2022

PERFORMANCE
OF THE MINING DIVISION
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This document presents the performance results of ROSATOM’s Mining Division (JSC Atomredmetzoloto) for the past year.

In 2022, the Mining Division made a significant contribution to strengthening the Russian nuclear sector market position and ensuring the raw material sovereignty of the Russian Federation.

The development of uranium assets was accompanied by further development of new uranium deposits. Khiagda JSC started mining at the Kolichkanskoye deposit and began to develop the Dybrynskoye deposit. Dalur JSC completed the construction of key pilot site facilities at the Dobrovolnoye deposit. PJSC PIMCU successfully continued the construction of Mine No. 6 for the development of the Argunskoye and Zherlovoye uranium deposits and began mining the deep horizons of the Yubileynoye deposit.

The digital mining life cycle platform developed by our specialists will enable JSC Atomredmetzoloto to maintain technological leadership and high competitiveness. In 2022, we replicated Smart ISL Site, the intelligent production control system, to the in-situ leaching deposits in the Kurgan Region and the Republic of Buryatia.

In the reporting year, the Division achieved impressive results in developing new businesses. As part of the roadmap for the development of the high-tech field “Technologies for New Materials and Substances” approved by the Government of the Russian Federation, in 2022 the Tugansk Mining and Processing Plant, the first Russian enterprise for the production of titanium-zirconium concentrates, was put into operation. In 2022, Dalur JSC continued to ramp up the extraction of scandium as a by-product: over 600 kilograms of scandium products (in terms of scandium oxide contained) were produced.

As part of the gold mining business development, geological exploration and pilot works were successfully completed at the Severnoye deposit and 500 kilograms of gold were mined in the reporting year.

2022 was a year of anniversaries for us: the Mining Division celebrated 15 years since its inception. Many hallmark events were dedicated to this date, such as the release of a book about the history of JSC Atomredmetzoloto, a sports competition, professional skills competitions, and corporate volunteer programmes.

The Mining Division pays significant attention to social investment. Its enterprises positively impact the social and economic development of the regions of operation by developing the mineral resource base, expanding production capacities, commissioning new production facilities. Uninterrupted uranium supplies, new competencies and products, our own innovative technologies along with digital transformation are the cornerstones of sustainable development of ROSATOM’s Mining Division in the long term.
2,508 tonnes of uranium produced by the division.

Key Results and Events in the Reporting Year:

1. Key Results and Events in the Reporting Year
2. Overview of the Division
Key Events in 2022

January
- By the Decree of the Government of the Russian Federation, the sites needed for Dalur JSC to carry out uranium mining were transferred to the category of ‘industrial land’. During public hearings held in the town of Shumikha, Kurgan Region, local residents approved amendments to the Municipal District’s Land Use and Development Rules.

March
- PJSC PIMCU started testing the mine water treatment technology in the commercial operation mode at the construction site of Mine No. 6.
- Khiagda JSC began the development of the Kolichkanskoye deposit in Buryatia ahead of schedule.

April
- JSC VNIPIPT obtained a patent for the invention ‘Method for Managing Groundwater Resources during Uranium Mining by In-Situ Leaching in Slightly Water-Flooded Ore Deposits’.

May
- Dalur JSC obtained a positive opinion from FAI Glavgosexpertiza of Russia for the project to develop the Khokhlovskoye uranium deposit.

June
- Khiagda JSC obtained a positive opinion from FAI Glavgosexpertiza of Russia for the project to develop the Dybrynskoye deposit.

October
- PJSC PIMCU mined the first ore from deep areas of the Yubileynoye deposit.

November
- First Ore Mining Company JSC obtained a positive opinion from FAI Glavgosexpertiza of Russia for the construction of a mining and processing complex and a port complex at the Pavlovskoye lead and zinc deposit.
- The first stage of the Tugansk Ore Mining and Processing Enterprise specialising in the processing of ilmenite-zircon sands in the Tomsk Region was put into operation.

December
- Khiagda JSC was included in the list of economically and socially significant entities of the Republic of Buryatia.

Key Results and Events in the Reporting Year

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Key results in 2022

<table>
<thead>
<tr>
<th>Key performance indicators of the Division</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uranium production, ’000 tonnes</td>
<td>2.846</td>
<td>2.635</td>
<td>2.508</td>
<td>The decrease in output was caused by a high level of depletion of existing mines and deposits.</td>
</tr>
<tr>
<td>Uranium resources (Russian assets), ’000 tonnes</td>
<td>509.4</td>
<td>506.4</td>
<td>503.7</td>
<td>The decrease of the Division’s mineral resource base was due to the annual depletion of economic uranium reserves during mining.</td>
</tr>
<tr>
<td>Average headcount, persons</td>
<td>7,246</td>
<td>7,325</td>
<td>7,689</td>
<td>The growth was driven by the expansion of mining, processing and auxiliary infrastructure of uranium mining enterprises, expansion of the scope of external projects of Elkon MMP JSC, as well as drilling, construction and installation operations at JSC RUSBURMASH.</td>
</tr>
<tr>
<td>Lost Time Injury Frequency Rate (LTIFR)</td>
<td>0</td>
<td>0.22</td>
<td>0.21</td>
<td>–</td>
</tr>
<tr>
<td>Revenue, RUB billion</td>
<td>20.4</td>
<td>23.2</td>
<td>24.7</td>
<td>The revenue growth was due to a rise in uranium market prices.</td>
</tr>
<tr>
<td>Taxes paid, RUB billion</td>
<td>7.6</td>
<td>6.41</td>
<td>7.2</td>
<td>The growth of tax payments was due to an increase in the Division’s revenue and the payroll fund across core production assets.</td>
</tr>
</tbody>
</table>

1. The amount of taxes for 2021 was adjusted due to the revision of the calculation methodology.
The Mining Division of ROSATOM (hereinafter referred to as the Division; its holding company is JSC Atomredmetzoloto) ranks among the largest natural uranium producers in the world. The Division manages Russian uranium mining assets in the Zabaykalsky Territory (PJSC PIMCU), the Republic of Buryatia (JSC Khiagda) and the Kurgan Region (JSC Dalur).

In addition to uranium mining, the Division is actively developing non-uranium businesses, including scandium mining as a by-product (Dalur JSC), brown coal mining (PJSC PIMCU), gold mining (JSC Elkon MMP), the mining and processing of ilmenite-zircon sands (JSC Yugansk Ore Mining and Processing Enterprise), the development of lithium production at the Kolmozeroskoye lithium deposit (LLC Polar Lithium), the design of an integrated production facility at the Pavlovskoye lead and zinc deposit (First Ore Mining Company JSC), and other businesses.

The Division has unique uranium mining capabilities; its enterprises perform a full range of operations, from geological exploration, design and pilot operation to the decommissioning of production facilities and land rehabilitation.

In 2022, exploration works (EW) were carried out at the Dobrovolnoye uranium deposit (Dalur JSC, Kurgan Region), at the Severnoye gold and uranium deposit (Elkon MMP JSC, Sakha Republic (Yakutia)) and at the Sovinoye gold deposit and the Dor and the Ryveem ore fields (Elkon MMP JSC, Chukotka Autonomous Region). The total investments in exploration works amounted to RUB 1,081.22 million.

Plans for 2023
- Continue exploration works at the Dobrovolnoye deposit (in-office and laboratory work, analytical studies).
- Continue exploration works at the Severnoye deposit.
- Complete appraisal stage exploration works at the Sovinoye deposit.
- Continue prospecting at the Dor and the Ryveem ore fields.
KEY EVENTS IN THE REPORTING YEAR

GOVERNANCE SYSTEM

INNOVATION AND DEVELOPMENT OF SCIENCE

RUB 2.43 BILLION

AMOUNT OF PRODUCED AND SOLD INNOVATIVE PRODUCTS
3.1. CORPORATE GOVERNANCE SYSTEM

JSC Atomredmetzoloto applies certain provisions of the Corporate Governance Code, as recommended in Letter No. 06-52/2463 of the Bank of Russia dated 10 April 2014, with due regard for the nature of ROSATOM’s legal status stipulated in laws and regulations of the Russian Federation ensuring the unity of management of nuclear organisations. These provisions are incorporated in a number of local regulations.

The corporate governance system, being a cornerstone on which JSC Atomredmetzoloto activities are based, is formed on several levels.

The governing bodies include:

1. The General Meeting of Shareholders
2. The Board of Directors
3. The General Director (sole executive body).

The General Meeting of Shareholders is the supreme governing body of JSC Atomredmetzoloto. The competence and the procedure for convening and holding the General Meeting of Shareholders are determined by the provisions of the Company’s Articles of Association, as well as laws and regulations of the Russian Federation.

JSC Atomredmetzoloto informs its shareholders in a timely manner of both the General Meeting of Shareholders date and the voting results at the meetings. The relevant messages are posted on the Company’s official website.

Members of the Board of Directors do not own shares of JSC Atomredmetzoloto. In the reporting period, members of the Board of Directors did not acquire or sell any shares. The candidates to the Board of Directors are nominated in accordance with the requirements of Article 53 of the Federal Law on Joint-Stock Companies.

The Board of Directors of JSC Atomredmetzoloto is convened as necessary by the Chairman of the Board of Directors on his own initiative, at the request of a member of the Board of Directors, the General Director, or an auditor.

In 2022, 25 meetings of the Board of Directors were held. The Board adopted resolutions on the most important issues related to the management of the Company’s business.

The Board of Directors has not established any board committees. No internal documents on the competence, proceedings or composition of such committees have been approved by the Board of Directors.

The General Director is the sole executive body of JSC Atomredmetzoloto managing its day-to-day business.

In accordance with the requirements of Article 69 of the Federal Law on Joint Stock Companies and Article 15 of the Company’s Articles of Association, the General Director organises the implementation of decisions of the General Meeting of Shareholders and the Board of Directors.

General Director of JSC Atomredmetzoloto Vladimir Verkhovtsev was first elected to the position by the decision of the extraordinary General Meeting of Shareholders (Minutes No. 15 dated 27 May 2013). He was re-elected as General Director for a period of three years by the decision of the extraordinary General Meeting of Shareholders of JSC Atomredmetzoloto (Minutes No. 38 dated 27 May 2021).

Vladimir Verkhovtsev does not own shares of JSC Atomredmetzoloto. In the reporting period, the General Director did not acquire or sell any shares.
GOVERNANCE SYSTEM

3.2. COMMITMENT TO SUSTAINABLE DEVELOPMENT PRINCIPLES

JSC Atomredmetzoloto shares ROSATOM’s commitment to the sustainable development agenda and its focus on environmental, social and governance aspects of its operations.

The Division supports all the Sustainable Development Goals (SDGs) adopted by the UN General Assembly in 2015. Given the specifics of JSC Atomredmetzoloto operations, the Company contributes most significantly to the achievement of the following goals:

- No. 8 (Decent Work and Economic Growth);
- No. 9 (Industry, Innovation and Infrastructure);
- No. 12 (Responsible Consumption and Production);
- No. 13 (Climate Action);
- No. 15 (Life on Land).

The Mining Division recognises the rights of employees to decent work and seeks to provide all employees with conditions for professional development, ensuring absolute safety of people and production processes. The Company’s social policy is aimed at improving the living standards of employees, including ensuring the social protection of employees and non-working pensioners, creating comfortable working and leisure conditions for employees.

The Mining Division operates and implements projects in 9 regions of the Russian Federation. In 2022, the average headcount was 7,689 employees.

The Mining Division has prioritised the development and implementation of its own innovative technologies. The Company has created a system for intelligent production management throughout the entire production cycle, put the Smart ISL Site system into commercial operation, and is developing and implementing new efficient, environmentally friendly technologies for the production of uranium, rare and rare-earth metals.

In 2022, the replication of the Smart ISL Site technology was launched at the Khokhlovskoye deposit of Dalur JSC (for more details on the Smart ISL Site system, see Chapter 7 ‘Digitisation’).

The Mining Division is continuously working to improve the sustainability of the production chain. The Company has adopted ROSATOM Production System (RPS) designed to promote a lean manufacturing culture.

The Division takes measures to reduce the negative impact on the environment, including the application of the sustainable in-situ leaching method of uranium mining (Khiagda JSC and Dalur JSC), the use of environmentally friendly mining equipment (PJSC PIMCU), measures to improve energy efficiency and energy saving, including the transition to own power generation.

The Mining Division shares the fundamental importance of combating climate change and upholds the position that it is impossible to achieve the goals set to reduce the carbon footprint without the use of nuclear energy. Reliable and uninterrupted supply of uranium raw materials to Russian customers contributes to the development of a clean and safe nuclear power industry.

The Mining Division carries out activities aimed at preserving biodiversity in its regions of operation. In 2022, it continued to implement the projects for compensatory reforestation, stocking of water bodies (Khiagda JSC), protection of wild birds (PJSC PIMCU).

For more details see Section 6.6 ‘Environmental programmes of the Division’s enterprises’.
Sustainable development management system

The Mining Division continuously improves the sustainable development management system by introducing internal documents on various aspects of sustainable development.

The fundamental document regulating the activities of JSC Atomredmetzoloto in the field of sustainable development is the Unified Industry Policy on Sustainable Development of ROSATOM and its Organisations adopted in 2020. It defines the main principles and key priorities of their efforts in the sphere of health, safety and the environment, in the social sphere and in the sphere of corporate governance. In order to systematise sustainable efforts, in 2020 the Company put into effect the Uniform Industry-Wide Methodological Guidelines on the Management of Sustainable Development.

