

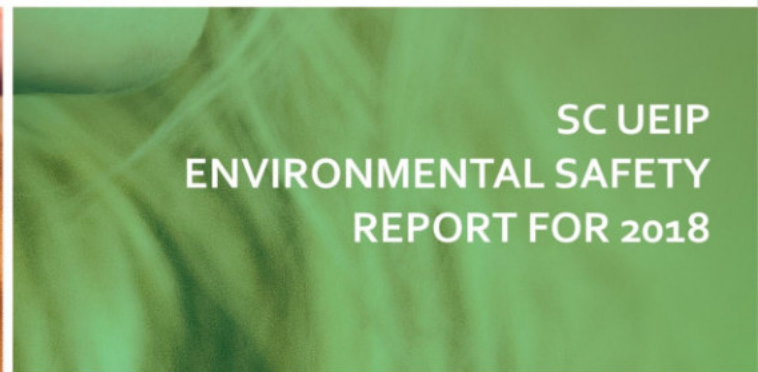
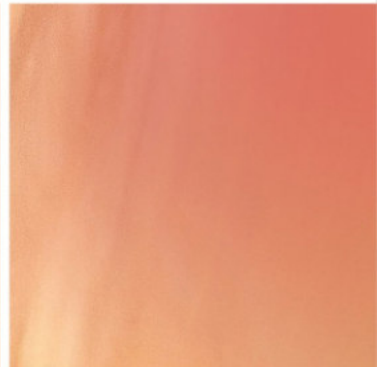
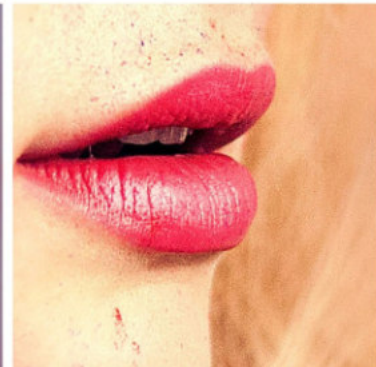
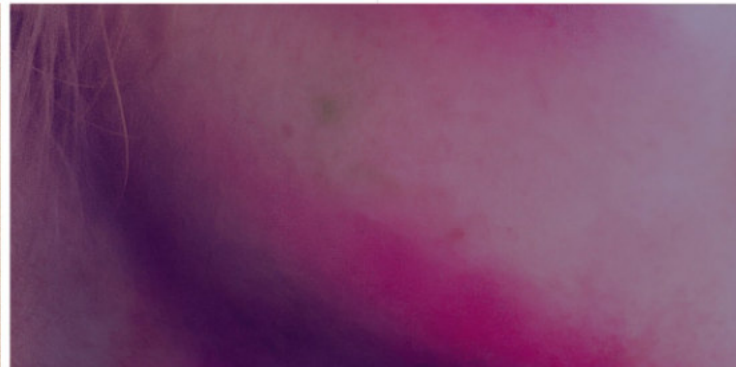
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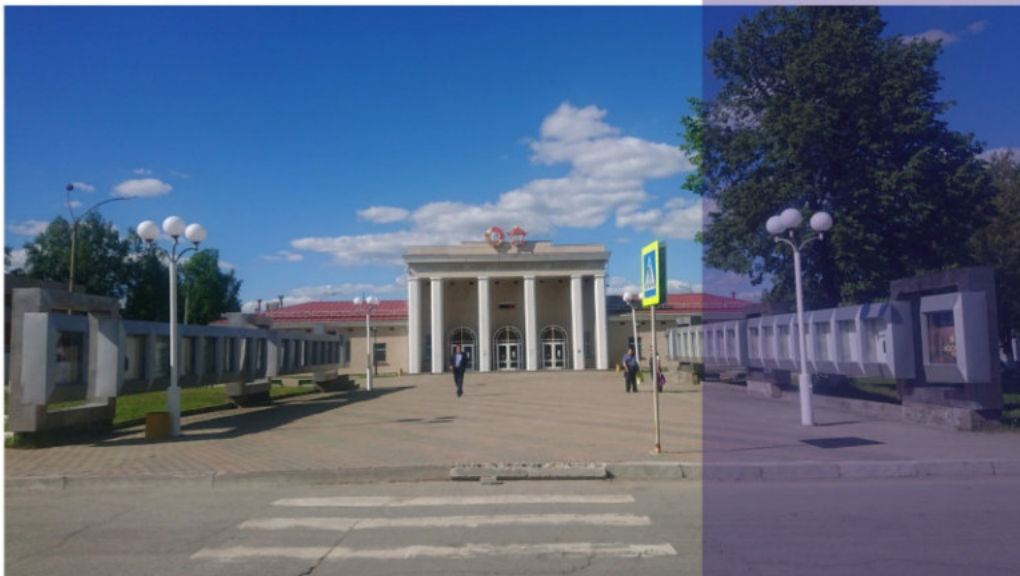
ASC - ROSATOM - COMPANY

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SC UEIP
ENVIRONMENTAL SAFETY
REPORT FOR 2018

FOREWORD



Public Environmental safety report for 2018 is the eleventh annual 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, environmental safety of production 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 the implementation of corporate programs focused on technical upgrade, modernization and energy saving. In particular, SC UEIP management understands the need for keeping a balance between strategic objectives of corporate business development and environmental protection 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).

Let us say a few words about the style of our new report. The design concept of this version is similar to the style of Instagram social networking service. It is common knowledge that today practically everyone who is able to handle smart phone or to press PC key buttons are registered in social networks. Instagram is a photo and video-sharing social networking service intended for fast editing and sharing photos and videos. Since its very creation this social network service has started to attract millions of users worldwide. In a year after its launch Instagram rapidly gained popularity with 10 million registered users. In 2017 the number of users exceeded 500 million, and as of today there are over 1 billion active users. Instagram is not just a space for uploading photographs and videos, but primarily it is a stylish service, which allows to post smart photos.

Certainly, Ural Electrochemical Integrated Plant is in step with the worldwide trends. The Company has got the account in social networks, for example Facebook, Vkontakte. Today we present the new bright decoration of our report.

We note, that at the time of issuing this report Ural Electrochemical Integrated Plant is celebrating its important milestone – seventy years from the date of first product release! We couldn't miss this key point in our report, that is why it contains the information on that long and challenging way made by the Company and its employees to achieve such great results that we have today.

