 was subject to upgrade with the replacement of gas centrifuges of the 5th generation with gas centrifuges of the 9th generation having less energy intensity. Additionally, the upgrade of power supply system was performed, including replacing rotating frequency converters with more efficient static frequency converters with 0.92 efficiency factor instead of 0.7.

6.10 Share of SC UEIP emissions, discharge & waste in Sverdlovsk region total volume

SC UEIP share in total volume of chemical pollutants (ChP), radionuclide emissions and discharge both in Sverdlovsk region and across Rosatom State Corporation enterprises makes less than 1 percent.

Table 11. Comparison of indicators with total volume within the territory

Indicator	Total Volume within the territory	SC UEIP Total Volume	SC UEIP Share
ChP emissions, thousand tons	906*	0.04	< 0.01 %
Discharge (volume of discharged waters), million m³	817*	5.3	< 1 %
Production and consumption waste, million tons	177*	0.002	< 0.01 %
α- emitting nuclides atmospheric emissions, GBq	512 000 **	0.087 **	< 0.0001 %
α- emitting nuclides discharge into open hydrographic network, Bq	2.6*1010 **	0	0

* - Total volume in Sverdlovsk region in 2016.

** - Total volume across JSC TVEL companies in 2016. The given values of radionuclide emissions and discharge do not exceed the RF permissible limits.

6.11 G4-EN2B Share of sold products and its packing materials returned to producer for processing

G4-EN32

SC UEIP product manufacturing process covers 100% return of packaging materials (cylinders) to product manufacturer. Safety of purchased products and services is ensured by:

- incoming inspection and acceptance control
- specifying requirements for the suppliers.

When evaluating and choosing suppliers the following factors are taken into consideration:

- technical requirements for the supplied products and availability of regulatory documents specifying these requirements
- availability of documents proving conformity of product to ecological and environmental safety requirements (certificates of goods conformity and origin, safety and health certificates)
- availability of documentation confirming the product quality.

Contractor obligations on operations (activities) management in furnishing products and services are determined in the contracts.

To improve the integrated management system the Company implements "Environmental and environmental safety requirements in furnishing products and services by the contractors".

G4-EN34 There are no claims from the contractors relating to environmental impact.

6.12 G4-EC2 Financial aspects and other risks and opportunities for the Company activity in the context of climate change

Meteorological observations being performed since 1960 show that temperature and wind regimes, amount of precipitations are practically constant within SC UEIP activity area and remain at the level of annual average values. Climatic and weather conditions are considered to be steady.

The Company annually develops plans of activities addressed to preventing emergency situations (flood protection, fire protection). Taking into account the Company geographic location, existing statistical observations and developed activities addressed to mitigating any possible climatic accidents, these risks are extremely low.

Taking into consideration the low rate of climatic changes, the Company management has not performed special quantitative evaluation of financial consequences in the context of climate change in medium and long-term perspective.

7

Implementation of environmental policy

Environmental safety is of great importance for nuclear industry and is critical for the development of nuclear technology and operation of nuclear facilities. Moreover, despite of nuclear industry sustainable development, improvement of technology and safety, stabilization of nuclear industry is closely related to its ecological and social acceptability. It greatly depends on conditions ensuring reduction of radioactive waste volume, safe waste disposal, development of decommissioning activities and solution of nuclear legacy problems.

SC UEIP scope of activity is of great strategic importance for development of Novouralsk urban district since it greatly contributes to its steady innovation progress. In this connection SC UEIP management understands the need for ensuring balance between strategic objectives for corporate business development and environmental safety, which is the basis for life and health of present and future generations. One of the Company key tasks remaining vital for many years is to ensure the parity between the economic and environmental values. Practically it is ensured by technical upgrade, retrofit and energy saving corporate programs, as well as detailed assessment and minimization of potential environmental risks in implementation of new build projects. Increase of environmental and energy performance is the mainstream of the Company strategy, a key element of environmental management system and environmental policy. SC UEIP advanced multi-level environmental management system is underpinned by qualified scientists and engineers and meets the modern criteria for management efficiency in this field. The complex approach to problem solution addressed to conservancy and environmental protection enables SC UEIP to achieve all intended environmental purposes, minimize environmental risks and increase social responsibility of business.