Key sustainable development documents

- Unified Industry Policy on Sustainable Development of ROSATOM and Its Organisations (2020)
- Environmental Policy of JSC Atomredmetzoloto (2018)
- Quality Assurance and Environmental Protection Policy of JSC Atomredmetzoloto (2017)
- Uniform Industry-Wide Safety Culture Policy of ROSATOM and Its Organisations (2021)
- Code of Ethics and Professional Conduct for Employees of JSC Atomredmetzoloto (2016)
- Uniform Industry-Wide Human Rights Policy of ROSATOM and Its Organisations (2022)

The management of certain sustainable development aspects, such as the use of natural resources, occupational health and safety, business ethics, respect for human rights, stakeholder engagement, is governed by separate policies and codes, some of which are cross-cutting and apply to all ROSATOM entities.

The sustainable development officer function in the Division is performed by the head of the Strategic Planning Department of JSC Atomredmetzoloto. Specific tasks and initiatives in the field of managing certain sustainable development aspects in the Division are carried out by the heads of the relevant functional units (First Deputy General Director, HR Director, Chief Safety Control Inspector, Director for Fixed Asset Management and Technical Policy, Head of Corporate Social Responsibility).

In 2022, the Division took part in the procedure for obtaining a sustainable development rating for ROSATOM from the Analytical Credit Rating Agency (ACRA). According to the assessment results, the Corporation was assigned an ESG-3 rating, category ESG-B, which corresponds to a very high assessment in the field of environment, social responsibility and governance. The final score was determined as an integrated result of the questionnaires of five divisions of the Corporation. The Division was highly possible its social impact, including due to the low level of fatal injuries over the period under review.

In order to raise awareness in the field of sustainable development, the Division pays considerable attention to personnel training. In 2022, employees of JSC Atomredmetzoloto organisations completed 435 person-hours courses on sustainable development (for details, see Chapter 8 ‘Developing the Human Capital’).

Environmental aspect

The Division is strongly focused on environmental protection issues throughout the entire production cycle, implementing measures to ensure sustainable use of resources and reduce negative environmental impacts.

The key regulatory documents in the field of environmental protection are the Environmental Policy of JSC Atomredmetzoloto and the Quality Assurance and Environmental Protection Policy of JSC Atomredmetzoloto. Pursuant to the latter, quality assurance and environmental goals are set annually.

The Division is actively developing the use of in-situ leaching, which is the most cost-effective and environmentally safe uranium mining technique. In 2022, the share of uranium mined in situ leaching at Khaogda JSC and Dalur JSC increased to 60% in the Division’s total production.

In the reporting year, the enterprises of JSC Atomredmetzoloto continued activities in the field of energy saving and energy efficiency, including replacement of low-efficiency light sources with LED lamps, purchase of submersible pump control stations with variable frequency drives (Khagda JSC, Dalur JSC), reconstruction of the electrical equipment and networks to increase capacity, use of autonomous water-heating boilers to reduce losses in heating networks in the summer period at the Urtuysky open pit (PSC PMCU), etc.

In 2022, Khagda JSC continued to implement the project for its own production of LED lamps, which are sold to the enterprises of JSC Atomredmetzoloto and external customers. Having its own manufacturer in the industry makes it possible to unify light fittings, promptly replace failed lamps, and also provides cost savings with high quality products. In the reporting year, own production of lamps amounted to 2,043 units, which is more than twice the level in 2021.

Energy savings at the enterprises of JSC Atomredmetzoloto in 2022 reached 1.5% compared to 2020 in comparable conditions.

For more information on projects aimed at preserving biodiversity, see Section 6.6 ‘Environmental programmes of the Division’s enterprises’.
3.3. APPROACH TO STAKEHOLDER ENGAGEMENT

Transparency is an important factor in increasing public confidence. The Mining Division seeks to ensure the maximum level of openness and transparency of its operations, adhering to the principle of active, regular and constructive dialogue with stakeholders. All enterprises of the Mining Division actively interact with stakeholders, provide them with high-quality information on the enterprises’ performance and impact on society and the environment, and report on the effectiveness of corporate governance. This approach helps to maintain a balance of interests and avoid potential risks. Information openness, transparency and fulfillment of assumed obligations imply balancing public interests and proprietary information of the enterprises. Transparency is an important factor in increasing public confidence. The Mining Division seeks to ensure the maximum level of openness and transparency of its operations, adhering to the principle of active, regular and constructive dialogue with stakeholders. All enterprises of the Mining Division actively interact with stakeholders, provide them with high-quality information on the enterprises’ performance and impact on society and the environment, and report on the effectiveness of corporate governance. This approach helps to maintain a balance of interests and avoid potential risks. Information openness, transparency and fulfillment of assumed obligations imply balancing public interests and proprietary information of the enterprises.

Stakeholders are identified and selected taking into account the assessment of the impact on the current operations and strategic development of the Mining Division, as well as the established practice of stakeholder engagement. The stakeholder identification process takes into account the degree of their mutual influence on society and the environment, and report on the effectiveness of corporate governance. This approach helps to maintain a balance of interests and avoid potential risks. Information openness, transparency and fulfillment of assumed obligations imply balancing public interests and proprietary information of the enterprises.

The key stakeholders of the Mining Division include:
- shareholders;
- investment community;
- local communities;
- the state (federal government, governments of the constituent entities of the Russian Federation), local governments, regulatory authorities;
- business partners and suppliers;
- Division employees, trade unions;
- consumers of products (TVEL JSC, JSC TENEX);
- media, non-profit organisations (NPOs) and environmental organisations.

JSC Atomredmetzoloto in its activities uses various methods of communication with stakeholders, including general meetings of shareholders, congress and exhibition events, presentations, information through media, social networks and corporate publications, hotlines for employees, federal communication projects, regional projects of the Division. All enterprises of the Division also have their own programmes of interaction with local communities.

In working with the media, the Division strives to provide the most up-to-date and reliable information about the enterprises’ operations as quickly as possible. Significant information about all aspects of the Division’s operations is published by federal, regional and foreign media.

In accordance with its open information policy, the Mining Division is widely represented on all industry-specific information sources of ROSATOM: on the website https://www.rosatom.ru, in the Strana ROSATOM newspaper, the Corporation’s video blog, the Strana Rosatom radio broadcast, etc. Corporate newspapers are published for employees of the Division’s enterprises and residents of the host regions. JSC Atomredmetzoloto publishes the “Vestnik ARMZ” (ARMZ Journal) corporate newspaper, PJSC PIMCU publishes the “Gornyak Priargunya” (Priargunye Miner) newspaper, Khiagda JSC publishes the “Vestnik Khiagda” (Khiagda Journal) newspaper. In addition, PJSC PIMCU is the main shareholder of TV Centre JSC (Krasnokamensk), a local television company.

Official groups in the VKontakte social network have been created by:
- ARMZ Uranium Holding Co. (https://vk.com/armzuranium);
- PJSC PIMCU (https://vk.com/club72036988);
- Khiagda JSC (https://vk.com/khiagda_official);
- Dalur JSC (https://vk.com/public183814662);

PJSC PIMCU has an official group in the Odnoklassniki social network (https://ok.ru/club72036988).

Most popular content includes:
- news about the enterprises’ operations;
- corporate activities (KVN humour contest club, sports contest, etc.);
- contests with presentation of souvenirs;
- photos of the enterprises’ employees, nature of the regions of operation.
3.4. COMPLIANCE AND INTRODUCTION OF QUALITY MANAGEMENT SYSTEMS IN THE DIVISION


In 2022, all enterprises of the Division successfully passed the inspection audit carried out by the certification bodies and confirmed the compliance of the quality management and environmental management systems applied by them.

In order to assess the level of development of the quality management and environmental management systems in the Mining Division’s organisations (PJSC PIMCU and JSC VNIPiPT), the holding company conducted audits of their integrated management systems. Based on the audit results, reports were generated for each audited organisation indicating the identified non-compliances.

Plans for 2023:
- Improve and develop the quality management system in the Mining Division;
- Carry out systematic self-assessment of operations, annually confirm the compliance of the management systems with established requirements.

The Division’s science and technology programme is an integral part of ROSATOM’s Innovative Development and Technological Modernisation Programme until 2030 (in the civilian sector). The key objectives of the Division’s R&D activities include:
- Increasing the efficiency of uranium production in existing uranium mining enterprises;
- Increasing the share of uranium production using in-situ leaching, an environmentally friendly and safe technology;
- Development and implementation of new efficient environmentally friendly technologies for the production of uranium, rare and rare-earth metals;
- Business diversification.

Division’s expenditure on innovation and R&D in 2020-2022 and 2023 forecast, RUB million

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023 (forecast)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs</td>
<td>146.0</td>
<td>77.7</td>
<td>141.4</td>
<td>228.6</td>
</tr>
<tr>
<td>Revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Key results in 2022

PJSC PIMCU:
- A feasibility study for the use of ion-exchange resins in the pulp technology of the PJSC PIMCU hydrometallurgical plant was developed, enterprise standards for laboratory testing of ion-exchange resins for PJSC PIMCU were drawn up;
- Research was conducted to study the possibility of obtaining various commercial products in the form of ferroalloys from the waste products of sulphuric acid production (pyrite cinders); the project is aimed at reducing the negative impact on the environment in the region of operation and the elimination of man-made waste storages (cinder storages).

Dalur JSC:
- The company continued to use and improve innovative IT solutions for mining and geological exploration provided by the software and information suite of Dalur JSC, which makes it possible to improve the accuracy of reserve calculation, the quality of mining site design and mining efficiency at the Dalmatovskoye and Kholkovskoye uranium deposits;
- Optimisation of mining modes and technological parameters for scandium extraction was carried out, which made it possible to increase the production of high-purity (99.9%) scandium oxide;
- Geological studies were carried out at the Dobrovolnoye uranium deposit, which confirmed the environmental safety of the development of this deposit using the ISL method;
- Based on the results of previous studies, work was carried out to restore sorption properties of the solid-phase extractant.

Khiagda JSC:
- Based on the results of the project ‘Development of technology for mining low-watered areas of ore bodies of the Khiagdinskoye deposit in the upper reaches of paleovalleys based on a hydrodynamic model’ implemented in 2020-2021, the company carried out pilot waterflooding of the X4 ore body;
- The Smart Mine project was replicated at the next technological block;
- The company continued to use and improve innovative IT solutions for mining and geological exploration provided by the software and information suite of Khiagda JSC, which makes it possible to improve the accuracy of reserve calculation, the quality of mining site design and mining efficiency at the uranium deposits.

Plans for 2023

PJSC PIMCU:
- Continue research on the processing of spent vanadium catalysts to obtain finished products of stable quality;
- Conduct research to study the possibility of obtaining various commercial products from the waste products of sulphuric acid production (pyrite cinders);
- Carry out process development work for percolation leaching of uranium with granulates of small classes of ore material obtained using sulphate-resistant portland cements and other binders.

Dalur JSC:
- Perform scientific and methodological work on the topic: Geological and geotechnological modelling of ore bodies and blocks of deposits mined by in-situ leaching at Dalur JSC;
- Provide R&D support during the operation of the pilot site of the Dobrovolnoye deposit;
- Continue geoeconomic studies at the Dobrovolnoye deposit;
- Provide scientific and technical support for optimisation of the ISL mining sites and improve process well drilling and construction methods based on the results of geophysical surveys of the existing process wells at the deposits of Dalur JSC carried out using the prompt fission neutron (PFN) method.

Khiagda JSC:
- Continue the implementation of the project to develop a groundwater resource management technology in order to involve dry and low-watered ore bodies in the Vitim uranium ore region (Zabaikalskiy Territory) into mining by the ISL method;
- Continue the implementation of the project to develop a technology for the production of REM-actinium concentrate from uranium ISL productive solutions;
- Perform an analysis of hydrogeological monitoring data during waterflooding of the Kh4 ore body and update its hydrodynamic model. The technology will ensure the recycling of acid and oxidizer, as well as reducing the cost of rehabilitation of the aquifer of the depleted sections of the deposit.

THE TOTAL AMOUNT OF PRODUCED AND SOLD INNOVATIVE PRODUCTS (EXCLUDING VAT)

2.43 BILLION RUB
KEY EVENTS IN THE REPORTING YEAR

CONTRIBUTION TO THE TECHNOLOGICAL SOVEREIGNTY.
NEW PRODUCTS AND BUSINESSES

SAFETY OF OPERATIONS

100% OF DIVISION’S ORGANISATIONS HAVE BEEN CERTIFIED IN ACCORDANCE WITH QUALITY MANAGEMENT AND ENVIRONMENTAL MANAGEMENT SYSTEMS.
Performance of the Mining Division in 2022

Contribution to the Technological Sovereignty. New Products and Businesses

Key operating results in 2022

Uranium production in the Division in 2022 totalled 2,508 tonnes.

PJSC PIMCU:
- The enterprise continued to develop the existing mines: the Uzhny site of the Ubyleynoye deposit of Mine No. 8 was developed;
- Two new high-performance ARAMINE diesel load-haul-dump (LHD) machines and two new drilling rigs were purchased;
- The programme for the third stage of renovation of the Sredneyeye tailings dump was completed.

Mine No. 6:
- The company began the demothballing of Mine No. 6 facilities. More than 2 million m³ of water was pumped out. Work is underway to achieve the target quality parameters of the treated mine water.
- Construction of exploration and development shaft 19-RESh and the hoist building was started;
- The project for the technical upgrade of shaft 20V was submitted for industry expert review.

Dalur JSC:
- The construction of phase one facilities was completed at the pilot site of the Dobrovolye deposit;
- A positive opinion was obtained from FAI Glavgosexpertiza of Russia for the project to develop the Khokhlovskoye uranium deposit;
- The construction of stage one start-up facilities for the development of the Eastern ore body of the Khokhlovskoye deposit was completed; the “digital” uranium mining technology (Smart ISL Site) was rolled out across the entire ore body.

Khiagda JSC:
- The construction of stage one mining units was completed at the Kolichkanskoye deposit;
- The development of the Dybrynskoye deposit was started; the construction of phase one infrastructure facilities was completed.