Therefore, in our report we tried to combine the past and the future, and demonstrate our respect to the heroic deeds of the past and forward-looking optimism. And you're to judge, if we succeeded.



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SC UEIP background information and core business

1

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 personnel contributed to development and provided the advanced level of enrichment production. In 1966 the plant reconstruction program was started, and by 1988 the gas diffusion equipment was 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 many foreign countries. In 1989 UEIP ceased the 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.



The first in the USSR plant for uranium isotope separation by gas diffusion method commenced operations

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1949

On August 15, 2008 Federal State-owned Unitary Enterprise Ural Electrochemical Integrated Plant was reorganized into Joint-Stock Company Ural Electrochemical Integrated Plant.

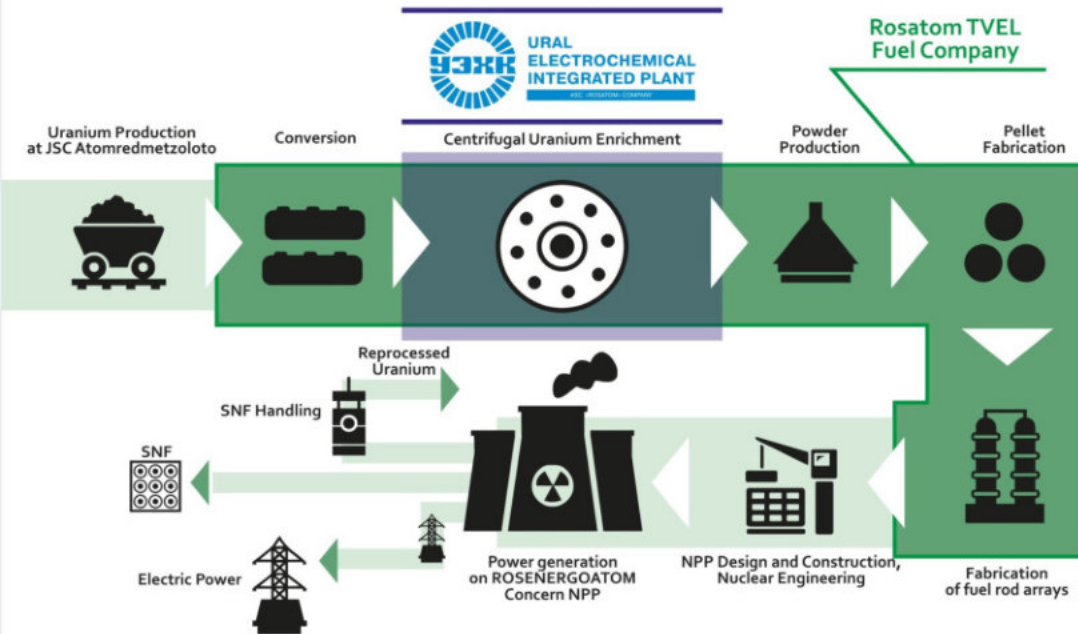
An important milestone became UEIP incorporation into ROSATOM TVEL Fuel Company in 2010. TVEL Fuel Company comprises separation-sublimation combine, gas centrifuge production, fabrication of nuclear fuel and research & development cluster. It enabled further effective development of the Company, its production facilities, infrastructure and human resources.

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.

SC UEIP Position in the Rosatom Nuclear Fuel Cycle



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.

Natural uranium consists of three radioactive isotopes:



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

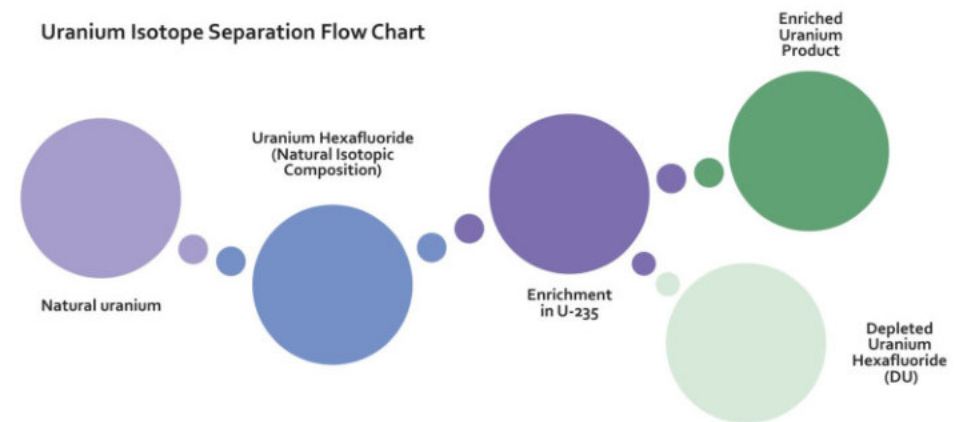
The key element of SC UEIP structure is the production cluster consisting of process shops 53, 54, 87, and directly associated subdivisions: analytical center (department 16), chemical metallurgical shop (shop 70), machinery revision shop (shop 19) and special product storage, transportation and control department (department 7). The gas centrifuge cascades are located in shops 53, 54, 87. "Chelnok" facility located in shop 54 is used for transferring uranium hexafluoride of required U-235 assay into the cylinders of foreign customers.

Enrichment production waste processing (extraction, precipitation, vessel washing, U₃O₈ 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 process equipment repair are conducted in the machinery revision shop.

Analytical center performs analytical procedures and produces uranium isotopic and chemical composition certified reference materials.

Special product storage, transportation and control department ensures nuclear material storage and transportation and performs some operations related to nuclear material control and accounting.

Uranium Isotope Separation Flow Chart



For the purpose of enrichment natural uranium is converted to uranium hexafluoride. enriched uranium product (EUP) and depleted uranium hexafluoride (DU) are resulted from the enrichment process.

EUP is delivered to the customer, and DU is transferred for storage and subsequent processing .

Integrated management system

Environmental management is a part of corporate governance system with well-defined organizational structure, and is aimed to achieve the environmental policy objectives by means of 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 sustainable development of human society and nature, 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 the key dominant of sustainable development and 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 specifying 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 development to implementation, and ensures the faultless operation of all production 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.

The technology of enriched uranium transfer into the transport cylinders of international customers was finalized in 1973.

Over the whole period of export activities the Company received no claims related to the supplied products quality.