In 2017 the Company developed and introduced several basic documents including all planned activities in the field of industrial and environmental safety:

- 1 Long-Term plan for implementation of SC UEIP environmental policy up to 2018.
- 2 Annual SC UEIP Environmental program.
- 3 Annual schedule for monitoring environment, emissions and pollutant discharge.

ALL ACTIVITIES OF «PLAN...», «PROGRAM...» И «SCHEDULE...» SCHEDULED FOR 2017 WERE COMPLETED IN FULL AND ON TIME.



The White Tower

The White Tower is one of the main sights in the region of Uralmash and the symbol of Soviet avant-garde in Yekaterinburg. It was built based on the project of the architect Moisey Reisher. The work began in 1928 and lasted for three years. A special place was selected for the tower: first of all, it is situated on the highest point of the Uralmash. Secondly, in the 1930s the tower could be seen from Pervoy Pyatiletki Square – the heart of the socialist city.

The tower was innovative and unique at that time. The building was manufactured of reinforced concrete and the world's largest water tank of 750 cubic meters capacity was installed at a height of 24 meters.

For 30 years the tower was used for intended purpose, but gradually, as the district grew and new buildings were constructed, the water head became low. Yekaterinburg architects thought hard how to deal with the tower, but didn't find a solution. The tower deterioration process started, its limed walls were splattered with graffiti, and the staircases were covered with rubbish.

The things changed in 2013. Podelniki architecture group reasoned the city property management committee into handing the tower over for the free use. They held several cleanup days and after that the building was conserved using crowdfunding.

Monuments of constructivism in Yekaterinburg.

7.1

64-EN27

Initiatives on mitigating products & services environmental impact and the scope of mitigation measures

Operational safety of SC UEIP nuclear facility (NF) and its systems and components is ensured by steady implementation of defense-in-depth principle. Safety assurance is provided by physical protection system acting as a barrier to entry of ionization radiation, nuclear material and radioactive substance into the environment, should it be the package (vessel, pipeline) or structure, frame or roof of any building.

SC UEIP NF safety includes protection of physical barriers, ensuring their performance within established lifetime, and personnel and environment protection. For this purpose SC UEIP performs a complex of special activities to prevent emergencies followed by process equipment seal failure (abnormality of process conditions, violation of equipment normal operation conditions and limits, self-sustained chain reaction, fire, dropping of goods, mechanical or corrosion damage, etc.), and consequence limiting control measures.

Safety level achieved by SC UEIP in NF operation and other activities in nuclear field are ensured primarily by technical measures and decisions taken in designing equipment, systems, NF components, and also by development of technological processes relating to nuclear material, radioactive substance and radioactive waste management.

Implementation of measures on reducing environmental impact is one of the mainstreams of the Company environmental activity.

64-EN31

SC UEIP environmental costs are basically related to processing and purification of discharge and emissions and addressed to supporting technical and organizational activities. Environmental protection investment is generally made in upgrading equipment and waste handling facilities.

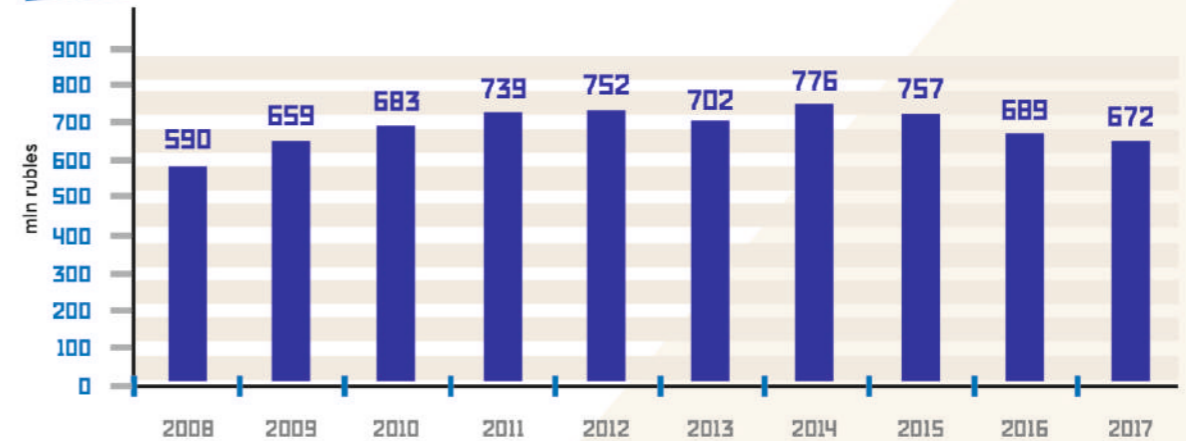
Table 12. Current environmental costs 2017, thousand rubles