JSC RUSBURMASH:
- The enterprise continued to enhance construction capabilities at the construction sites of Dalur JSC and Khiagda JSC;
- As part of the fulfillment an industry-wide RPS order, the time required to prepare for the mining of ore bodies at uranium deposits was reduced three-fold;
- The fleet of drilling rigs for the construction of process wells in ISL enterprises was expanded, including as part of import substitution.

JSC VNIPIT:
- was assigned the 2022 BIM Leader status.

New products and businesses

The Mining Division is a centre of responsibility tasked with supplying ROSATOM and the Russian Federation other strategic metals which are used in cutting-edge areas of modern economic development, such as additive manufacturing, robotics, energy storage systems, high-temperature and renewable energy, etc.

The main areas for the development of new businesses of the Mining Division include:
- mining and processing of rare and rare earth metals;
- gold mining;
- mining and processing of non-uranium ores and other minerals;
- provision of services: geological exploration and drilling, engineering services and design, construction of engineering structures and communications.

The priority area of focus is the development of production of rare and rare-earth metals (hereinafter referred to as RMs and REMs), which is of critical importance for meeting the needs of high-technology industries in the Russian Federation.

The purposes for import substitution and the creation of full-cycle production and technologies based on own mineral resource base, as part of the Development of the High-Tech Area ‘Technology for New Materials and Substances’ has been developed and approved by the Government of the Russian Federation, which includes a separate product area, Rare and Rare-Earth Metals. In accordance with the Road Map, the share of imported products in total consumption in the Russian Federation is intended to be reduced to zero by 2030.

In order to achieve the goals of developing the RM and REM product area, supplying resources for the production of flagship products and addressing gaps in the process chains for the manufacture of products based on titanium, zirconium, REM oxides, lithium and scandium, JSC Atommetsnotolo is implementing the following projects:
- Lithium Asset in the Russian Federation: the development of lithium carbonate/hydroxide production at the Kolmozerskoye lithium deposit in the Murmansk Region;
- Phosphogypsum project: the establishment of a facility for the production of REMs and gypsum products from phosphogypsum, including individual REM oxides;
- Titanium project: the processing of ilmenite-zircon sands from the Tuganskoye deposit in the Tomsk Region to produce titanium and zircon concentrates;
- Scandium project: the production of scandium oxide and aluminium-scandium alloy as by-products at the industrial site of Dalur JSC.

Key operating results in 2022

Uranium production in the Division in 2022 totalled 2,508 tonnes.

PJSC PIMCU:
- The enterprise continued to develop the existing mines: the Uzhny site of the Ubyleynoye deposit of Mine No. 8 was developed;
- Two new high-performance ARAMINE diesel load-haul-dump (LHD) machines and two new drilling rigs were purchased;
- The programme for the third stage of renovation of the Sredneyeye tailings dump was completed.

Mine No. 6:
- The company began the demothballing of Mine No. 6 facilities. More than 2 million m³ of water was pumped out. Work is underway to achieve the target quality parameters of the treated mine water.
- Construction of exploration and development shaft 19-RESh and the hoist building was started;
- The project for the technical upgrade of shaft 20V was submitted for industry expert review.

Dalur JSC:
- The construction of phase one facilities was completed at the pilot site of the Dobrovolye deposit;
- A positive opinion was obtained from FAI Glavgosexpertiza of Russia for the project to develop the Khokhlovskoye uranium deposit;
- The construction of stage one start-up facilities for the development of the Eastern ore body of the Khokhlovskoye deposit was completed; the “digital” uranium mining technology (Smart ISL Site) was rolled out across the entire ore body.

Khiagda JSC:
- The construction of stage one mining units was completed at the Kolichkanskoye deposit;
- The development of the Dybrynskoye deposit was started; the construction of phase one infrastructure facilities was completed.

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- Scandium project: the production of scandium oxide and aluminium-scandium alloy as by-products at the industrial site of Dalur JSC.
Key operating results in 2022

As part of the Roadmap for the Development of the High-Tech Area ‘Technology for New Materials and Substances’ approved by the Government of the Russian Federation, the first stage of the Tugansk Ore Mining and Processing Enterprise specialising in the processing of ilmenite-zircon sands in the Tomsk Region was put into operation. The first Russian enterprise for the production of titanium-zirconium concentrates was successfully launched, qualified specialists were recruited, the first batches of finished products were shipped to Russian consumers of rare metals.

As part of the Phosphogypsum project, a pilot plant for the processing of phosphogypsum waste and the extraction of individual compounds of rare earth metals was created in the Leningrad Region. The extraction cascade for cerium/praseodymium separation was launched, the first samples of finished products were obtained.

Under the Lithium Asset in the Russian Federation project, an order of the Russian Government was prepared to hold an auction for the Kolmoozerskiy lithium deposit with special conditions for participation in the auction. In 2022, the Division and PJSC Norilsk Nickel established LLC Polar Lithium, a special-purpose vehicle for implementation of this project.

Under the Scandium project, pilot work was completed, more than 600 kilograms of scandium products (in terms of scandium oxide contained) were produced.

Under the Severnaya project, 500 kilograms of gold were obtained during pilot production, geological exploration and pilot works were successfully completed.

As part of the optimisation of the project for the development of the Pavlovskoye lead and zinc deposit (Novaya Zemlya archipelago), in 2022, positive opinions were obtained from FAI Glavgosexpertiza for the port complex and the mining and processing complex.

Plans for 2023

The Division will continue to expand the use of in-situ leaching, which is the most effective mining technique. Plans include completing the construction of pilot site facilities at the Dobrovolnoye deposit in the Kurgan region. The construction of facilities will also continue at the Khokhlovskoye deposit in the Trans-Urals. The Division plans to start uranium mining at the Dybrynskoye deposit in the Republic of Buryatia.

In the Zabaykalsky Territory, the Division plans to reach the design capacity and meet the quality target for the pumping out of mine water, and start the construction of site facilities at Shaft 20V of Mine No. 6 of PJSC PIMCU.

As the Krasnokamensk CHPP has become a subsidiary of the Mining Division, ensuring the reliable and safe operation of energy facilities will become one of the top priorities of PJSC PIMCU.

As part of new business development, in 2023, the Division plans to move to the industrial stage of development of the Severnaya deposit in the Republic of Sakha (Yakutia), which will result in a significant increase in gold production. Reserves are expected to be confirmed and entered in the register by the State Reserves Commission.

An important milestone in the development of the rare and rare-earth metals business in 2023 will be participation in the auction for mineral rights to the Kolmoozerskiy deposit in the Murmansk Region. The development of this deposit will provide the Russian Federation with its own source of lithium feedstock.

An important step towards developing an in-house technological solution for producing individual REM oxides will be the validation of design performance of a pilot REM separation plant and of the quality of the finished product as part of the Phosphogypsum project in 2023. The next stage will involve the development of a semi-industrial plant to ramp-up REM production.

Production ramp-up to target capacity in the Tugansk Ore Mining and Processing Enterprise in 2023 will provide Russian producers with a domestic source of titanium and zirconium and will make it possible to validate design performance.

The implementation of new projects in the mining industry and related sectors will drive the growth of the Division’s business and enhance its long-term social and financial sustainability.
6.1. SAFETY OF NUCLEAR TECHNOLOGIES AND PRODUCTS

Radiation safety

The average annual effective dose for personnel working at the sites of PJSC PIMCU posing radiation hazards (underground mines and the leach plant) was unchanged and remained at an acceptable level. There were no changes in the number of deviations rated at level 1, 0 or ‘out of scale’ on the INES scale.

At PJSC PIMCU, a low level of volumetric activity in the air in workspaces was maintained by implementing technical measures to improve exhaust and supply ventilation: removing dust from air ducts (at least three times a year), replacing used leaking air ducts; continuous irrigation of ore; stricter administrative measures in terms of compliance with radiation safety requirements, and the introduction of preventive measures.

Consistent efforts have been made to improve radiation safety in mine workings:

- 40 concrete and wooden bulkheads were installed in underground mines No. 1 and No. 8;
- 4 ventilation and lock doors were restored and commissioned;
- Based on the findings of individual radiation exposure monitoring, employees were replaced when exposure reached the reference level of 16.0 mSv.

The following measures were taken to improve radiation safety at the leach plant:

- Decontamination of equipment and surfaces in the furnace room and the finished product packing room involving a process shutdown;
- Overhaul of the sorption tank and the leaching agitation tank;
- Furnace repairs (replacement of a retort, rollers, bearings, repairs to the bunker, lids, the drive and furnace power supply units);
- Dust and technological products removal and washing of intake and exhaust air ducts;
- Scheduled decontamination of equipment and surfaces in workrooms.

In 2022, the operating organisations of JSC Atomredmetzoloto carried out work to prepare for the decommissioning and liquidation of nuclear and radiation hazardous facilities.

6.2. Occupational health and safety

In 2022, there were no accidents investigated in accordance with federal rules and regulations at the facilities of the companies managed by JSC Atomredmetzoloto.

There were three injuries in the reporting year, including a fatal injury at JSC RUSBURMASH and a severe injury at PJSC PIMCU. The main causes of the injuries were violation of workplace discipline by employees, personal negligence and unsatisfactory organisation of work, violation of technological processes.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of injuries in the Division, total</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Including fatalities</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Number of injuries in contractor organisations, total</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Including fatalities</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Occupational health and safety indicators in 2020–2022

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lost time injury frequency rate (LTIFR), target / actuals</td>
<td>0.38 / 0</td>
<td>0.38 / 0.22</td>
<td>0.30 / 0.21</td>
</tr>
<tr>
<td>Fatal injury frequency rate (FIRR)*</td>
<td>0</td>
<td>0</td>
<td>0.067</td>
</tr>
<tr>
<td>Lost day rate (LDR)**</td>
<td>0.45</td>
<td>3.67</td>
<td>1.95</td>
</tr>
<tr>
<td>Occupational disease rate (ODR)**</td>
<td>0.13</td>
<td>0.06</td>
<td>0.22</td>
</tr>
</tbody>
</table>

* FIRR was calculated using the following formula: Number of fatal injuries/Total number of man-hours worked × 1,000,000.
** LDR was calculated using the following formula: Number of days lost due to accidents and occupational diseases/Total number of man-hours worked × 200,000.
*** ODR was calculated using the following formula: Total number of occupational diseases per year/Total number of man-hours worked × 200,000.
The increase in the occupational disease rate in the reporting year was due to the fact that in 2020-2021, the possibility of referring employees to occupational pathology centres for examination of connection between the disease and the profession was limited due to anti-pandemic restrictions.

In 2022, the organisations managed by JSC Atomredmetzoloto took the following measures to ensure safe working conditions:

- Four organisations of the Division began the implementation of a programme to develop a culture of safe behaviour, aimed at changing the attitude of employees to safety and, as a result, reducing the number of accidents related to employees’ behaviour;
- A comprehensive action plan was implemented to prevent occupational injuries in the industry, aimed at reducing severe and fatal injuries in ROSATOM’s organisations.
- The Red Line divisional project was launched, aimed at improving the safety culture at the enterprises of the Division.
- Occupational risks were assessed and measures were developed to reduce them.

Red Line divisional project

The project is aimed at ensuring the safe conduct of technological processes at enterprises and promotes safety as a priority for human life. The project was launched in June 2022. Main risks were analysed, posters were developed for the Division’s enterprises. A master class in graffiti drawing was held in Krasnokamensk.

Together with artists, children drew pictures about safety on the streets, using the wall of a transformer substation instead of a sheet. The project team shot a film titled ‘PAPA’ about safety and the value of human life. The filming took place in Krasnokamensk, the characters are real employees of PISC PIMCU, they perfectly played their roles and approached the filming process responsibly. The film ‘PAPA’ officially opened ROSATOM’s 5th forum-dialogue ‘Safety Day’. The film is available at:...

In total, four multifaceted films about safety were shot: ‘Papa’, ‘I’m for safety’ music video, ‘Accident on 15.03’ investigative film, ‘Mine Accident’ interview film. The Division organised safety audits, as well as advanced training for safety culture officers and internal trainers; together with artists, children drew pictures about safety on the streets, using the wall of a transformer substation instead of a sheet. The project team shot a film titled ‘PAPA’ about safety and the value of human life. The filming took place in Krasnokamensk, the characters are real employees of PISC PIMCU, they perfectly played their roles and approached the filming process responsibly. The film ‘PAPA’ officially opened ROSATOM’s 5th forum-dialogue ‘Safety Day’. The film is available at:...  

Plans for 2023:

- Continue the implementation of the programme for the development of a culture of safe behaviour and the introduction of safety culture principles and practices among employees; organise regular training for managers at all levels in safe behaviour principles and in practical skills for conducting behavioural safety audits, as well as advanced training for safety culture officers and internal trainers;
- Continue work to prevent occupational injuries, aimed at reducing severe and fatal injuries;
- Continue the implementation of the Red Line divisional project, which promotes security as a priority for human life;
- Organise work to improve the efficiency of the work order system in the Division’s organisations.

6.3. ENVIRONMENTAL SAFETY

The Red Line divisional project

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- Continue the implementation of the Red Line divisional project, which promotes security as a priority for human life;
- Organise work to improve the efficiency of the work order system in the Division’s organisations.