Laboratory No.3 headed by A.A. Privalov, was established. Main activity was focused on research aimed at development and improvement of technological processes in shop 19 and 70. The first works on outdated equipment decontamination, were carried out



STRATEGIC GOAL

Ensuring safe and sustainable development, minimization of environmental impact

SC UEIP ensured introduction and successful performance of Environmental management system (EMS). A comprehensive certification audit for compliance with ISO 9001 and ISO 14001 was conducted at SC UEIP in 2010. The audit conducted at SC UEIP subdivisions resulted in issuing the Certificate of conformity which proved the compliance of SC UEIP production organization with QMS and EMS requirements. In 2011-2012 the Company was audited for conformity to ISO 9001 and ISO 14001. 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.

SC UEIP management system is certified against the following standards as part of Rosatom TVEL Fuel company integrated management system



ISO 9001:2015; ISO 14001:2015; ISO 50000:2011; BS OHSAS 18001:2007

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 system). 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 traditionally successfully audited. Besides, in 2014 SC UEIP was given a Certificate of QMS conformity to ISO 50001 (Energy management system). In 2015-2017 the audits for compliance with four standards: ISO 9001, ISO 14001, OHSAS 18001, ISO 50001 were conducted. Therefore, at present SC UEIP Integrated management system includes:

- Environmental management system aimed to improve procedures that ensure environmental safety
- Quality management system aimed to improve procedures that ensure high quality of released products
- Occupational health & Safety assessment system established for the Company employees
- Energy management system aimed 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 stages of production.

Constant mitigation of environmental and social impact is the key 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 are aware of their responsibility for ecological implications of production process and strive for decreasing the man-made impact on the environment.

In pursuance of ROSATOM State Corporation environmental policy SC UEIP management complies with the following principles:

- presumption of potential environmental hazard in planning and carrying out activities
- permanent readiness of SC UEIP management and personnel to prevent and mitigate emergency situations and other accidents
- coincidence of environmental, economic and social concerns of SC UEIP and population, non-governmental organizations, governmental authorities and local authorities for the purpose of sustainable development and promotion of favorable environment and ecological safety
- ensuring high environmental performance, mitigation of SC UEIP impact on the environment and natural resources at reasonable costs
- transparency and availability of the information related SC UEIP operations in the field of environmental protection and ecological safety.

SC UEIP main tasks in the field of environmental protection and ecological safety:

- meet the requirements of international, federal and regional legislation, rules and guidelines in the area of radiation and nuclear safety, environmental protection, sanitary-and-epidemiological well-being of population, protect population in natural and man-made emergency situations, and other commitments undertaken by SC UEIP
- develop the natural environment and radiation control and monitoring systems using advanced automatic equipment and software
- improve the resource and energy efficiency of production
- ensure decommissioning of SC UEIP nuclear facilities being out-of-service
- reduce the volume of radioactive and hazardous industrial waste
- regularly inform SC UEIP personnel, citizens and other concerned parties of environmental and radiation situation and SC UEIP environmental impact
- continuously improve the integrated management system as required by ISO 9001, ISO 14001, OHSAS 18001, ISO 50001, IAEA GSR Part 2, IAEA GS-G-3.1.

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 January 10, 2019 by SC UEIP General Director order and was approved by ROSATOM State Corporation and JSC TVEL. The Company environmental policy is available in mass media and at SC UEIP web-site.



- 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 the scope of their competence.



Research of methods and installations for purification and recovery of aggressive technological waste gases by sorption them on various sorbents, were conducted. Thereafter these best practices were used for environmental emissions' reduction

The list of the Company main authorization documents in the field of environmental protection

SC UEIP obtained all necessary permits in accordance with the applicable 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.

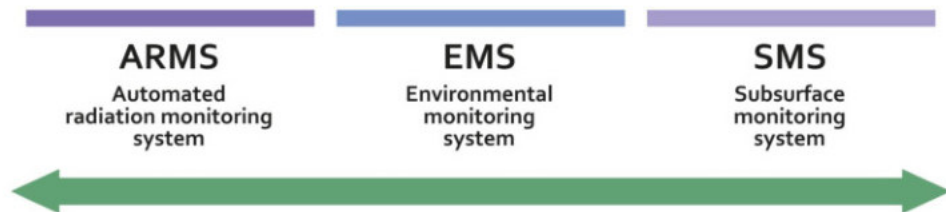
SC UEIP site conditions

There are no areas polluted by radionuclides at UEIP industrial site and sanitary protection area. Gamma-radiation equivalent dose rate does not exceed the natural background. The average value makes 0.06 $\mu\text{Sv}/\text{hour}$. Over the whole period of SC UEIP operations there was no environmental contamination resulting 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 specified. The sanitary protection area for SC UEIP, as the nuclear hazardous facility, is specified 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.

The following monitoring objects within SC UEIP impact area are:

- water bodies of the open hydrographic system
- atmospheric air
- vegetation
- atmospheric precipitation (snow)
- radiation environment
- meteorological parameters.

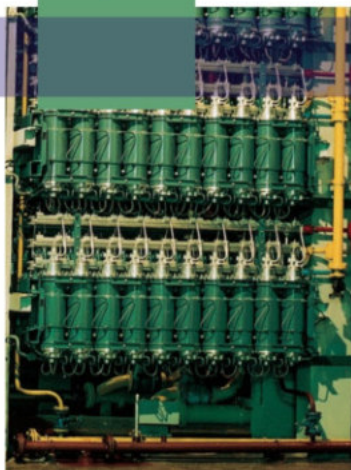
SC UEIP performs monitoring of radiation, ecological situation and natural environment using three systems:



G4-EN24
G4-EN11

5.1

1962



The world's first commercial gas centrifuge plant was put in operation

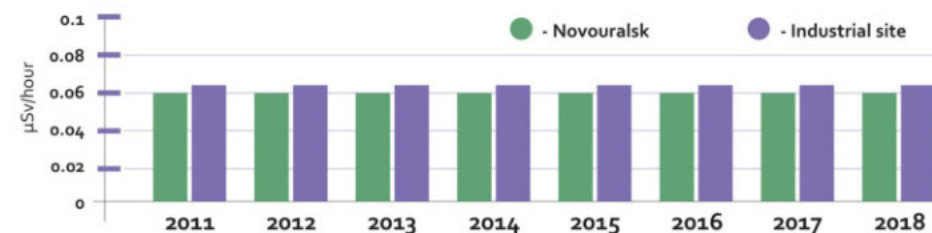
ARMS. Radiation monitoring and meteorological observations

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 designed 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.