Type of environmental activity	Annual current (operating) costs	where from the Company's own funds
Total	672 848	672 848
including:		
air protection	113 351.5	113 351.5
collection and purification of waste water	295 766.7	295 766.7
waste management	2 634.9	2 634.9
environmental radiation safety	260 311.6	260 311.6
other environmental activities	783.3	783.3

Table 13. Payment for environmental services 2017, thousand rubles

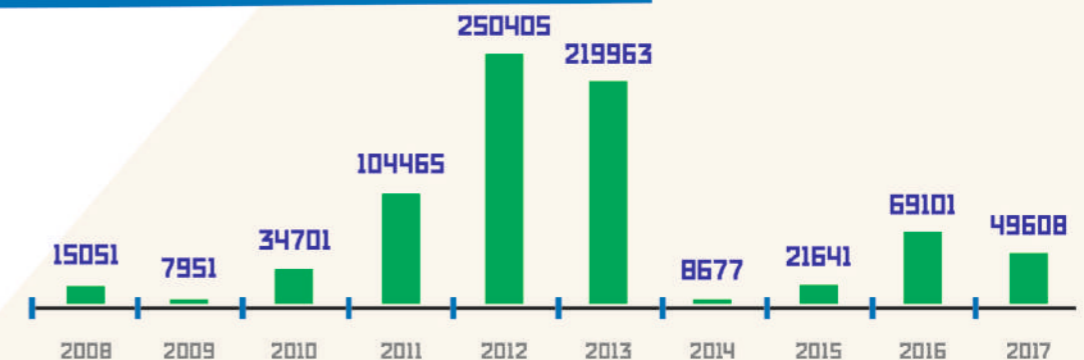
Environmental activity	Payment for environmental services	where from the Company's own funds
Total	38 399.2	38 399.2
including:		
air protection	45	45
collection and purification of waste water	37 703.8	37 703.8
waste management	506.4	506.4
environmental radiation safety	-	-
other environmental activities	144	144

Diagram 7. Current (operating) environmental costs, mln rubles



Cost saving occurred due to production and consumption waste reduction and material cost reduction (electricity, materials).

Diagram 8. Environmental Investment Data, thousand rubles



Environmental costs financed from capital investment made 49 608 thousand rubles in 2017:

- Shop 19, building 302. Defective vessel repair section **37 043 thousand rubles.**
- Shop 19, building 302. Technical upgrade of nonferrous metal melting section **5 752 thousand rubles.**
- Upgrading of air monitoring stations **6 813 thousand rubles.**

Planned investment in safety activities shall exceed 300 million rubles in 2018, for example, establishment of ground water monitoring system at VI-VII industrial sites.

Monuments of constructivism in Yekaterinburg.



City Centre

Opposite to the Iset Hotel there is another constructivism monument – the Construction Worker's Club Building. It was built in 1933. The author of the project was the famous Moscow architect and critic Yakov Kornfeld – he managed to win the All-Soviet contest for the creation of a new building in Sverdlovsk.

The building consists of three parts: the entertainment unit, the club unit and the sports unit. The latter is situated at the back of the courtyard and is connected with the previous one with a big passage.

The Construction Worker's Club Building is decorated by ribbon windows and glassed-in openings, as well as open terraces, where you can do open air sports exercises and take sunbaths. Previously in the club there was a cafeteria and an auditorium for 800 seats, a library, and a room for different project teams, children's and sports studios.

The first reconstruction of the interiors took place during the Great Patriotic War, when in 1943 the building housed the Sverdlovsk cinema studio. In 1999 the CITY CENTRE Shopping Mall was opened. Its owners saved only the facades and the staircases of the unique building.