6.3. ENVIRONMENTAL SAFETY

Environmental protection

Water use. Water withdrawal and discharge

Water withdrawal in the Division’s enterprises in 2021-2022 by purpose, million m³

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>Water withdrawal for operational needs</th>
<th>Water withdrawal for drainage and sanitary purposes</th>
<th>Total water withdrawal</th>
<th>Groundwater</th>
<th>Exceeding the established limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PISC PIMCU</td>
<td>22.31</td>
<td>23.248</td>
<td>23.636</td>
<td>5.966</td>
<td>5.793</td>
</tr>
<tr>
<td>Dalur JSC</td>
<td>0.096</td>
<td>0.062</td>
<td>0.053</td>
<td>0.064</td>
<td>0.053</td>
</tr>
<tr>
<td>Khiaaga JSC</td>
<td>0.207</td>
<td>0.213</td>
<td>0.244</td>
<td>0.051</td>
<td>0.039</td>
</tr>
</tbody>
</table>

Water supply to the production facilities of PISC PIMCU and to the population of Krasnokamensk, including for hot water supply, is carried out centrally, mainly using groundwater from the East Urulyungui basin. Additional sources of water supply for technical needs, including for supporting the production cycle at LP and CHPP (maintaining the required water level in the reservoir) include:

- surface waters from the Argun River;
- drainage waters from the Urgunsky mine;
- mine waters of uranium mining production facilities.

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- surface waters from the Argun River;
- drainage waters from the Urgunsky mine;
- mine waters of uranium mining production facilities.

The main indicator of reduction in water consumption is the full use of drainage waters of the Urgunsky mine and mine waters of the uranium mining production facilities for technical water supply. All mine waters of the uranium mining production are used for the technical water supply to the LP Drainage water from the Urgunsky brown coal mine is used at the CHPP and other divisions. Efficient use of water resources at production facilities reduces the volume of water withdrawal from natural sources.

At Khiaaga JSC, water is supplied to the enterprise from its own water intake at the Tetrakh groundwater deposit. Water consumption increased slightly compared to 2021 due to an increase in water use for production needs, namely the drilling of new wells. The decrease in water withdrawal for drinking and sanitary purposes was associated with a decrease in the number of working personnel living in the rotational camp.
At Dalur JSC, 8 water wells were operated in 2022 for operational and sanitary needs, including five wells at the Dalmatovskoye deposit and three at the Khokhlovskoye deposit. In 2022, water withdrawal decreased due to the repairs of the sand pond of pregnant solutions at the Ust-Uksyanskoye local sorption unit (LSU), the coating of the pond was replaced. Water withdrawal for production needs at the Zapad LSU decreased due to the termination of the reagent (NaNO₂) supply to the technological process.

**Wastewater discharge**

**PJSC PIMCU**

Wastewater discharge at PJSC PIMCU in 2020–2022, million m³

<table>
<thead>
<tr>
<th>Year/volume of water</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater discharge</td>
<td>10,318</td>
<td>10,418</td>
<td>10,663</td>
</tr>
</tbody>
</table>

Disposal of household water and industrial wastewater from the CHPP to the Umkey lake system amounted to 10,418,220 m³ in 2021 and 10,663,270 m³ in 2022. The volume of water discharge in 2022 increased by 0.97% year on year.

**Khiagda JSC and Dalur JSC**

Due to the closed process cycle, no wastewater containing hazardous chemicals and radionuclides is discharged. Domestic wastewater from the sewerage system is transported to wastewater treatment facilities of a specialised enterprise under a contract.

**Air protection**

**Pollutant emissions into the atmosphere in 2020 – 2022, PJSC PIMCU, tonnes**

<table>
<thead>
<tr>
<th>Pollutant name</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon oxide</td>
<td>321.477</td>
<td>277.048</td>
<td>336.001</td>
</tr>
<tr>
<td>Sulphur dioxide</td>
<td>5,624.726</td>
<td>5,603.21</td>
<td>5,422.9</td>
</tr>
<tr>
<td>Nitrogen oxides (NO₂ equivalent)</td>
<td>1,657.578</td>
<td>1,685.29</td>
<td>1,750.85</td>
</tr>
<tr>
<td>Specific pollutants</td>
<td>9,308.079</td>
<td>9,187.19</td>
<td>5,383.58</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>17,211.86</td>
<td>16,761.7</td>
<td>12,873.3</td>
</tr>
</tbody>
</table>

At PJSC PIMCU, in 2022, there was a decrease in inorganic dust emissions: 70-20% SiO₂ (ash emissions), and a reduction in gross emissions of sulphur dioxide (sulphurous anhydride), which was associated with the improved quality of the mined coal and the technical re-equipment of the ash-collecting plants of the CHPP.

There was a slight increase in gross emissions of carbon monoxide (CO) and nitrogen oxides. Changes in the emission of these substances depend on the physical and chemical characteristics of coal, as well as fuel combustion modes at the CHPP.

**Pollutant emissions into the atmosphere in 2020 – 2022, Khiagda JSC, tonnes**

<table>
<thead>
<tr>
<th>Pollutant name</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon oxide</td>
<td>5.25</td>
<td>5.413</td>
<td>5.156</td>
</tr>
<tr>
<td>Sulphur dioxide</td>
<td>300.293</td>
<td>300.316</td>
<td>280.614</td>
</tr>
<tr>
<td>Nitrogen oxides (NO₂ equivalent)</td>
<td>4.968</td>
<td>5.079</td>
<td>4.674</td>
</tr>
<tr>
<td>Specific pollutants</td>
<td>44.362</td>
<td>44.655</td>
<td>42.172</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>354.873</td>
<td>355.463</td>
<td>330.752</td>
</tr>
</tbody>
</table>

Actual emissions from sources of pollution did not exceed permitted limits.

**Pollutant emissions into the atmosphere in 2020 – 2022, Dalur JSC, tonnes**

<table>
<thead>
<tr>
<th>Pollutant name</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon oxide</td>
<td>0.046</td>
<td>0.1483</td>
<td>0.189</td>
</tr>
<tr>
<td>Sulphur dioxide</td>
<td>0</td>
<td>0</td>
<td>0.167</td>
</tr>
<tr>
<td>Nitrogen oxides (NO₂ equivalent)</td>
<td>0.205</td>
<td>0.623</td>
<td>2.316</td>
</tr>
<tr>
<td>Specific pollutants</td>
<td>0.58035</td>
<td>0.9613</td>
<td>1.411</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.866</td>
<td>1.732</td>
<td>4.083</td>
</tr>
</tbody>
</table>

Pollutant chemical emissions in 2019-2021 changed mainly due to the emissions from the boiler house of the central production site and varied in connection with higher or lower gas consumption caused by scheduled and unscheduled shutdowns of the cogeneration unit.

In 2022, emissions from stationary sources totalled 4.083 tonnes, which constitutes 16% of the permitted level (the standard is 26,141 tonnes per year). Pollutant chemical emissions changed mainly due to the emissions from the boiler house of the central production site and varied in connection with higher or lower gas consumption caused by scheduled and unscheduled shutdowns of the cogeneration unit.

Actual emissions of hazardous (polluting) substances into the atmosphere did not exceed the maximum permissible emission standards.

For as estimated greenhouse gas emissions, in 2022, the Division participated in the industry-wide pilot calculation of greenhouse gas emissions in accordance with international methodologies (Scope 1 and Scope 2) conducted by ROSATOM. Cumulative GHG emission estimates are presented in section 1.2 “Sustainable Development Management” of ROSATOM’s report for 2022. The reporting of GHG emission data by division is expected from 2023, when an industry-wide GHG emission management system is implemented.
### Waste management

#### Generation of waste of all hazard classes in 2020-2022, tonnes

<table>
<thead>
<tr>
<th>Hazard class</th>
<th>Year</th>
<th>PJSC PIMCU</th>
<th>Dalur JSC</th>
<th>Khiagda JSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class 1</td>
<td></td>
<td>2.873</td>
<td>0.143</td>
<td>0.056</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.039</td>
<td>0.132</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.163</td>
<td>0.092</td>
<td>0.098</td>
</tr>
<tr>
<td>Hazard class 2</td>
<td></td>
<td>2020</td>
<td>8.383</td>
<td>1.368</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2021</td>
<td>10.514</td>
<td>1.641</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>4.283</td>
<td>0.901</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2021</td>
<td>146.196</td>
<td>1.489</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>182.711</td>
<td>1.832</td>
</tr>
<tr>
<td>Hazard class 4</td>
<td></td>
<td>2020</td>
<td>469.695</td>
<td>125.344</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>22,289.465</td>
<td>18.131</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2021</td>
<td>27,259.533</td>
<td>22.619</td>
</tr>
</tbody>
</table>

#### PJSC PIMCU

Compared to 2021, the following changes in 2022 should be noted:

- Reduction in the amount of hazard class 1 waste (mercury lamps) by 0.376 tonnes due to the earlier replacement of mercury lamps with LED ones;
- Reduction in the generation of undamaged spent lead batteries with electrolyte by 6.231 tonnes due to the unexpired battery life. A significant number of batteries were routinely replaced at the end of 2021;
- An increase in generation of hazard class 3 waste by 36.514 tonnes was due to the replacement of used railway sleepers in connection with the ongoing repairs of the railway track, as well as due to the increased generation of engine, hydraulic, transmission oils and oil, air and fuel filters in the course of operations of the structural subdivisions of PJSC PIMCU, including United Automobile Fleet and the Urtuyskoye automobile fleet;
- There was an increase in hazard class 4 waste generation by 361.8 tonnes due to the total volume of municipal solid waste (MSW), moulding sand during foundry work, waste from sand traps, tires, air filters, overalls, office equipment;
- An increase in hazard class 5 waste generation was associated with the overburden of the Urtuyskoye coal mine, which is the main type of hazard class 5 waste. This type of waste is placed in the internal dumps of the coal mine for the technical stage of reclamation. In 2022, hazard class 5 waste generated totalled 27,005,900 tonnes, accounting for 99% of the total volume of all PJSC PIMCU waste generated during the reporting period.
- Hazard class 5 waste also includes a practically non-hazardous ash and slag mixture generated from coal combustion at the CHPP in the amount of 252,469,000 tonnes, of which:
  - 219,632,060 tonnes of ash and slag was disposed of at CHPP Ash and Slag Dump, the enterprise’s own waste disposal facility;
  - 32,839,940 tonnes of ash and slag mixture was used in mining for backfilling operations to improve the quality of backfilling and thus ensure safe mining operations. This type of waste utilisation helps to reduce the storage of hazard class 5 waste at operated production facilities.

Thus, PJSC PIMCU is actively involved in the recycling of waste.

#### Dalur JSC

A year-on-year increase in waste generation in 2022 was due to the increase in municipal solid waste generation.

#### Khiagda JSC

Compared to 2021, the following changes in 2022 should be noted:

- An increase in hazard class 1 waste generation (mercury lamps) due to expired service life or burnout. This change is almost residual as the enterprise transitions to LED lighting;
- An increase in hazard class 5 waste generation due to a large volume of construction work (three deposits are being built at the same time), as well as an increase in the number of employees of the enterprise.

PJSC PIMCU

Compared to 2021, the following changes in 2022 should be noted:

- An increase in generation of hazard class 3 waste by 36.514 tonnes was due to the replacement of used railway sleepers in connection with the ongoing repairs of the railway track, as well as due to the increased generation of engine, hydraulic, transmission oils and oil, air and fuel filters in the course of operations of the structural subdivisions of PJSC PIMCU, including United Automobile Fleet and the Urtuyskoye automobile fleet;
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Khiagda JSC:

Compared to 2021, the following changes in 2022 should be noted:

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- An increase in hazard class 5 waste generation due to a large volume of construction work (three deposits are being built at the same time), as well as an increase in the number of employees of the enterprise.
6.4. PROTECTION OF LAND AND BIODIVERSITY

** PJSC PIMCU **

<table>
<thead>
<tr>
<th>Total area of land disturbed at PJSC PIMCU in 2020–2022, ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,685</td>
</tr>
<tr>
<td>29,909</td>
</tr>
<tr>
<td>52,224</td>
</tr>
</tbody>
</table>

An increase in the area of disturbed land by 22.315 hectares was due to the reconstruction of the Srednee tailing dump, the development of a coal mine, and the construction work at Mine No. 6. No reclamation of disturbed land was carried out in 2022.

** Khiagda JSC **

In 2022, the area of land disturbed at Khiagda JSC totalled 213.95 ha, including:

- 66.39 ha disturbed during the mining of mineral deposits of the Khiagda ore field;
- 100.14 ha disturbed during construction works (construction of a road and a power transmission line) at the Khiagda ore field;
- 4.30 ha disturbed during construction works (development of the Istochnoye open-pit mine) at the Khiagda ore field;
- 25.07 ha disturbed during construction works (the LSU site) at the Khiagda ore field;
- 18.05 ha disturbed during the mining of mineral deposits of the Khiagda ore field.

Land reclamation is scheduled after the completion of development of ore bodies and deposits.

** Dalur JSC **

In 2022, the area of land disturbed at Dalur JSC totalled 1.525 hectares, which was due to the preparation of construction sites for construction and installation work at the pilot facility for in-situ leaching of uranium at the Dobrovlyonye deposit.

The topsoil removed at the sites will be used at the final stage of construction, during the improvement of the area surrounding the constructed facilities and during the rehabilitation of areas contaminated as a result of the work.

** Environmental costs in 2022, RUB ‘000 **

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>Current (operating) expenses</th>
<th>Payment for environmental services</th>
<th>Environmental costs associated with major repairs of fixed assets</th>
<th>Environmental investments in fixed assets</th>
<th>Charges for the negative environmental impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>PJSC PIMCU</td>
<td>197,902.0</td>
<td>18,719.0</td>
<td>103,019.0</td>
<td>33,189.0</td>
<td>36,092.6</td>
</tr>
<tr>
<td>Khiagda JSC</td>
<td>50,865.0</td>
<td>1,367.0</td>
<td>-</td>
<td>41,462.2</td>
<td>62.6</td>
</tr>
<tr>
<td>Dalur JSC</td>
<td>1,479.0</td>
<td>5,106.0</td>
<td>-</td>
<td>-</td>
<td>1.38</td>
</tr>
<tr>
<td>** Total **</td>
<td>** 250,246.0 **</td>
<td>** 25,192.0 **</td>
<td>** 103,019.0 **</td>
<td>** 74,635.2 **</td>
<td>** 36,156.6 **</td>
</tr>
</tbody>
</table>

In 2022, the funds were spent on activities aimed at protecting the atmospheric air, protecting and rationally using water resources, protecting land resources and reducing waste disposal, ensuring radiation safety, monitoring and environmental control, design work, as well as measures to preserve biodiversity, including reforestation, fish stocking and protection of wild birds.