Nine monitoring stations cover all SC UEIP industrial sites. 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 $\mu\text{Sv}/\text{hour}$, which is well below the standard values and background exposure dose rates specified for Urals region.

Diagram 1. Average equivalent dose rate



Start of SC UEIP automated radiation monitoring station pilot operation

ARMS

2003

G4-EN12

Description of existing impact of operations, products and services on biological diversity in conservation areas outside their territories

SC UEIP has no negative impact on biodiversity of conservation areas. Pollutant emissions from SC UEIP sources make no impact on atmospheric air ($C_{\text{max}} < 0.05$ parts of maximum permissible concentration). According to 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

5.3

Monitoring of the natural environment

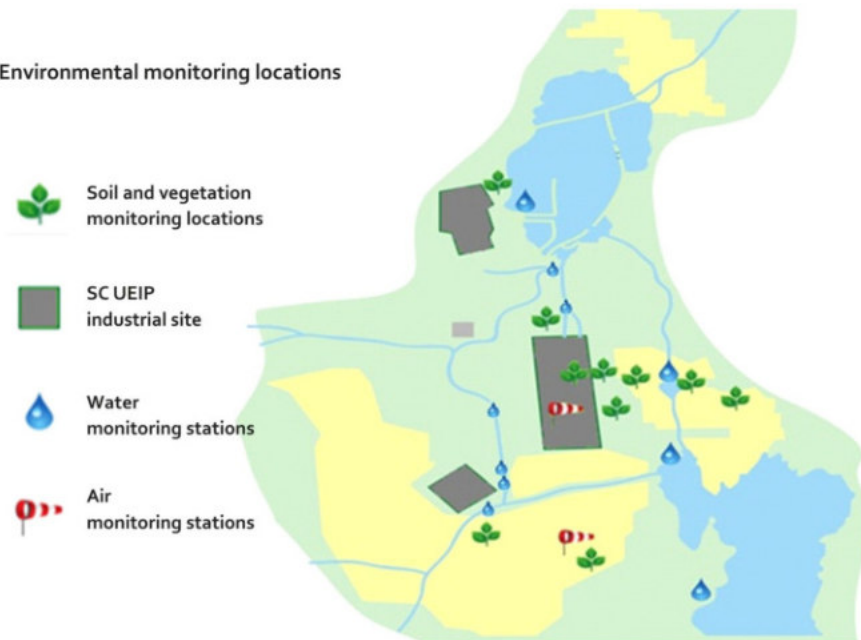
Industrial environmental control and ambient monitoring is carried out by the Company Environmental protection department. The monitoring activity shall be performed by SC UEIP Analytical center and several organizations dealing with environmental sampling and analytical control. These organizations have got the relevant accreditation certificates and are authorized to perform such activities: №POCCRU.0001.510905; №RA.RU.21YA04; №RA.RU.511612; №POCCRU.0001.214L36; №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 ~150 times below the sanitary limits
- the content of radionuclides in Novouralsk atmospheric air and SC UEIP site does not exceed the background level and is ~270 times below acceptable limit
- the radionuclide content in soil does not exceed the background level.

Environmental monitoring locations



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 increase.

5.4

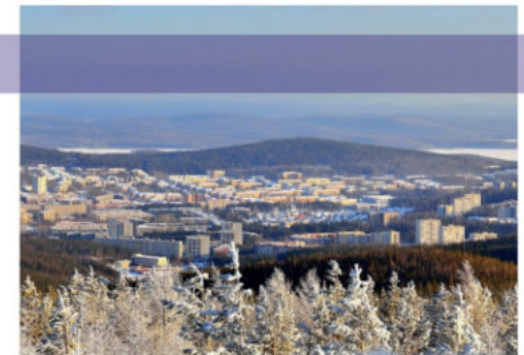
SC UEIP subsurface monitoring

Due to the necessity of 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, the Company created the network of monitoring wells and stations keeping track of the hydrodynamic status and water quality of water-bearing layers. Testing of methods, techniques and equipment for wells installation and connection, sampling and water samples' analysis procedures, and other operations were performed.

At present the introduction of brand new subsurface monitoring system makes it possible to obtain correct and complete information on the state of underground hydrosphere. 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.

1977

Laboratory No.3 of SC UEIP Analytical center by the order No.77 dated June 30, 1977 was reorganized into the Environmental protection laboratory (EPL) headed by Yu. S. Danilovsky



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 geoecological 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 creation of SC UEIP underground water observation well network which includes 38 wells. The geoinformation system was developed.

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

6.2

G4-EN8

Discharges into open hydrographic system

In 2018 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". According to «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 2018 made 6.2 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

Table 4. Wastewater composition by priority pollutants in 2018

| Priority pollutants | Class of hazard | ADL, t/a | Actual discharge in 2018 t/a | % of limit |
|--|-----------------|-------------|------------------------------|------------|
| Petroleum products | 3 | 1.24 | 0.21 | 17 |
| Suspended substances | 4 | 87.2 | 27.6 | 32 |
| Ammonia nitrogen | 4 | 5.6 | 0.9 | 16 |
| Nitrites | 4 | 2.07 | 0.48 | 23 |
| Phosphorus | 4 | 0.69 | 0.36 | 52 |
| Total, only by basic substances | | 96.8 | 29.5 | 31 |

ADL – Allowable Discharge Rate

1988



Gas diffusion equipment operation was completely ceased.

Diagram 2. Waste water volume



Industrial water consumption has increased due to pressure rise in water supply system at 6-7 industrial sites during July-August aimed at reliability improvement of equipment (capital repair of unit assemblies in specialized organizations) and increased water losses from supply pipelines

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.

Chemical release

G4-EN2.1

6.4

In 2018 the actual release made 26 tons, being 16 tons less as compared to 2017. 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 due to transfer of TPP assets to OTEK JSC branch in 2017.

The Company chemical release monitoring is performed in accordance with annual "Chemical releases monitoring plan", 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 indicators.