64-EN29
In 2017 no monetary fines and nonmonetary sanctions were imposed on the Company for inobservance of environmental laws.

Table 14. Payments for the pollution of the environment, thousand rubles

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
pollution charge	327	337	387	339	315	292	192	182	96	247
including water bodies	75	131	96	103	105	84	64	60	43	95
ambient air	130	148	285	233	210	208	128	122	53	2
waste disposal	122	58	6	3	0*	0*	0*	0*	0*	150**

** The calculation was made in accordance with new statutory requirements of the Russian Federation in the field of environmental protection and production and consumption waste management.

Evaluation of efficiency of SC UEIP environmental mitigation measures in 2017 as compared to 2016 :

- by 354 thousand cubic meters** withdrawal of water from natural water resources was reduced
- by 581 tons** chemical pollutant emissions were decreased
- by 1200 tons** amount of production and consumption waste was reduced
- by 45 cubic meters** amount of radioactive waste was reduced
- by 59577 GJ** total energy consumption was decreased

■ emission and discharge limits were observed by the Company subdivisions.
 ■ violations of environmental regulations were not committed.

8

ENVIRONMENTAL EDUCATION

8.1

Cooperation with public and local authorities

The adequate level of nuclear, radiation, industrial, environmental and labor safety at SC UEIP was confirmed by many inspections conducted by the following executive authorities:

- Urals Directorate of the Rostekhnadzor – to the extent concerning compliance with industrial safety requirements at SC UEIP hazardous facilities
- Urals Interterritorial Directorate for supervision of nuclear and radiation safety - to the extent concerning conformity to standards and regulations in nuclear field during nuclear facility operation
- RF FMBA Regional office No 31 – to the extent concerning compliance with health legislation requirements at SC UEIP.

SC UEIP management cooperates closely with Novouralsk urban district administration. SC UEIP employees jointly with Novouralsk urban district public authorities constantly perform activities in the field of landscaping, garbage collection, and various charitable activities.

8.2

Promoting public awareness

SC UEIP pays great attention to environmental education. One of the Company environmental policy principles is to ensure transparency and public availability of information concerning UEIP environmental protection and safety activities. 63 news materials were published in corporate, local, regional and branch mass media in 2017. The information covered the issues related to the Company environmental activities and environmental conditions in the territory of presence. Following the "transparency" policy pursued by SC UEIP, 5 ecological press-tours to the site were conducted. The tour participants received unique opportunity to visit the Company process facilities, measure radiation background in any point of their route and make sure that the plant is environmentally friendly. Since 2008 the Company annually publishes Environmental Safety Reports presenting full and objective information on current environment status and environmental impact resulting from SC UEIP activity. Environmental Safety Reports 2012 - 2017 were presented to concerned regional public communities. The Report is delivered to organizations dealing with SC UEIP on environmental protection and industrial safety, mass media and public organizations located in Novouralsk urban district, and is available at SC UEIP web-site.

8.3

Cooperation with ecological public organizations, scientific and social institutions, population

With the support of SC UEIP and JSC TVEL the ceremonial opening of «School technopark» in Lyceum No.58 took place on the **13th of January**.

On the **27th of January** SC UEIP senior management and environmental department specialists took part in the special event for Novouralsk urban district educational institutions devoted to the Year of Ecology, which was held in MAU DO «Campus activity center».

SC UEIP environmental department specialists participated in public consultations held on the **21st of February** 2017 where the following issues were discussed:

- supporting materials for licence for operation of the first phase of the on-site facility designed for radioactive waste disposal – near-surface solid radioactive waste disposal facility, «Novouralskoye» section of «Seversky» branch FSUE «NO RAO»
- supporting materials for licence for construction (reconstruction) of radioactive waste disposal facility designed for radioactive waste disposal «Novouralskoye» section of «Seversky» branch FSUE «NO RAO».

SC UEIP environmental department specialists were on the jury panel of municipal intellectual game for high school students «Hurray for Urals!», devoted to the regional ecology and environmental protection. The game next scheduled round was held on the **10th of February** 2017 in MAU DO «Campus activity center».