Charges for the negative impact on the environment in 2022 amounted to RUB 36.1 million due to the generation of ash and slag mixture from coal combustion at the CHPP in connection with the deterioration of the physical and chemical properties of coal and the over-limite fee for the disposal of ash and slag waste.

** 6.6. ENVIRONMENTAL PROGRAMMES OF THE DIVISION’S ENTERPRISES **

The main objective of the environmental protection activities of the Mining Division’s enterprises is to ensure environmental and radiation safety.

The priority is to comply with legal requirements for environmental protection and protection of the population against radiation exposure.

To achieve this, the Division implements the following environmental measures on an annual basis:

- Developing and ensuring the stable functioning of an integrated management system compliant with the ISO 9001:2015 and ISO 14001:2015 standards;
- Continuously maintaining the required level of environmental education for environmental safety decision-makers;
- Radiation and environmental monitoring of industrial sites and buffer areas;
- Replacing mercury-containing light bulbs with LED light bulbs.
**Measures taken in 2022 to reduce the negative impact**

**PJSC PIMCU**
- Comprehensive tests of process equipment and process lines of the mine water treatment plant at Mine No. 6 in the pre-commissioning and operating modes;
- Obtaining an opinion on the compliance of the completed capital construction facility with the requirements of design documentation, including the requirements for energy efficiency and the requirements for equipping the capital construction facility with metering devices for energy sources used at stage No. 3 of the project "Development of the Argunskoye and Zherlovoye deposits. Construction of Mine No. 6 of PJSC PIMCU: site of the mine water treatment complex (MWTP)";
- Installation of Bird Gard Super Pro AMP bioacoustic devices for the protection of birds in the area of the tailings of the leach plant;
- Use of drainage waters from the Urtuysky open pit and mine waters of underground Mines No. 1 and No. 8 as an additional source of technical water in the technology in order to reduce the withdrawal of natural water from the Argun River;
- Use of inorganic dust: 70-20% SiO₂ (waste from coal combustion) as a component of the backfill mixture for filling the spent mine workings in underground mines No. 1 and No. 8;
- Collection and storage of radioactive waste at RAW disposal sites;
- Continued implementation of the technology for processing spent vanadium catalysts. In 2022, in order to implement the scheme for the production of vanadium pentoxide from spent vanadium catalysts of the sulphuric acid production, the required reagents were purchased, the installation of the hardware and technological scheme was completed in the experimental hydrometallurgical shop;
- Transfer of hazard class 1 and 2 waste (mercury-containing lamps and batteries) to the Federal Environmental Operator for processing and disposal;
- Transfer of hazard class 3 and 4 waste to a specialised organisation for processing and disposal;
- Timely repair and overhaul of equipment;
- Monitoring of emissions, discharges, the state of atmospheric air, surface and ground waters, soil and vegetation.

**Khiagda JSC**
In 2022, Khiagda JSC planted 700,000 pine tree seedlings in the Republic of Buryatia as part of compensatory reforestation efforts, contributing to forest restoration after wildfires. Pine sprouts were planted on two plots with a total area of 173.2 hectares in the Zagraevsky and Mukhorshibirsky districts. Volunteers of the enterprise took part in tree planting. They also checked the sites with the young stock planted earlier.

For three years, the foresters of the Zagraevsky forestry will take care of the young trees, plough mineralised strips and, if necessary, supplement them with forest crops.

The enterprise has approved the compensatory artificial reforestation schedule until 2025.

In the reporting year, Khiagda JSC continued the implementation of the project to preserve the biological diversity of Lake Baikal. In 2022, the employees of the enterprise released 163,000 graveling fry grown from eggs by the specialists of the Barguzinsky fish hatchery into the Ina River in the Barguzinsky District of the Republic of Buryatia. Fish stocking contributes to the restoration of the endemic ichthyofauna of Lake Baikal, the restoration of aquatic biocenosis of the Selenga and Ima rivers and Lake Baikal, as well as the trophic interactions between hydrobionts.

**Dalur JSC**
To further preserve biodiversity, in 2022, Dalur JSC developed a reforestation plan for 43.4 hectares of land, which was agreed with the Department of Civil and Environmental Protection and Natural Resources of the Kurgan Region.
7. Digitisation

8. Developing the human capital

Average headcount: 7,689 persons
The digitisation programme for the Mining Division of ROSATOM is updated annually in accordance with the United Digital Strategy. Taking into account changes in the internal and external environment. In 2022, the key issue addressed in the Division was import substitution. All implemented digital solutions must now be import-independent.

Khiagda JSC remains the divisional leader in digital solutions implementation. At the active unit of Khiagda JSC, the Smart ISL Site system has been brought to the target level of operation. The efficiency of applying the Smart ISL Site digital solutions is forecast to exceed RUB 30 million thanks to the autonomous operation of the unit when the optimal mining mode is maintained, as well as thanks to a reduced mining time and, as a result, significant savings on reagents and electricity. In 2023, the digital solution applications are planned to be adapted to the domestic database management system (DBMS).

In 2022, an information system for plan-fact analysis and deviation management was put into commercial operation for the main production at Khiagda JSC and a quality control system for laboratory tests was introduced, which made it possible to reduce the time for collecting daily samples of mother solutions for uranium tests and publishing the result, for registration of the uranium test results for liquid samples in a chemical analysis laboratory, as well as for issuing work orders.

Taking into account the successful digitisation experience of Khiagda JSC, Dalur JSC has launched the replication of the Smart ISL Site technology at the Dobrovolnoye deposit since 2022. A project was launched aimed at preventing and reducing the risks of emergencies that threaten human life or health. In particular, a PPE control system, VR training and testing tools have been introduced, and a control room with a video wall has been deployed. The commissioning of a comprehensive solution with digital tools for monitoring the field of safety and understanding the concept of sustainable development. The system for geotechnological monitoring of rock pressure in the mine was put into operation. In 2023, the digital solution applications are planned to be adapted to the domestic database management system (DBMS).

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HR policy is an integral part of all managerial and production activities of the Division. The key objective of the policy is to create conditions, under which the day-to-day operations of the Division’s enterprises meet the needs of modern society, do not harm the environment, contribute to the solution of social problems, ensure a balance between economic, environmental and social development, form stable employee behaviours in the field of safety and understanding the concept of sustainable development.

Number of employees by employment type, people

<table>
<thead>
<tr>
<th>Personnel distribution by employment type</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headcount at the end of the reporting period</td>
<td>7,490</td>
<td>7,439</td>
<td>8,023</td>
</tr>
<tr>
<td>Working under an employment contract signed for an indefinite period</td>
<td>7,037</td>
<td>6,895</td>
<td>7,390</td>
</tr>
<tr>
<td>Fixed-term employees</td>
<td>453</td>
<td>544</td>
<td>633</td>
</tr>
<tr>
<td>Part-time employees</td>
<td>43</td>
<td>71</td>
<td>106</td>
</tr>
</tbody>
</table>

In the distribution of personnel by employment type, the share of part-time employees and fixed-term employees increased, most of whom (75%) are employed by JSC RUSBURMASH.

Staff turnover, %

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff turnover (%) excluding employment termination due to optimisation, employment contract expiration, transfer within the industry, etc.</td>
<td>17.15</td>
<td>15.97</td>
<td>14.19</td>
</tr>
</tbody>
</table>

Age and gender composition of personnel, people, %

<table>
<thead>
<tr>
<th>Personnel distribution by gender</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average headcount of men, people</td>
<td>5,453</td>
<td>5,499</td>
<td>5,811</td>
</tr>
<tr>
<td>Share of men in the total headcount, %</td>
<td>75.25</td>
<td>75.07</td>
<td>75.58</td>
</tr>
<tr>
<td>Average headcount of women, people</td>
<td>1,793</td>
<td>1,826</td>
<td>1,878</td>
</tr>
<tr>
<td>Share of women in the total headcount, %</td>
<td>24.75</td>
<td>24.93</td>
<td>24.42</td>
</tr>
</tbody>
</table>

1. The employee turnover data have changed due to the introduction of a new calculation methodology in personnel reporting since April 2021. "Staff turnover %, total" data were recalculated and aligned to 'Staff turnover (%) excluding employment termination due to optimisation, employment contract expiration, transfer within the industry, etc.'
DEVELOPING THE HUMAN CAPITAL

PERFORMANCE OF THE MINING DIVISION IN 2022

Share of women and men in managerial positions, %

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Share of female managers</th>
<th>Share of male managers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2021</td>
<td>2022</td>
</tr>
<tr>
<td></td>
<td>20.67</td>
<td>22.19</td>
</tr>
<tr>
<td></td>
<td>– top management</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>– senior management</td>
<td>24.14</td>
</tr>
<tr>
<td></td>
<td>– mid-level management</td>
<td>30.97</td>
</tr>
<tr>
<td></td>
<td>– first-line management</td>
<td>14.55</td>
</tr>
<tr>
<td></td>
<td>– top management</td>
<td>79.33</td>
</tr>
<tr>
<td></td>
<td>– senior management</td>
<td>75.86</td>
</tr>
<tr>
<td></td>
<td>– mid-level management</td>
<td>69.03</td>
</tr>
<tr>
<td></td>
<td>– first-line management</td>
<td>85.45</td>
</tr>
</tbody>
</table>

Due to the specifics of operations, the share of women in managerial positions is not significant, but it is steadily growing.

Personnel training and development

The Division’s HR policy prioritises personnel training and development.

Expenses for personnel training, assessment and development, RUB ‘000

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Expenses for personnel training, assessment and development</th>
<th>Expenses for personnel training, assessment and development per employee per year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2020</td>
<td>2021</td>
</tr>
<tr>
<td></td>
<td>16,982.0</td>
<td>20,368.6</td>
</tr>
</tbody>
</table>

In 2022, the total volume of training increased significantly, and the average number of training hours per employee exceeded 48 hours.

Training hours

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Training hours</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023 / 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>221,377</td>
<td>236,039</td>
<td>390,177</td>
<td>65.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30.55</td>
<td>31.73</td>
<td>48.63</td>
<td>53.3</td>
</tr>
</tbody>
</table>

Special focus was made on personnel training in the field of sustainable development, respect for human rights, the organisation’s impact on regional economy, the environment and human health. In 2022, employees of the Division’s organisations completed 435 person-courses on Sustainable Development.

Share of employees covered by training programmes

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Number of employees who underwent training, retraining and advanced training, people</th>
<th>Share of employees who underwent training, retraining and advanced training in the reporting year, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2020</td>
<td>2021</td>
</tr>
<tr>
<td></td>
<td>3,255</td>
<td>6,247</td>
</tr>
</tbody>
</table>

Remuneration policy

The remuneration of employees is based on the Integrated Standardised Remuneration System of ROSATOM (ISRS), which provides the basis for a single approach to the establishment of wages and salaries in the Division and provides employees with a stable income regardless of their gender, ethnicity, religion, age or minority status.

The main principle of the current remuneration system in the Division is to ensure the correlation between an employee’s salary and his or her performance and achievement of key performance indicators (KPIs).

To ensure an increase in real salary value for employees in connection with the growth of consumer prices for goods and services, salaries in the organisations of the Division are indexed at least once a year. The amount of indexation is determined in accordance with the current Sectoral Agreement for Nuclear Energy, Industry and Science at a level not lower than the forecasted average annual consumer price index. In 2022, extensive measures were taken to increase salaries, including a two-stage indexation, which made it possible to significantly increase the average monthly salary.

Average monthly salary in the Division, RUB

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Average monthly salary in the Division</th>
<th>Share of employees covered by salary indexation (at or above inflation level), %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2020</td>
<td>2021</td>
</tr>
<tr>
<td></td>
<td>70,147</td>
<td>74,925</td>
</tr>
</tbody>
</table>

The increase in salary rates and the introduction of index-linked payments resulted in a decreased variable remuneration in the salary structure.

Share of variable remuneration in the salary structure of employees, %

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Share of variable payments in employees’ salaries</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>19.39</td>
<td>19.48</td>
<td>18.61</td>
</tr>
</tbody>
</table>

1. The staff turnover indicator has been included in HR reporting since 2021.
2. According to the management level matrix of ROSATOM and its organisations, only the General Director of JSC Atomredmetzoloto belongs to the top management of the Division.

GRI 2–19

Developing the human capital

Remuneration

- Number of employees who underwent training, retraining and advanced training, people
- Share of employees who underwent training, retraining and advanced training in the reporting year, %
- Share of employees covered by training programmes

Expenses for personnel training, assessment and development, RUB ‘000

- Expenses for personnel training, assessment and development
- Expenses for personnel training, assessment and development per employee per year

Training hours

- Training hours
- Average training hours per employee

Remuneration policy

- The remuneration of employees is based on the Integrated Standardised Remuneration System of ROSATOM (ISRS), which provides the basis for a single approach to the establishment of wages and salaries in the Division and provides employees with a stable income regardless of their gender, ethnicity, religion, age or minority status.

- The main principle of the current remuneration system in the Division is to ensure the correlation between an employee’s salary and his or her performance and achievement of key performance indicators (KPIs).

- To ensure an increase in real salary value for employees in connection with the growth of consumer prices for goods and services, salaries in the organisations of the Division are indexed at least once a year. The amount of indexation is determined in accordance with the current Sectoral Agreement for Nuclear Energy, Industry and Science at a level not lower than the forecasted average annual consumer price index. In 2022, extensive measures were taken to increase salaries, including a two-stage indexation, which made it possible to significantly increase the average monthly salary.