Diagram 3. Air Emissions



Table 5. SC UEIP chemical pollutant emissions

| Pollutant | tons per year | | | | | |
|--|----------------|----------------|----------------|----------------|---------------|---------------|
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Total | 937.187 | 591.035 | 513.624 | 523.008 | 41.757 | 26.070 |
| Including controlled emission sources | 879.550 | 525.671 | 478.820 | 491.091 | 21.215 | 26.070 |
| Including non-controlled emission sources | 1.124 | 1.074 | 0.857 | 0.898 | 0.714 | 0.678 |
| Solid | 936.063 | 589.961 | 512.767 | 522.110 | 41.043 | 25.392 |
| Gas and liquid pollutants, among them | 3.474 | 4.960 | 3.706 | 3.808 | 0.438 | 0.141 |
| Sulfur dioxide | 49.945 | 61.142 | 29.189 | 37.078 | 16.453 | 0.157 |
| Carbonic oxide | 834.010 | 475.171 | 431.377 | 432.700 | 1.931 | 0.327 |
| Nitrogen oxides (in-equivalent No ₂) | 0.420 | 0.420 | 0.420 | 0.420 | 0 | 0 |
| Hydrocarbons (without VOC) | 40.243 | 40.243 | 40.208 | 40.205 | 14.104 | 10.045 |
| Volatile organic compounds (VOC) | 7.971 | 8.025 | 7.867 | 7.899 | 0 | 14.722 |
| Other gas and liquid pollutants | 0 | 0 | 0 | 0 | 0 | 0 |

Initiatives on greenhouse gas reduction and progress made

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

Indirect greenhouse gas emissions were increased due to thermal power overconsumption. The overconsumption causes are:

- increase of steam and energy consumption resulted from organizational changes at SC UEIP boiler plant in building 6o
- duplication of hot water production capacity (of OTEK JSC steam) and decrease of thermal power consumption from MUP "Water Boiler" (for the same capacity)
- increase of percentage losses attributable to heat transfer (previously attributable to heat production) resulted from changing the contract conditions and calculation methods after OTEK JSC was granted the UTB (Unified Tariff Body) status.

Table 6. Direct & indirect greenhouse gas emissions tons per year

| Material (substance) | Direct greenhouse gas emissions | | | | | |
|--|---------------------------------|--------|--------|--------|--------|--------|
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| For all types of emissions in CO ₂ equivalent | 388065 | 385342 | 356986 | 379953 | 94 | 145 |
| Indirect greenhouse gas emissions | | | | | | |
| For all types of emissions in CO ₂ equivalent | 803195 | 792706 | 734215 | 723213 | 840648 | 876353 |

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 we need 393 kg of fuel equivalent (0.393 t) to generate one thousand kW-h of electric power by traditional sources. It would cause the atmospheric emissions making 920 kg (0.92 t) of carbon dioxide. Therefore, nuclear industry prevented releases amounting to 2300 million tons of greenhouse gas under the sun!

Table 7. Greenhouse gas emission rate

| Material (substance) | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|---------|---------|---------|---------|-------|--------|
| Total direct and indirect greenhouse gas emissions, ton | 1191260 | 1178047 | 1091201 | 1080129 | 40657 | 876353 |
| Annual products and services revenue, mln roubles | 19400 | 20543 | 20523 | 22908 | 23881 | 22310 |
| Intensity of greenhouse gas emissions / annual revenues from product sales, tons/mln roubles | 61 | 57 | 53 | 47 | 35 | 39 |

Evaluation of SC UEIP contribution to greenhouse gas emission reduction

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.

SC UEIP covers ~ 20% of the global demand for uranium enrichment. SC UEIP is involved in generation of every fifth nuclear power kilowatt under the sun, and thus the Company activity saves the earth atmosphere from releasing ~460 million tons of greenhouse gas!!!

Radionuclides release

The results of radionuclide emission monitoring are given in Table 8. 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

| Radionuclides release | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|-------|-------|-------|-------|-------|-------|
| Total atmospheric release of long-lived alpha-active radionuclides, Gbq/year | 0.140 | 0.103 | 0.098 | 0.093 | 0.087 | 0.079 |
| Allowable release level, Gbq/year | 2.0 | 0.92 | 0.55 | 0.3 | 0.3 | 0.3 |

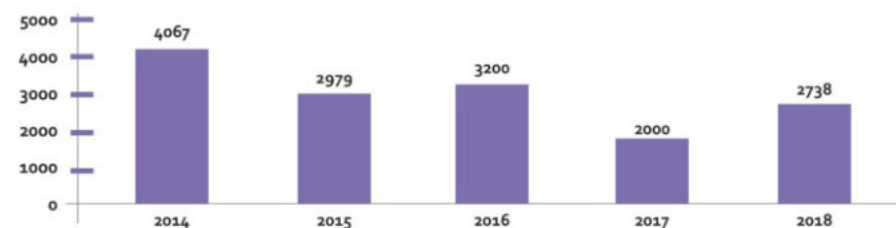
Production and consumption waste management

The Company obtained all necessary permits for production and consumption waste management. There were no cases of exceeding the waste generation limits. Significant volume of waste is delivered for processing to the authorized companies. Every year SC UEIP performs organizational and technical activities focused on waste reduction. Increase in figures results from increase of ferrous scrap yield (5th class of hazard). Of 2738 tons of production and consumption waste, generated in 2018, 2585 (95%) tons made ferrous and non-ferrous scrap waste being delivered for processing and returned to production facilities in the form of finished products. In 2017 the processed production and consumption waste volume made 86% of the total waste volume. In 2016-81%.

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

| Total waste generation | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------------|------|------|------|------|------|
| Including: | 4067 | 2979 | 3200 | 2000 | 2738 |
| 1st class | 29 | 8 | 30 | 3 | 2 |
| 2d class | 0 | 0 | 0 | 0 | 0 |
| 3d class | 114 | 19 | 73 | <1 | 3 |
| 4th class | 1241 | 578 | 453 | 223 | 129 |
| 5th class | 2683 | 2374 | 2644 | 1773 | 2604 |
| Processed waste | 2600 | 2400 | 2600 | 1720 | 2585 |
| Delivered for disposal | 1467 | 579 | 600 | 280 | 153 |
| Waste generation limit | 4500 | | | | |

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



Generation of solid radioactive waste (SRW) at different stages of production process is resulted from SC UEIP nuclear facility operation. SRW are classified as low-active waste. The most part of SRW volume collected at the Company facilities is subject to processing. After treatment SRW packages shall be delivered to FSUE "NO RAO" SRW storage facility, which is safe and isolated from the environment.