On the **14th of February** 2017 SC UEIP environmental department specialists took part in research and practical conference «Biospheric compatibility of nuclear industry», organized by the Institute of applied ecology of Ural branch of the Russian Academy of Sciences in Yekaterinburg.

On the **1st of March** 2017 the ecological tour of Novouralsk urban district Public Chamber to SC UEIP subdivisions and Novouralsk industrial site facilities was held.

On the **15th of March** 2017 SC UEIP environmental department specialists participated in the All-Russian Congress «Regional industrial ecology», which took place in the Yekaterinburg World trade center.

On the **22nd of March** 2017 traditional briefing devoted to SC UEIP environmental protection and environmental safety was held in SC UEIP museum. SC UEIP Deputy Technical Director Ye.G. Skorynin and the Head of environmental department A.V. Nalivaiko reported to the corporate and city mass-media on 2016 results and SC UEIP plans in the field of environmental protection.

On the **29th of March** 2017 the ecological tour for students and teaching staff of the Institute of Science and Technology of National Nuclear Research University «Moscow Engineering Physics Institute» was held.

SC UEIP environmental department specialists took part in the ceremonial opening of ecological education project «Verkh-Neivinsky pond - eco-territory», which was launched in the framework of JSC TVEL strategic initiative «Ecological responsibility». This action was held on the **22nd of April** 2017 in MAU «Lyceum No.58».

SC UEIP environmental department specialists took part in XII Scientific and Industrial Forum «Technical upgrade of the Russian machine-building enterprises», in terms of which the meeting of «Industrial ecological safety» section was held. This action took place on the **27th of April** 2017 in Yekaterinburg.

The Head of environmental department A.V. Nalivaiko participated in the fourth official ceremony «Rosatom person of the year 2016», which was held on the **27th of April** 2017 at the Maly Theatre in Moscow, where A.V. Nalivaiko took the second place in the cluster «Safety of nuclear industry».

On the **27th of April** 2017 SC UEIP employees took part in the All-Russian cleanup day «Green spring 2017».

From May **15th through May 18th** the industry-specific Research and Practice Seminar on environmental protection and radiation safety was held in Yekaterinburg. The Head of environmental department A.V. Nalivaiko and the Head of radiation safety department A.D. Taratorkin took part in the workshop and reported on environmental and radiation safety issues respectively.

SC UEIP environmental department specialists took part in X Regional Public Dialogue Forum «Atomic energy. Future technologies – reduction of environmental impact», which took place from May **22nd through May 24th** in Yekaterinburg. Within the framework of the Dialogue Forum the Head of environmental department A.V. Nalivaiko took part in the panel discussion on public evaluation of ecological situation in Sverdlovsk region, including nuclear facilities' location areas.

Within the framework of X Regional Public Dialogue Forum «Atomic energy. Future technologies – reduction of environmental impact» the technical tour to SC UEIP was organized for the members of Rosatom State Corporation Public Council on the **24th of May** 2017.

Under SC UEIP and Novouralsk Department of education joint ecological project «Verkh-Neivinsky pond - eco-territory» the intellectual creative workshop «Mysterious world of the pond» was held in the Campus activity center.

On the **20th of June** as part of IX International Forum «ATOMEXPO-2017» the round table «Environmental safety of nuclear industry: strategy, regulation, technology» was held, where SC UEIP environmental department specialists submitted a report «SC UEIP. Sustainability management», and also presented SC UEIP Environmental safety report 2016.

The Head of SC UEIP environmental department participated in scientific-technical seminar «Radioactive waste processing and conditioning in achieving acceptability criteria», which was held in Saint-Petersburg from **June 26th through June 30th** 2017. The report «Practice for validation of SC UEIP radioactive waste conformity to acceptability criteria of Novouralsk near-surface RW disposal facility during transfer of the first batch of solid radioactive waste for final isolation».

SC UEIP specialists took part in Public Dialogue Forum «The way to successful future through social harmony» which was held on the **30th of August** 2017 in the Children's library at the discussion platform «Clean city – safe world» the following reports were submitted: «SC UEIP: Sustainability management», «Radioactive effect on population and environment». SC UEIP Environmental safety report 2016 was presented at the Forum.