Average monthly salary in the Division, RUB

- Average monthly salary in the Division
- Share of employees covered by salary indexation (at or above inflation level), %

The increase in salary rates and the introduction of index-linked payments resulted in a decreased variable remuneration in the salary structure.

Share of variable remuneration in the salary structure of employees, %

- Share of variable payments in employees’ salaries
Social support is provided to employees and their families, as well as to retirees in accordance with the Uniform Industry-Wide Social Policy of ROSATOM and its organisations through the implementation of corporate social programmes, as well as other commitments stipulated by collective agreements and local regulations in the Division’s organisations.

The main priorities of the Division’s social policy in 2022 were the principles of social responsibility:  
- Ensuring the safety and health of employees;  
- Adherence to generally accepted moral and ethical standards;  
- Respect for human rights;  
- Ensuring social protection of employees and retirees.

### Social policy

**Development of the Human Capital**

- Social investment in social and charitable projects in the regions of operation, RUB million

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare programmes</td>
<td>50,084</td>
<td>57,636</td>
<td>67,481</td>
</tr>
<tr>
<td>Support for retirees</td>
<td>5,746</td>
<td>9,535</td>
<td>10,124</td>
</tr>
<tr>
<td>Private pension plans</td>
<td>17,673</td>
<td>13,927</td>
<td>12,051</td>
</tr>
<tr>
<td>Expenditure on sporting and cultural events</td>
<td>34,331</td>
<td>25,370</td>
<td>25,487</td>
</tr>
<tr>
<td>Catering</td>
<td>33,821</td>
<td>32,818</td>
<td>59,018</td>
</tr>
<tr>
<td>Financial assistance to employees</td>
<td>10,994</td>
<td>15,871</td>
<td>43,915</td>
</tr>
<tr>
<td>Total</td>
<td>210,743</td>
<td>236,174</td>
<td>311,547</td>
</tr>
</tbody>
</table>

**Other social expenses**

- Public pension plans: 17.673
- Expenditure on sporting and cultural events: 34.331
- Catering: 33.821
- Financial assistance to employees: 10.994
- Total: 210.743

An important area of the Division’s social policy is the involvement of employees in regular physical training and sports. The ARMZ Spartakiad, a traditional sports and entertainment event for the Division’s employees, is held annually. Employees of the Division’s organisations also take part in industry-wide, federal and international sports tournaments. 5,791 employees participated in sporting events in 2022.

**Social investment in social and charitable projects in the regions of operation, RUB million**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social investment in infrastructure</td>
<td>7.15</td>
<td>1.20</td>
<td>24.80</td>
</tr>
<tr>
<td>Social investment in sports</td>
<td>3.98</td>
<td>4.51</td>
<td>0.20</td>
</tr>
<tr>
<td>Other social investment</td>
<td>0.70</td>
<td>1.80</td>
<td>5.55</td>
</tr>
<tr>
<td>Charity expenses of JSC Atomredmetzoloto</td>
<td>10.50</td>
<td>7.70</td>
<td>13.55</td>
</tr>
</tbody>
</table>

The enterprises of the Division are parties to the Sectoral Agreement for Nuclear Energy, Industry and Science, which establishes mutual obligations of the parties to the social partnership (employees and employers) in the following areas: remuneration, working conditions and labour guarantees, occupational health and safety, work organisation, corporate social responsibility, labour programme, labour policies, and labour guarantees and improving the well-being of employees, compliance with the principle of priority of preserving the life and health of employees.

Over the past three years, there have been no violations of working conditions, forced labour, cases of mass employee discontent or strikes. In order to prevent these shortcomings and minimise the corresponding risks, regular monitoring of working conditions is carried out in accordance with the adopted labour protection policies and standards. Any cases of human rights violation, corruption and other issues may be reported by employees via ROSATOM hotline (info@rosatom.ru), to the General Director of JSC Atomredmetzoloto (the contact form is available on the website of JSC Atomredmetzoloto and subsidiaries).

Each organisation of the Division has an Ethics Committee. In 2022, a committee meeting was held at PJSC PIMCU.

All reports and requests are considered within the time limits established by the legislation of the Russian Federation. They are handled in accordance with confidentiality and non-discrimination principles. A written response must be sent to the address indicated in the report/request once it has been reviewed (unless the report/request is anonymous). In 2022, 6 report/requests were received from employees and responses thereto were timely given.

In 2022, the Uniform Industry-Wide Human Rights Policy of ROSATOM and Its Organisations was approved and implemented, which establishes priority industry principles on human rights, as well as measures for implementation thereof in all areas of organisations’ activity.

In accordance with the Uniform Industry-Wide Safety Culture Policy of ROSATOM and Its Organisations adopted in 2021 and the Uniform Industry-Wide Guidelines for Occupational Risk Management in ROSATOM Organisations, in all enterprises of the Division rolled out the programmes for developing a safety culture and transforming labour protection based on the principles of injury prevention.

**Occupational health and safety expenses, RUB ‘000**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational health and safety expenses</td>
<td>467,077</td>
<td>544,618</td>
<td>776,292</td>
</tr>
<tr>
<td>Occupational health and safety expenses per employee per year</td>
<td>64.5</td>
<td>74.4</td>
<td>101.0</td>
</tr>
</tbody>
</table>

**Cooperation with universities and youth outreach**

Youth councils have been formed and are operating at the enterprises of the Division to arrange systematic work to develop an integrated industry youth community and strengthen the role of youth in the implementation of industry, federal and international initiatives.

The main task of the divisional Youth Council is to create a tool designed to provide a background for the implementation of youth initiatives, identify and support youth leaders, determine issues and proposals concerning the creation of conditions for professional growth and self-realisation of young people, develop mechanisms for searching and selecting talented youth for further development.
**Number and share of young employees**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2022/2021, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headcount of young employees (up to 35 years old) at the end of the reporting period, people</td>
<td>2,070</td>
<td>1,943</td>
<td>2,172</td>
<td>229</td>
</tr>
<tr>
<td>Share of employees under 35, %</td>
<td>27.97</td>
<td>26.12</td>
<td>27.07</td>
<td>0.95</td>
</tr>
</tbody>
</table>

The Division pays great attention to attracting and retaining young professionals, passing critical knowledge to them, and working with students.

In 2022, 460 university and college students completed job training and internship at the enterprises of the Division, of which 27 graduates were employed at the Division's enterprises, three agreements with students for employer-sponsored education were made (Russian State Geological Prospecting University named after S. Ordzhonikidze and Irkutsk National Research Technical University).

The number of mentors for interns and young employees increased by 73% in 2022.

**Number of mentors for interns and young employees, people**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2022/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of mentors for interns</td>
<td>26</td>
<td>49</td>
<td>115</td>
<td>66</td>
</tr>
<tr>
<td>Number of mentors for newly hired young employees</td>
<td>270</td>
<td>199</td>
<td>315</td>
<td>116</td>
</tr>
</tbody>
</table>

More than 10% of young employees took part in industry and divisional events:
- Youth Leadership Convention;
- Youth Community Leadership School;
- ROSATOM Youth Congress;
- Interdivisional conferences;
- Industry-specific webinars for youth, etc.

**Collective bargaining agreements, trade unions and vetera**

Currently, the Division has three collective agreements (PJSC PIMCU, Dalur JSC and JSC VNIPIPT) and two trade unions (PJSC PIMCU, JSC VNIPIPT). In Dalur JSC, employees’ interests are represented by the Works Council, which actively engages with the employer. More than 75% of employees are covered by collective agreements.

**Share of employees covered by collective agreements, %**

<table>
<thead>
<tr>
<th>Region</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moscow</td>
<td>40.45</td>
</tr>
<tr>
<td>Kurgan Region</td>
<td>69.64</td>
</tr>
<tr>
<td>Zabaykalsky Territory</td>
<td>92.79</td>
</tr>
<tr>
<td>Total</td>
<td>75.70</td>
</tr>
</tbody>
</table>

In 2022, the Division spent RUB 13.9 million on support for retirees, including:
- RUB 11.2 million on regular pension supplements;
- RUB 2.7 million on financial assistance and partial reimbursement for the cost of health resort treatment.

**Number of retirees registered in the HR departments, councils of veterans, and trade unions, people**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,637</td>
<td>1,379</td>
<td>1,409</td>
</tr>
</tbody>
</table>

GRI 2–30
KEY EVENTS IN THE REPORTING YEAR

DEVELOPING THE REGIONS OF OPERATION

SPECIFIC RISKS AND MANAGEMENT APPROACHES

>200 OF SOCIAL INITIATIVES ARE SUPPORTED IN THE FRAMEWORK OF THE GRANT COMPETITION IN CITY OF KRASNOKAMENSK
DEVELOPING THE REGIONS OF OPERATION

The Division makes a significant contribution to the social and economic development of the regions where it operates by implementing corporate social responsibility programmes and projects that facilitate sustainable development. Social and charity projects are aimed at creating a favourable environment for employees of the enterprises and the local population, improving the quality of life in the regions of operation, developing an environmental culture and unlocking human potential. When developing, monitoring and evaluating the effectiveness of social investment programmes in all regions of operation, the Division follows the best industry practices and standards.

Creative projects

Grant competition for creative teams ‘To the Top!’

From November 2022 to March 2023, the Division held the ‘To the Top! 2’ competition. The goal of the project is to create a positive image of ROSATOM’s region of operation, to stimulate the activities of creative teams, to develop conditions for unlocking the creative potential of Krasnoyarsk residents.

Pre-qualification was held in the category ‘Krasnokamensk – a city of creative people’.

Three categories were established:

- Soldier song contest dedicated to the Defender of the Fatherland Day;
- Competition of theatre studios with performances on a patriotic theme;
- Competition of dance companies with performances on a patriotic theme.

11 creative teams presented their vocal and dance compositions. The first place was awarded to the ‘Plastilin’ dance studio (Dauria Palace of Culture). The second place was awarded to the ‘Sozvezdie’ exemplary dance company (Stroitel Palace of Culture). The third place was shared by the ‘Ogonki’ – Competition of dance companies with performances on a patriotic theme.

The winners received grants that they can spend on purchasing stage costumes and organising tours around the cities of the Zabaykalsky Territory and other regions.

Illustrated books for little blind children

For more than 10 years, the Division has been supporting the Regional Charitable Public Foundation ‘Illustrated Books for Little Blind Children’. In 2022, 34 sets of educational books for visually impaired children were delivered.

The books were delivered to specialised children’s institutions in the regions of operation and distributed in children’s specialised institutions in Krasnokamensk (Zabaykalsky Territory), Dalmatovo (Kurgan Region), and the Republic of Buryatia.

Key social projects funded by the Division

Patriotic projects:

- A temporary Orthodox chapel was erected to commemorate the memorable date and historical event – the 80th anniversary of the Battle of Moscow – on the premises of the Federal State Budgetary Institution 27th Central Research Institute of the Ministry of Defence of the Russian Federation;
- Financial support was provided to veterans of the Regional Public Organisation of Veterans of the Military Academy of the General Staff for the publication of the military-historical work ‘The Book of Memory of the Military Academy of the General Staff. Heroes of the Soviet Union and Russia’;
- Support was provided to the ANO ‘Club of Russian Military Officials’ for holding a military–scientific conference, round table discussions, awarding personal scholarships of the Club to students of the military Suvorov and Nakhimov schools, cadet corps and a number of other events for the patriotic education of Russian citizens;
- Support was provided to the All-Russian Public Organisation of Veterans ‘Russian Union of Veterans’ in the form of financial and charitable assistance to disabled people and veterans of military service, as well as their families.

Educational projects

The ‘Nuclear Genius’ project was implemented with the help of the Regina Turyeva Foundation to support and promote the implementation of priority social projects in the Novaya Zemlya archipelago. A creative schoolchildren’s creativity competition was organised and held for children of school No. 150 located in the village of Belushya Guba. The financing is aimed at promoting activities in the field of education, science, culture, art, enlightenment, personal spiritual development, as well as raising the level of schoolchildren’s knowledge about nuclear science, technology, and forming a positive attitude towards existing and developing nuclear technologies. Students showed their knowledge in three age groups: from the second grade, from the second to the fourth grade, from the fifth to the seventh and from the eighth to the tenth grade. The competition included various questions: on general sciences and the nuclear industry of Russia. The winners and runners-up were awarded with memorable gifts. During the preparation and holding of the intellectual competition, the children learned a lot about the nuclear industry, many of them decided to get higher education in industry specialties.

Sports projects

The Division also supports sports projects in its host regions. In 2022, the Regional Sports Public Organisation ‘Trans-Baikal Archery Federation’ received funding to organise and hold all-Russian and regional archery competitions. Material and technical equipment for archers was purchased, trips for archers from the Zabaykalsky Territory were organised as part of the competitive process.
Programme to provide support (grants) through a contest of social and charity initiatives in the town of Krasnokamensk (Zabaykalsky Territory).

The aim and objectives of the project are to promote social support and social security for local residents, create social partnership and provide opportunities for the introduction of innovative sustainable development technologies in the regions of operation, and to foster self-employment. In 2022, the Division held the 9th Contest of Charity and Social Projects. Financial support totalling RUB 2.8 million was provided in the 1st round of the competition for 12 out of 15 important social projects submitted for the contest. 12 out of 16 submitted applications were supported in the 2nd additional round. The contest included the following categories: ‘Krasnokamensk: a city of bloggers’; ‘Krasnokamensk: a tourist city’; ‘Krasnokamensk: a city of patriots’; ‘Krasnokamensk: a comfortable city’; ‘Krasnokamensk: a digital city’.