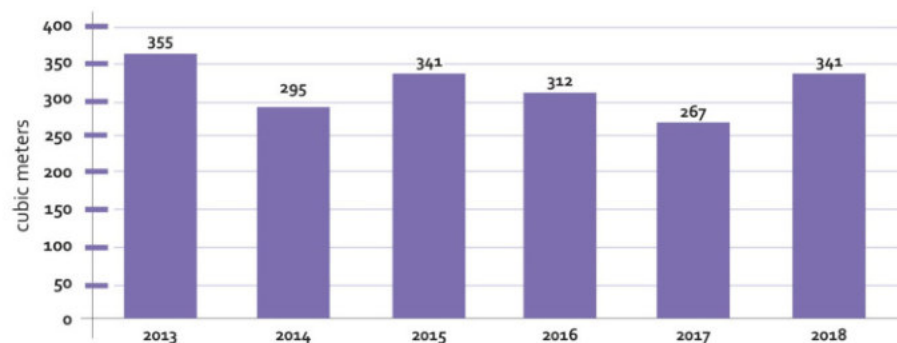
Decontaminating uranium-bearing solutions shall be processed by means of special technology. Upgrade of uranium-bearing solution processing technology in 2005 ensured reduction of the content and activity of radioactive substances in such solutions to the background levels. It makes possible to tell responsibly of zero radioactive substances' discharge with wastewater.

The main SC UEIP principle and criteria for SRW management is to ensure the personnel, population and environment radiation safety with strict compliance with radiation safety regulations and radiation protection requirements.

In 2018 SC UEIP 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.

Taking into account the planned work on thermal disposal of gas centrifuges the scheduled SRW volume in 2019 shall make 410 cubic meters.

Diagram 6. SRW generation



1993



HEU-LEU Agreement was made between the USA and the Russian Federation

SC UEIP is committed to introduction of energy-saving technologies and cost reduction. Based on the results of the research conducted in 2010 the Program for energy saving and energy efficiency improvement in 2011-2020 at SC UEIP was developed, approved and started in 2011. The Program is focused on the effective use of energy resources and reduction of energy losses resulted from changes in personnel behavior, and improvement of production process.

Effective use of energy resources & energy loss reduction

- SC UEIP introduced and ensured successful operation of energy management system as per ISO 50001. SC UEIP Energy policy was developed and introduced. In terms of enrichment production equipment technical upgrade the process unit 61 was modernized and gas centrifuges of the 5th generation were replaced by gas centrifuges of the 9th generation with low energy consumption. Furthermore, the upgrade of power supply system was performed, including replacement of rotary frequency converters (RFC) with more efficient static frequency converters. The power supply system of process unit 61 was equipped with new energy-efficient SPChS-170 frequency converters. In process shop 54 the process units 51–56 were furnished with the system of automatic control of gas centrifuge energy saving mode at lower voltage due to overdrive of power hysteresis motors. Refrigerating unit in the water supply shop was replaced with a new one of high capacity with cooling ratio over 7. Outdated refrigerating unit was dismantled and the new equipment was purchased.
- In the networks' and substations' shop the cable power lines were replaced for the purpose of improving security of enrichment production power supply.
- An automated energy accounting system and data collection center including over 600 energy metering units (water, wastewaters and thermal energy) and 500 electricity metering units were commissioned.
- The Company continued the work on introduction of the information-measuring systems for energy resources accounting and equipped all buildings located at SC UEIP industrial site with metering units.

Table 10. Energy consumption

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|---------|---------|---------|---------|---------|---------|---------|
| SC UEIP power consumption, thousand kW/ h. | 1156060 | 1095121 | 1068888 | 1006733 | 976161 | 979059 | 1012306 |
| SC UEIP thermal energy consumption, Gcal | 712260 | 695726 | 667107 | 591284 | 604521 | 587907 | 627539 |
| Total energy consumption, GJ | 7146185 | 6857528 | 6643175 | 6101719 | 6045161 | 5985584 | 6279965 |

Causes of energy overconsumption in 2018.

Due to low water temperature in water basins in May and June all refrigerating plants had to operate at low specific indicators (with plant capacity factor 60 %), and, vice versa, due to high water temperature in fall period refrigerating plants kept working in October (in previous years refrigerating plants ceased operations at the end of September). In such situation the switch over to comparable conditions is not specified by the procedure. During switch over to comparable conditions the forced increase of unit supply voltage (increase of power consumption by 10-15 %) is not taken into account when changing the technological mode (increase of gas centrifuges' load capacity).

The scope and intervals of maintenance for air pipes of SVPCh brush gear devices in building 2004 were changed in order to ensure the fire safety upgrade. Owing to this the operation period of equipment using redundant drive circuit (increase of power consumption by 15 %) made over 3 months.

6.10

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

SC UEIP share in total volume of chemical pollutants (ChP), radionuclide emissions and discharge both in Sverdlovsk region and within the territory of 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 | 928* | 0.026 | <0.01% |
| Discharge (volume of discharged waters), million cubic meters | 763* | 6.2 | <1% |
| Production and consumption waste, million tons | 167* | 0.0027 | <0.01% |
| α- emitting nuclides atmospheric emissions, GBq | 451000** | 0.079** | <0.0001% |
| α- emitting nuclides discharge into open hydrographic network, Bq | 2,42210*** | 0 | 0 |

* Total volume in Sverdlovsk region in 2012

** Total volume in JSC TVEL companies in 2017. The given values of radionuclide emissions and discharge do not exceed the RF permissible limits.



Environmental protection department (department 23) was established. A.V. Nalivaiko was appointed as the head of department 23.

6.11

G4-EN28
G4-EN32

Share of sold products and its packing materials returned to producer for processing

SC UEIP production process allows for 100% return of packaging materials (vessels) 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 delivering products and services are specified in the contracts.

To improve the integrated management system the Company implements "Environmental protection and ecological safety requirements during work performance, product and service delivery by the contractors".

G4-EN34

Number of complaints related to environmental impact, submitted, processed and settled through official mechanisms

A specific request (No.604-obr dated September 11, 2018) was made to the Department of Federal Service for Supervision of Nature Resources in Ural Federal District, which related to SC UEIP possible non-compliance with the requirements of environmental legislation of the Russian Federation in the field of air protection of atmospheric air. In view of the request unscheduled inspection of the Company was performed by Rosprirrodnadzor. Inspection detected no violations resulted in environmental contamination.

Financial aspects and other risks and opportunities for the Company activity in the context of climate change

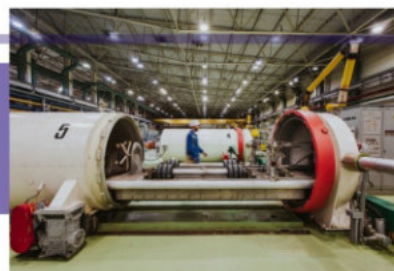
G4-EC2

6.12

Meteorological observations 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 rather stable.