Deputy Technical Director for nuclear, radiation, industrial and environmental safety Ye. G. Skorynin took part in XII International Nuclear Forum «Safety of nuclear technologies: Emergency preparedness and response», which took place from **11th through 15th of September** 2017 in Saint-Petersburg branch of Non-State Educational Institution of Further Professional Education «Central advanced training institute of Rosatom».



On the **22nd of September 2017** within the framework of «InnoNovouralsk 2017» Investment Forum, the offsite meeting of Natural Resource and Ecology Management Committee of Sverdlovsk Region Union of Industrialists and Entrepreneurs was held, devoted to «Solving issues related to environmental monitoring, disposal and utilization of Novouralsk urban district industrial and biological waste». At the meeting SC UEIP Deputy General Director for technical support and quality - Technical Director Ye.M. Lobov reported on SC UEIP sustainability management.

On the **27th of September 2017** The Head of environmental department participated in the session No.3 of scientific and technical council (STC) of FGUGP «Hydrospecgeology».

On the **28th of September 2017** SC UEIP environmental department specialists took part in special event devoted to the « Day of Lyceum No.58».

On the **12th and 19th October** school No. 54 hosted the next scheduled stage of ecological education project «Clean city – safe world». SC UEIP specialists organized and conducted the workshop session on «Industrial environmental monitoring», where the young ecologists from ten schools could witness the process of preparation and analytical control of soil taken in various areas of Novouralsk urban district.

On the **9th of November 2017** the ecological tour for Novouralsk urban district Duma deputies was held. SC UEIP environmental department specialist was on the jury panel of the final game of the TVEL Fuel Company educational program "The first step into atomic project» that was held on November 11, 2017 in «Novouralsky» culture center.

SC UEIP environmental department specialists got involved in the engineering research conference "Pure water + clear air = healthy planet", which was held on **November 17, 2017** in Lyceum No.58 of Novouralsk urban district.

The Head of SC UEIP environmental department participated in «ATOMECO 2017», the International Dialogue Forum and Exhibition, which took place in Moscow from November 20, 2017 through November 23, 2017. He took part in the round table for senior management and specialists of environmental protection service of environment-oriented Rosatom State Corporation. The round table was devoted to «Amendments to the Russian Federation Environmental Legislation. Results and opportunities for nuclear industry». The Head of SC UEIP environmental department made a report on «Problems of adapting production activities to environmental regulatory changes».

The Head of SC UEIP environmental department participated in the session No.3 of scientific and technical council (STC) of FGUGP «Hydrospecgeology» devoted to «Updating of SC UEIP geomigration model and assessment of long-range consequences of underground and surface water chemical and radioactive pollution within the areas of potential impact made by nuclear legacy facilities », which took place on November 28, 2017 in Moscow.

On the **30th of November 2017** the ceremonial closing of the Year of Ecology in Novouralsk urban district was held in MAU DO «Campus activity center». The results of social ecological projects implemented in Novouralsk urban district area, including JSC TVEL ecological education project «Clean city – safe world» were summed up at the ceremony. Recognition letters on behalf of Managing Head of Metallurgical Administrative District were ceremoniously presented to the following SC UEIP employees:

- Marina N. Sapozhnikova, Spectrometry analyst, Analytical center
 - Anastasia V. Prosviryakova, Spectrometry engineer, Analytical center
 - Olga V. Khmeleva, Mass communication specialist, PR department
- Diplomas of the Department of education of Novouralsk city administration were given to:
- Marina N. Sapozhnikova, Spectrometry analyst, Analytical center
 - Dmitry N. Shibalenkov, Environmental Engineer
 - Mikhail V. Noskov, Environmental Engineer.

8.4

SC UEIP environmental awards 2017

SC UEIP became the finalist of «Crystal compass» national award in the nomination «Environmental culture in industry and power industry».



SC UEIP BECAME THE WINNER OF MUNICIPAL ENVIRONMENTAL CONTEST «GREEN OWL 2017»

in the nomination «The leader of environmental activity among Novouralsk urban district organizations».

SC UEIP was also mentioned, as the prizewinner in the following nominations:

- «Environmental education»
- «Social ecological initiatives»
- «The best mass media environmental publications and news items ».





CONTACT DETAILS

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