‘Colourful Krasnokamensk’ category was established for the first time. In this category, a grant is provided for the design of residential or industrial facilities in the town of Krasnokamensk in order to promote the nuclear industry and develop artistic skills among young people. The facades of two houses were painted in the graffiti style with images symbolising the work of miners: on one of the walls, a family of miners was depicted, on the other, an employee of the city-forming enterprise PJSC PIMCU. As part of the project, a master class on drawing using graffiti technique was held, in which 30 students of the cadet class of school No. 1, children’s art school, and children from the Dobrota orphanage took part.

Corporate Volunteering Programme

To celebrate the anniversary of the Company, volunteers implemented the programme ‘15 Good Deeds for the 15th Anniversary of ARMZ’, which consists of 15 socially significant events aimed at developing environmental consciousness and supporting the regions of operation:

- Become a Santa Claus 2022, 2023: purchasing New Year’s gifts for children undergoing treatment at the tuberculosis sanatorium in Krasnokamensk;
- Congratulations to grandmothers on March 8: sending greeting cards to grandmothers in nursing homes for the elderly;
- Pulsation donor campaign;
- Environmental campaign to collect ‘good caps’ and used batteries;
- Earth Day environmental campaign to collect checks and plastic cards;
- Congratulations to veterans on the Great Victory;
- Congratulations to veterans on the Great Victory Day;
- Joy of Old Age – May: collecting things for the elderly in nursing homes;
- ‘Fluffy Atom’ campaign to help homeless animals;
- ‘Okoem art workshops fair involving artists with special mental needs;
- Ecological and patriotic trip to Vologdsklami;
- New Year for Grandparents: collecting New Year’s gifts for grandparents in nursing homes;
- Soon to School: helping children of evacuees in collecting school supplies by 1 September;
- BumBattle waste paper collection campaign;
- Joy of Old Age – New Year: sending greeting cards.

Second Industry-Wide Corporate Social Responsibility (CSR) and Volunteering Competition named after Anatoly Alexandrov

Best CSR Programme category: 1st place: the project ‘Social investment programme of ROSATOM Mining Division in the regions of operation’ (L. Loginova, I. Krupyanko, JSC Atomredmetzoloto);

Best volunteer project category: 3rd place: the project ‘20 good deeds for the 20th anniversary of Dalur’ (N. Kurasova, Dalur JSC).

The 9th All-Russian Contest of Employers’ Best Practices in the Socio-Humanitarian Sphere

2nd place in the Art Workshop category: the project ‘A complex of art programmes in the ‘uranium capital’ of Russia’.

The Best Social Projects of Russia competition:

1st place in the Culture, Art, Religion category: the project ‘Programme for the provision of competitive support for creative teams ‘To the Top!’ in the Zabaykalsky Territory’.
The Division’s management approach to specific risks. Evaluation of the management approach. Key impacts, specific risks (maximum 4 risks) of the Division.

In accordance with ROSATOM’s unified approach, JSC Atomredmetzoloto has implemented a risk management system (RMS) integrated into the planning and management processes of the Mining Division. The risk management system is based on a cyclic process of identifying, assessing and managing risks that may affect the results and performance indicators of the Mining Division enterprises. The RMS is being developed in accordance with the approved Risk Management Development Programme of ROSATOM for the period from 2019 through 2024.

In 2022, JSC Atomredmetzoloto successfully confirmed the compliance of its activities, including risk management, with the ISO 9001:2015 and ISO 14001:2015 international standards.

Radar of key risks of JSC Atomredmetzoloto for 2021-2022

Key risks and risk management procedures in 2022

Change in risk level compared to 2021:

- **increase**
- **decrease**
- **no significant changes**

1. **Currency risk**
   - Low level

2. **Interest rate risk**
   - High level
   - In order to mitigate the negative impact of a significant increase in interest rates in February 2022, a temporary procedure for determining interest rates for tranches provided to the organisations of the Mining Division under the existing intra-group debt financing agreements was developed and approved, pursuant to which the rates were reviewed on a monthly basis, taking into account adjustments for actual changes in the previous month. This methodology allowed to reduce the impact of interest rate volatility on the Division’s operations, while maintaining the average market level. The Division also took out loans with a subsidised interest rate.

3. **Credit risk**
   - High level
   - Credit risk was managed in accordance with the Uniform Industry-Wide Guidelines for Credit Risk Management in ROSATOM and its Organisations. In order to reduce the level of credit risk in a situation where counterparties have financial limitations, the list of acceptable means to secure the performance of counterparties’ obligations has been expanded, closer contact has been established with counterparties to control their performance, and, in order to procure critical materials for the Division’s operations, decisions have been made that allow the subsidiaries of the Division to be flexible in their relations with counterparties in the context of significant volatility of macro parameters. As a result of the actions taken, losses associated with the default of counterparties have been minimised.

4. **Liquidity risk**
   - Low level

5. **Commodity risk (uranium)**
   - Critical level

6. **Health, safety and environmental (HSE) risk**
   - High level

7. **Political risk**
   - Critical level
   - In connection with the political and economic sanctions imposed by unfriendly countries against the Russian Federation, the production plans and activities of the Division were developed taking into account the existing and threatened restrictions. As a result, the impact of political risk on the financial performance of the Division has been minimised.

8. **Risk of loss of and damage to assets (corruption and other offences)**
   - Low level

9. **Reputational risk**
   - Low level

10. **Risk associated with investment projects (uranium)**
    - Low level

11. **Risk associated with new investment projects**
    - Critical level

12. **Other risks, including additional sustainability risks**
    - Critical level
APPENDIX 1. INFORMATION ON THE REPORTING PROCESS

Contents
This report, Performance of the Mining Division, hereinafter referred to as the Report) forms part of the 2022 modular public annual report of ROSATOM. Public reports are disclosed on an annual basis. Previous reports have been posted on the website https://www.report.rosatom.ru/armz.

Report boundaries
The Report covers JSC Atomredmetzoloto operations from 1 January 2022 through 31 December 2022 and all key entities managed by the Division.

There were no changes in the scope of consolidation compared to the previous reporting period.

Standards and regulatory requirements used during the preparation of the Report Process for drafting the Report and determining its content
Preparation of the Report included an analysis of the Division's enterprises' operations in 2022. The Report presents the performance of the Division in the economic, social and environmental contexts, discloses promising areas of development.

The Report reflects the Division's impact on its stakeholders. The Report has been prepared in close cooperation with them. On 10 February 2023, two dialogues were held on Key Performance Results of the Mining Division in 2022. In May 2022, remote public consultations were held to discuss the draft Report.

Process for determining the materiality of information
The content of the 2022 Report was determined in accordance with the requirements of the Global Reporting Initiative GRI (2021) international reporting standards, which are aimed at preparing reports on organisations' significant impacts on the economy, environment and social sphere.

JSC Atomredmetzoloto applied the following procedure to determine the materiality of impacts. The working group responsible for Report preparation, with the involvement of experts in the field of non-financial reporting, CSR and sustainable development, prepared a list of significant impacts related to the Division's operations. Using an online survey of the Company's management and representatives of the main stakeholder groups, an assessment of significant impacts was carried out according to the following two criteria:

- taking into account the significance/strength of the Division's impact: the assessment was based on a three-point system - moderate, significant or critical impact;

In order to reduce operational and social risks, insurance is actively used:
- Insurance of enterprises’ property, cargo insurance during transportation;
- Civil liability insurance for the carriage of goods, capital construction activities, as well as compulsory types of civil liability insurance;
- Personal insurance in order to ensure social protection of the Division’s employees: voluntary medical insurance, accident and health insurance.

The implementation of new mining businesses is associated with capital intensity and a long investment phase (a phase with great uncertainty), and long payback periods for projects. When making a decision to enter a new business, JSC Atomredmetzoloto applies the following procedure to determine the materiality of impacts: the assessment was based on a three-point system - moderate, significant or critical impact;
— taking into account the reparability / irreparability of negative consequences: the assessment was also made according to a three-point system - ‘reparable, difficult and expensive’, ‘compensable’, ‘irreparable’. Based on the survey results, a list of the most significant impacts of the Division was formed for the preparation of the 2022 Report using the Standard (2021) divided in three blocks: economy, environment, society.

Impact on the economy

Impact on the achievement of strategic goals in the context of global challenges

Contribution to the country’s technological development through R&D to improve technology, optimise the timing and cost of equipment production

Impact on the development of import substitution in Russia

Ensuring reputational and financial stability of the company through full and timely fulfilment of contractual obligations, timely payment of taxes to the budgets of all levels

Impact on the development of effective management practices in procurement, quality management, organisational development and other areas

Presence in the nuclear technologies and services markets (markets for natural uranium, uranium conversion and enrichment, nuclear fuel, NPP construction, etc.) and markets for rare non-nuclear businesses, as well as prospects for the development of these markets

Impact on the environment

Impact of enterprises on the flora and fauna, water, air and land

Environmental impact of enterprises’ operations during equipment production

Impact of industrial waste generated by enterprises on the flora and fauna, water, air and land

Impact on water resources, including water withdrawal, consumption and discharge

Contribution of scientific and technical solutions for equipment production to reducing environmental impacts

Impact of the Division on improving the environmental friendliness of the entire supply chain (including the introduction of requirements for energy efficiency and environmental management certificates in procurement procedures)

Impact on society, including personnel

Impact of the Division on improving occupational health and safety in the entire supply chain (including the introduction of occupational health and safety requirements in procurement procedures, control of occupational health and safety in the process of equipment production)

Impact on the safety and health of personnel in the workplace

Impact on staff employment

Impact on staff qualifications

Impact on the infrastructure of the regions of operation

Potential impact of enterprises’ operations on personnel and residents of the host regions

Impact of enterprises’ operations on improving the quality of life of citizens in the regions of operation

Social impacts on residents of the regions of operation, who are not employees of the Division or their family members

Impact on the rights and equal opportunities of employees and other stakeholders

Data validation
The report preparation was carried out and supervised by the Corporate Communication Department.

Disclaimer
The reporting materials contain forward-looking statements regarding operating, financial, economic and social indicators characterising the Division’s future development. The materialisation of assumptions and plans is directly related to the political, economic, social and legal environment. As a result, the Division’s actual performance may differ from the forward-looking statements.
Statement of use
The Mining Division (JSC Atomredmetzoloto) has reported in accordance with the GRI Standards for the period from 1 January through 31 December 2022.

GRI Standard/ Other source Disclosure Report section Comments
GRI 1 used GRI 1: Foundation 2021
Applicable GRI Sector Standard(s) Not applicable

GRI 2: General Disclosures (2021)
2-1 Organizational details Appendix 1. Information on the Reporting Process
2-2 Entities included in the organization’s sustainability reporting Appendix 1. Information on the Reporting Process
2-3 Reporting period, frequency and contact point Appendix 1. Information on the Reporting Process
2-4 Restatements of information Appendix 1. Information on the Reporting Process
2-5 External assurance Appendix 1. Information on the Reporting Process
2-6 Activities, value chain and other business relationships 2. Overview of the Division
2-7 Employees 1. Key Results and Events in the Reporting Year
2-8 Workers who are not employees 8. Developing the Human Capital
2-9 Governance structure and composition 3. Governance System
2-10 Nomination and selection of the highest governance body Members of the Board of Directors are elected by the General Meeting of Shareholders. The General Meeting of Shareholders has the right to remove members of the Board of Directors. At the same time, a decision on removal of members of the Board of Directors may be taken only in respect of all members of the Board of Directors simultaneously. Members of the Board of Directors are elected taking into account qualifications and competencies to solve the assigned tasks.
2-11 Chair of the highest governance body
3. Governance System
3.10 of the Articles of Association of JSC Atomredmetzoloto, the competences of the Boards of Directors of JSC Atomredmetzoloto are determined in accordance with the Articles of Association of JSC Atomredmetzoloto and Federal Law No. 208-FZ dated 16 December 1995 on Joint Stock Companies. The provisions of Chapter I of Federal Law No. 208-FZ dated 26 December 1995 on Joint Stock Companies and the Articles of Association of the Division’s companies do not apply to the Company.
3.2 Commitment to sustainable development principles
2-12 Role of the highest governance body in overseeing the management of impacts 3. Governance System
3.2 Commitment to sustainable development principles
2-14 Role of the highest governance body in sustainability reporting Appendix 1. Information on the Reporting Process
2-15 Conflicts of interest 3. Governance System
2-16 Communication of critical concerns 3. Governance System
2-17 Collective knowledge of the highest governance body 3. Governance System
2-18 Evaluation of the performance of the highest governance body 3. Governance System