The Company annually develops plans of activities focused on emergency situations' prevention (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.

In view of the slow rate of climatic changes, the Company management has not performed special quantitative evaluation of financial consequences in the context of climate change sin medium and long-term perspective.



SC UEIP was incorporated into TVEL Fuel Company of Rosatom State Corporation

2010

Implementation of environmental policy

7

Environmental safety is crucial for nuclear industry and is essential to 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. At present it greatly depends on conditions ensuring reduction of radioactive waste volume, safe waste disposal, development of decommissioning technologies and solution of nuclear legacy problems.

SC UEIP scope of activity is of great strategic importance for the 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, being 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, modernization and energy saving corporate programs, as well as detailed assessment and minimization of potential environmental risks during implementation of new build projects. Improvement 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 multilevel 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 solution of problems addressed to conservancy and environmental protection enables SC UEIP to achieve all intended environmental purposes, minimize environmental risks and increase social responsibility of business.

7.1

G4-EN27
G4-EN31

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 is ensured by application of physical protection system acting as a barrier on the way 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 operation within specified lifetime, and personnel and environment protection. For this purpose SC UEIP performs a complex of special measures to prevent emergencies which may result in 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.

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.

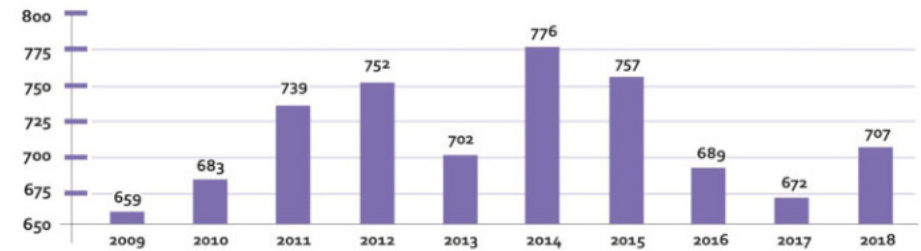
Table 12. Current environmental costs in 2018, thousand rubles

| Type of environmental activity | Annual current (operating) costs | where from the Company's own funds |
|--|----------------------------------|------------------------------------|
| TOTAL | 707613 | 707613 |
| including: | | |
| air protection | 108744 | 108744 |
| collection and purification of waste water | 283314 | 283314 |
| waste management | 3256 | 3256 |
| environmental radiation safety | 311203 | 311203 |
| other environmental activities | 1096 | 1096 |

Table 13. Payment for environmental services in 2018, thousand rubles

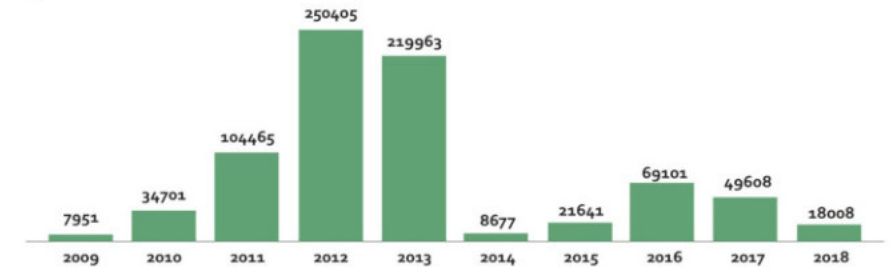
| Environmental activity | Payment for environmental services | where from the Company's own funds |
|--|------------------------------------|------------------------------------|
| TOTAL | 45196 | 108940 |
| including: | | |
| air protection | 103 | - |
| collection and purification of waste water | 44719 | - |
| waste management | 214 | 53777 |
| environmental radiation safety | - | 57163 |
| other environmental activities | 160 | - |

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



Cost increase occurred due to SRW delivery to FSUE "NO RAO" SRW near-surface storage facility.

Diagram 8. Environmental investment data, thousand rubles



In 2018 environmental costs by means of capital investment made 18 008 thousand rubles

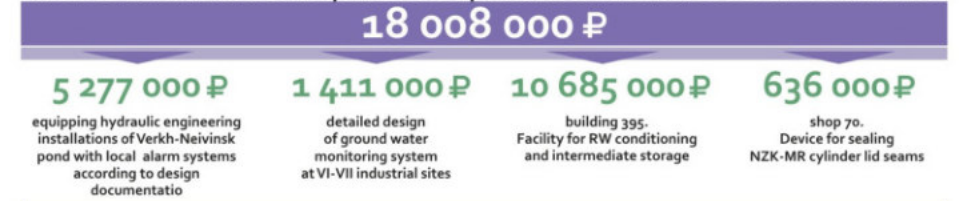


Table 14. Environmental pollution payments, thousand rubles

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------------|------|------|------|------|------|------|------|------|
| Pollution charge | 339 | 315 | 292 | 192 | 182 | 96 | 247 | 169 |
| including water bodies | 103 | 105 | 84 | 64 | 60 | 43 | 95 | 100 |
| open air | 233 | 210 | 208 | 128 | 122 | 53 | 2 | 42 |
| waste disposal | 3 | 0 | 0 | 0 | 0 | 0 | 150* | 27 |

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

Evaluation of efficiency of SC UEIP environmental initiatives in 2018 as compared to 2017:

Current environmental expenditure made 707.6 mln rubles and increased by 34.8 mln rubles as compared to 2017.

Also as compared to 2017:

- atmospheric pollutant emissions were decreased by 15.7 tons (38%)
- total radionuclides release was reduced by 10%
- emission and discharge limits were observed by the Company subdivisions.
- environmental regulations were observed.



HEU-LEU Program was completed. Start of JSC «NAC «Kazatomprom» (Republic of Kazakhstan) and Rosatom State Corporation joint project on establishing Uranium enrichment center under the auspices of SC UEIP

Cooperation with public and local authorities

The proper 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 – as related to compliance with industrial safety requirements at SC UEIP hazardous facilities
- Urals Interterritorial Directorate for supervision of nuclear and radiation safety - as related to nuclear facility operation compliance with standards and regulations
- RF FMBA Regional office No 31 – as related to SC UEIP compliance with health legislation requirements.

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.



2016
Installation for complex service of cylinders used for transportation of uranium product was put in operation

Promoting public awareness

SC UEIP pays great attention to environmental education. One of the Company key principles stated in environmental policy is to ensure transparency and public availability of information related to UEIP environmental protection and safety activities. Dozens of information materials are published annually in corporate, local, regional and branch mass media. The published information highlights the Company environmental activities and environmental conditions in the territory of presence. In accordance with "transparency" policy pursued by SC UEIP, the Company annually organizes the ecological press-tours to the site (5 press-tours were conducted in 2018) for Novouralsk and Sverdlovsk region students, newsmen, bloggers and representatives of public organizations. The tour participants receive 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 report presenting full and objective information on SC UEIP current environment conditions and environmental impact. Since 2012 Environmental Safety Reports have been publically presented to concerned regional public communities and Novouralsk citizens. The Report is delivered to organizations cooperating with SC UEIP on environmental protection and industrial safety, mass media and public organizations located in Novouralsk urban district, and is available on SC UEIP web-site.

Furthermore, the news-bulletin on radiation situation in the territory of Novouralsk urban district is posted monthly on SC UEIP web-site.

SC UEIP management and specialists of environmental protection department are always ready to answer all questions related to the Company environmental activity and production ecological safety.

Environmental events

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

- On the 22nd of March 2018 environmental protection department (EPD) specialists took part in the offsite meeting of Novouralsk urban district Public Chamber which was held at MUP Vodokanal.
- On the 29th of March 2018 traditional briefing devoted to SC UEIP safety culture, environmental protection and nuclear, radiation and industrial safety was held in SC UEIP museum.
- On the 13th of April 2018 SC UEIP environmental protection department specialists took part in XIII Scientific and Industrial Forum «Technical upgrade of the Russian machine-building enterprises», which was held in Yekaterinburg.
- EPD and PR specialists presented the ecological education project «Clean city – safe world», which was included in Novouralsk collection of "Best municipal practices 2018". The presentation was held on the 23rd of April 2018 in the «RF Atomic cities» Center of MBUK «Public library».
- On the 26th of April 2018 SC UEIP employees took part in the All-Russian cleanup event «Green spring 2018».
- On May 21st - 25th the industry-specific Research and Practice Seminar on environmental protection and radiation safety was held in Novosibirsk. The Head of environmental department A.V. Nalivaiko took part in the workshop and reported on «Modernization of SC UEIP ARMS. Key problems and solutions».
- On the 5th of June 2018 SC UEIP employees event on the dam of Verkh-Neivinsky pond.
- On the 27th of August 2018 SC UEIP Environmental safety report for 2017 was presented in the «Rosatom information center».
- On the 27th of September 2018 the presentation of the book by A.P. Konstantinov «Amusing ecology» was held in the children's library.
- On the 31st of October public consultations on supporting materials for licensing SC UEIP activity in nuclear field concerning «Nuclear facility operation» were held.
- Environmental protection department specialists participated in the district meeting at Plenipotentiary Representative of the RF President to the Ural Federal District devoted to «Ecological population health risks in the constituent entities of the Russian Federation», which was held on the 1st of November 2018.
- The Head of SC UEIP environmental department participated in the session No.10 of scientific and technical council (STC) «Ecology and radiological safety» devoted to «Current issues of developing radiological safety legal framework».
- The results of the contest for «The best solution/research work» among the teams of JSC TVEL companies in 2018 were summarized. In the nomination «The best solution on improving the industrial safety level» the incentive award for «Creation of automated alerting system for natural origin emergency» was given to the group of SC UEIP corporate authors and Geenatom JSC branch in Novouralsk.
- For participation in competition «Ecologically exemplary organization in nuclear industry» SC UEIP was honored in a special nomination «Ecologically exemplary organization of the JSC TVEL Fuel company». The head of Rosatom state corporation A. Likhachev has expressed personal congratulations to SC UEIP General Director A. Belousov on getting honourable award at the meeting of Rosatom state corporation Public Council which took place on the 18th of December.
- Five ecological press-tours to the site were conducted for Novouralsk and Sverdlovsk region students, newsmen, bloggers and representatives of public organizations..

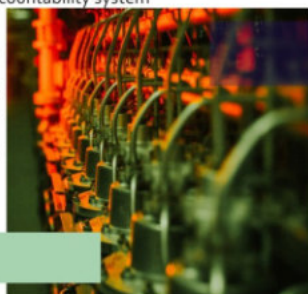
8.4

Environmental innovation in 2018

- Organization of fast reporting to SC UEIP responsible person on emergency of natural origin. This work was honoured in the nomination «The best solution on improving the level of industrial safety» in the JSC TVEL competition for «The best solution/research work» among the teams of TVEL companies in 2018.
- Automated radiation monitoring system (ARMS) was upgraded and expanded (three monitoring points were added to six). Due to completion of construction and installation, and successful pilot operation SC UEIP ARMS was commissioned.-
- The work on expanding the ground water monitoring system at SC UEIP VI-VII industrial sites was started
- Development of SC UEIP automated environmental monitoring system commenced. The system incorporates:
 - the ground water monitoring system at SC UEIP VI-VII industrial sites
 - ARMS (monitoring of equivalent gamma-radiation dose rate and meteorological parameters)
 - SC UEIP automatic weather station
 - wastewater control and accountability system

SC UEIP
environmental management
system successfully
passed certification audits

2008
-
2018



2018

Three sections
of process unit equipped
with gas centrifuges
of the 9 and 9+ generation,
were commissioned

8.5

Plans for 2019

In 2018 the specialists of environmental protection department developed new version of SC UEIP Environmental policy, which was introduced by the order of SC UEIP General Director.

According to new version of Environmental policy SC UEIP main tasks in the field of environmental protection and ecological safety in prospect are:

- further meeting the requirements of international, federal and regional legislation, rules and guidelines in the area of radiation and nuclear safety, environmental protection, sanitary-and-epidemiological well-being of population, protecting population in natural and man-made emergency situations, and other commitments undertaken by SC UEIP
- developing the natural environment and radiation control and monitoring systems using advanced automatic equipment and software
- improving the resource and energy efficiency of production
- ensuring decommissioning of SC UEIP nuclear facilities being out-of-service
- reducing the volume of radioactive and hazardous industrial waste
- regularly informing SC UEIP personnel, citizens and other concerned parties of environmental and radiation situation and SC UEIP environmental impact
- constant improving the integrated management system as required by ISO 9001, ISO 14001, OHSAS 18001, ISO 50001, IAEA GSR Part 2, IAEA GS-G-3.1.

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9

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