1. Disclosures from 2-10 to 2-21 inclusive are provided in respect of JSC Atomredmetzoloto, the key organization of the Division.
<table>
<thead>
<tr>
<th>GRI Standard/ Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 2: General Disclosures (2021)</td>
<td>2-19 Remuneration policies</td>
<td>3. Governance System</td>
<td>According to the internal documents of the key organisations of the Division, members of the Board of Directors during the period of performance of their duties may be paid remuneration and (or) reimbursed for expenses related to the performance of their functions as members of the Board of Directors of the Company upon the decision of the General Meeting of Shareholders (sole shareholder). The amount of such remuneration and reimbursement is established by the General Meeting of Shareholders (sole shareholder). The General Meeting of Shareholders (sole shareholder) did not make any decisions on the payment of remuneration to members of the Board of Directors and (or) reimbursement for expenses related to the performance of the functions of members of the Board of Directors.</td>
</tr>
<tr>
<td></td>
<td>2-20 Process to determine remuneration</td>
<td>3. Governance System</td>
<td>JSC Atomsredmetzoloto does not have any internal document defining the process for determining the amount of remuneration for members of the Board of Directors.</td>
</tr>
<tr>
<td></td>
<td>2-21 Annual total compensation ratio</td>
<td>3. Governance System</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-22 Statement on sustainable development strategy</td>
<td>3.2. Commitment to sustainable development principles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-23 Policy commitments</td>
<td>3.2. Commitment to sustainable development principles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-24 Embedding policy commitments</td>
<td>4. Innovation and Development of Science</td>
<td>The policies of the Division’s organisations are brought to the attention of employees by means of distribution via electronic document management systems (EDMS) and e-mail. The Policy is communicated to customers and contractors through quality assurance programmes. Availability of the Policy to stakeholders is ensured by posting it on the websites of the Division’s organisations, as well as by sending the Policy upon request to any stakeholder.</td>
</tr>
<tr>
<td></td>
<td>2-25 Processes to remediate negative impacts</td>
<td>3.2. Commitment to sustainable development principles</td>
<td>Upon receipt of a report/request, it is sent to a structural unit of the Division in accordance with its subject matter. After the matter has been reviewed, a written response is sent to the author of the report/request. No complaints, requests or reports were received in 2022.</td>
</tr>
<tr>
<td></td>
<td>2-26 Mechanisms for seeking advice and raising concerns</td>
<td>3.3. Approach to stakeholder engagement</td>
<td>Citizens’ enquiries can be addressed directly to the head of the communications department, whose contact is posted on an external website (telephone, e-mail), as well as during ongoing communication activities.</td>
</tr>
<tr>
<td></td>
<td>2-27 Compliance with laws and regulations</td>
<td>3. Governance System</td>
<td>In the reporting year, the key organisations of the Division did not commit any material violations of laws or regulations, which would result in the imposition of fines by competent authorities, in the course of their core business activity.</td>
</tr>
<tr>
<td></td>
<td>2-28 Membership associations</td>
<td>3. Governance System</td>
<td>No decisions were made in 2022 on participation in international non-profit organisations.</td>
</tr>
<tr>
<td></td>
<td>2-29 Approach to stakeholder engagement</td>
<td>3.3. Approach to stakeholder engagement</td>
<td>Appendix 1. Information on the Reporting Process</td>
</tr>
<tr>
<td></td>
<td>2-30 Collective bargaining agreements</td>
<td>8. Developing the Human Capital</td>
<td></td>
</tr>
</tbody>
</table>

Material topics

GRI 3: Material Topics 2021

<table>
<thead>
<tr>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-1 Process to determine material topics</td>
<td>Appendix 1. Information on the Reporting Process</td>
<td></td>
</tr>
<tr>
<td>3-2 List of material topics</td>
<td>Appendix 1. Information on the Reporting Process</td>
<td></td>
</tr>
</tbody>
</table>

1. Material violation is defined by the Division as a violation of laws or regulations within the scope of the core business, resulting in the imposition of a fine in excess of RUB 200,000.
Impact of the Division on improving occupational health and safety in the entire supply chain (including the introduction of occupational health and safety requirements in procurement procedures, control of occupational health and safety in the process of equipment production)

<table>
<thead>
<tr>
<th>GRI Standard/Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-1 Management of material topics</td>
<td>6.1. Safety of nuclear technologies and products</td>
<td></td>
</tr>
</tbody>
</table>

Impact on the achievement of strategic goals in the context of global challenges

<table>
<thead>
<tr>
<th>GRI Standard/Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-1 Management of material topics</td>
<td>Statement from the Head of the Division</td>
<td></td>
</tr>
<tr>
<td></td>
<td>403-4 Worker participation, consultation, and communication on occupational health and safety</td>
<td>6.2. Occupational health and safety</td>
<td>6.3. Environmental safety</td>
</tr>
<tr>
<td></td>
<td>403-5 Worker training on occupational health and safety</td>
<td>6.2. Occupational health and safety</td>
<td>6.3. Environmental safety</td>
</tr>
<tr>
<td></td>
<td>403-6 Promotion of worker health</td>
<td>9. Developing the Regions of Operation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships</td>
<td>6.2. Occupational health and safety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>403-9 Work-related injuries</td>
<td>6.2. Occupational health and safety</td>
<td></td>
</tr>
<tr>
<td>GRI Standard/ Other source</td>
<td>Disclosure</td>
<td>Report section</td>
<td>Comments</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------</td>
<td>----------------</td>
<td>----------</td>
</tr>
<tr>
<td>GRI 303: Water and Effluents (2018)</td>
<td>303-1 Interactions with water as a shared resource</td>
<td>6.3 Environmental safety</td>
<td></td>
</tr>
<tr>
<td>303-2 Management of water discharge-related impacts</td>
<td>6.3 Environmental safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>303-3 Water withdrawal</td>
<td>6.3 Environmental safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>303-4 Water discharge</td>
<td>6.3 Environmental safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRI 306: Emissions (2016)</td>
<td>306-1 Direct (Scope 1) GHG emissions</td>
<td>6.3 Environmental safety</td>
<td></td>
</tr>
<tr>
<td>306-2 Nitrogen oxides (NOx), sulphur oxides (SOx), and other significant air emissions</td>
<td>6.3 Environmental safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306-2 Management of significant waste-related impacts</td>
<td>6.3 Environmental safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306-3 Waste generated</td>
<td>6.3 Environmental safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306-5 Waste directed to disposal</td>
<td>6.3 Environmental safety</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Impact on staff employment**

<table>
<thead>
<tr>
<th>GRI Standard/ Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-3 Management of material topics</td>
<td>B. Developing the Human Capital</td>
<td></td>
</tr>
<tr>
<td>GRI 404: Training and Education (2016)</td>
<td>404-1 Average hours of training per year</td>
<td>B. Developing the Human Capital</td>
<td></td>
</tr>
<tr>
<td>GRI 406: Non-Discrimination (2016)</td>
<td>406-1 Incidents of discrimination and corrective actions taken</td>
<td>B. Developing the Human Capital</td>
<td></td>
</tr>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-3 Management of material topics</td>
<td>S. Contribution to the Technological Sovereignty: New Products and Businesses</td>
<td></td>
</tr>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-3 Management of material topics</td>
<td>6.3. Environmental safety</td>
<td></td>
</tr>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-3 Management of material topics</td>
<td>6.3. Environmental safety</td>
<td></td>
</tr>
<tr>
<td>GRI 304: Biodiversity (2016)</td>
<td>304-2 Significant impacts of activities, products, and services on biodiversity</td>
<td>B. Developing the Human Capital</td>
<td></td>
</tr>
</tbody>
</table>

**Development of the project quality management system**

<table>
<thead>
<tr>
<th>GRI Standard/ Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-3 Management of material topics</td>
<td>3.4. Compliance and introduction of quality management systems in the Division</td>
<td></td>
</tr>
</tbody>
</table>

**Intellectual property of the Division**

<table>
<thead>
<tr>
<th>GRI Standard/ Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-3 Management of material topics</td>
<td>4. Innovation and Development of Science</td>
<td></td>
</tr>
</tbody>
</table>

**Assessment of suppliers’ and contractors’ compliance with sustainability requirements**

<table>
<thead>
<tr>
<th>GRI Standard/ Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-3 Management of material topics</td>
<td>6.2. Occupational health and safety</td>
<td></td>
</tr>
</tbody>
</table>

**Impact on staff qualifications**

<table>
<thead>
<tr>
<th>GRI Standard/ Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 201: Economic Performance (2016)</td>
<td>201-3 Defined benefit plan obligations and other retirement plans</td>
<td>B. Developing the Human Capital</td>
<td></td>
</tr>
<tr>
<td>GRI 404: Training and Education (2016)</td>
<td>404-2 Programmes for upgrading employee skills and transition assistance programme</td>
<td>B. Developing the Human Capital</td>
<td></td>
</tr>
<tr>
<td>GRI 406: Non-Discrimination (2016)</td>
<td>406-1 Incidents of discrimination and corrective actions taken</td>
<td>B. Developing the Human Capital</td>
<td></td>
</tr>
</tbody>
</table>

**Impact substitution as a competitive advantage**

<table>
<thead>
<tr>
<th>GRI Standard/ Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-3 Management of material topics</td>
<td>5. Contribution to the Technological Sovereignty: New Products and Businesses</td>
<td></td>
</tr>
</tbody>
</table>

**Potential impact of enterprises’ operations on personnel and residents of the host regions**

<table>
<thead>
<tr>
<th>GRI Standard/ Other source</th>
<th>Disclosure</th>
<th>Report section</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 3: Material Topics 2021</td>
<td>3-3 Management of material topics</td>
<td>6.3. Environmental safety</td>
<td></td>
</tr>
<tr>
<td>GRI 304: Biodiversity (2016)</td>
<td>304-2 Significant impacts of activities, products, and services on biodiversity</td>
<td>6.3. Environmental safety</td>
<td></td>
</tr>
</tbody>
</table>
Contribution to the technological sovereignty of the Russian Federation
(prioritised topic of ROSATOM’s annual report)

GRI 3: Material
Topics 2021
4. Innovation and Development of Science
5. Contribution to the Technological Sovereignty. New Products and Businesses

Indicator demonstrating the contribution to technological sovereignty

1. Key Results and Events in the Reporting Year

APPENDIX 3. KEY PERSONNEL CHARACTERISTICS

Number of employees with a breakdown by gender and type of employment¹ as at 31 December 2022, people

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees</td>
<td>1,996</td>
<td>6,027</td>
<td>8,023</td>
</tr>
<tr>
<td>Number of regular employees</td>
<td>1,898</td>
<td>5,492</td>
<td>7,390</td>
</tr>
<tr>
<td>Number of temporary employees</td>
<td>98</td>
<td>535</td>
<td>633</td>
</tr>
<tr>
<td>Number of full-time employees</td>
<td>1,928</td>
<td>5,089</td>
<td>7,017</td>
</tr>
<tr>
<td>Number of part-time employees</td>
<td>68</td>
<td>128</td>
<td>206</td>
</tr>
</tbody>
</table>

Number of employees with a breakdown by region and type of employment as at 31 December 2022, people

<table>
<thead>
<tr>
<th>Region</th>
<th>Moscow</th>
<th>Kurgan Region</th>
<th>Irkutsk Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees</td>
<td>801</td>
<td>718</td>
<td>13</td>
</tr>
<tr>
<td>Number of regular employees</td>
<td>770</td>
<td>556</td>
<td>10</td>
</tr>
<tr>
<td>Number of temporary employees</td>
<td>31</td>
<td>162</td>
<td>3</td>
</tr>
<tr>
<td>Number of full-time employees</td>
<td>737</td>
<td>709</td>
<td>13</td>
</tr>
<tr>
<td>Number of part-time employees</td>
<td>64</td>
<td>9</td>
<td>0</td>
</tr>
</tbody>
</table>

Republic of Buryatia
Zabaykalsky Territory
Chukotka Autonomous District

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of employees</th>
<th>Number of regular employees</th>
<th>Number of temporary employees</th>
<th>Number of full-time employees</th>
<th>Number of part-time employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Republic of Buryatia</td>
<td>679</td>
<td>5,603</td>
<td>110</td>
<td>5,580</td>
<td>110</td>
</tr>
<tr>
<td>Zabaykalsky Territory</td>
<td>492</td>
<td>5,363</td>
<td>100</td>
<td>5,363</td>
<td>100</td>
</tr>
<tr>
<td>Chukotka Autonomous District</td>
<td>187</td>
<td>240</td>
<td>10</td>
<td>240</td>
<td>10</td>
</tr>
</tbody>
</table>

¹  In accordance with the labour legislation of the Russian Federation, there are no non-guaranteed hours employees in the Division.
### Performance of the Mining Division in 2022

<table>
<thead>
<tr>
<th>Sakha Republic</th>
<th>Republic of Kazakhstan</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of employees</td>
<td></td>
<td>97</td>
</tr>
<tr>
<td>Number of regular employees</td>
<td></td>
<td>73</td>
</tr>
<tr>
<td>Number of temporary employees</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Number of full-time employees</td>
<td></td>
<td>97</td>
</tr>
<tr>
<td>Number of part-time employees</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

### Share of employees covered by collective agreements, %

<table>
<thead>
<tr>
<th>Moscow</th>
<th>Kurgan Region</th>
<th>Zabaykalsky Territory</th>
</tr>
</thead>
<tbody>
<tr>
<td>40.40</td>
<td>69.64</td>
<td>52.70</td>
</tr>
</tbody>
</table>

### Glossary and Abbreviations

- **CCD-SMD**: Central Commission for the Development of Solid Mineral Deposits of the Federal Agency for Mineral Resources (Rosnedra)
- **CHPP**: combined heat and power plant
- **CPS**: central production site
- **CSP**: corporate social programme
- **CSR**: corporate social responsibility
- **CT**: critical tasks
- **CTG**: consolidated taxpayer group
- **EDS**: exploration and development shaft
- **EW**: exploration work
- **FEED**: front-end engineering design
- **FS**: feasibility study
- **GRI**: Global Reporting Initiative - Sustainability Reporting Standards
- **HL**: heap leaching
- **IP**: intellectual property
- **ISL**: in-situ leaching
- **ISRS**: integrated standardised remuneration system
- **KPI**: key performance indicator
- **LDR**: lost day rate
- **LP**: leach plant
- **LSU**: local sorption unit
- **MRB**: mineral resource base
- **ODR**: occupational disease rate
- **PSEDA**: priority social and economic development area
- **R&M**: repairs and maintenance
- **RAW**: radioactive waste
- **REM**: rare-earth metals
- **RPS**: ROSATOM Production System
- **SCMR, FSFI**: State Commission on Mineral Reserves, Federal State-Funded Institution
- **SOCEX**: social expenses
- **SS**: substation
Contact Details

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Fax: +7 (495) 508-88-10

Corporate Communications Department
E-mail: VGeLoginova@armz.ru

Official group on Telegram
https://t.me/armz_uranium

Official group on VKontakte
https://vk.com/armzuranium