

Dear Ladies and Gentlemen,

In accordance with our principle of open communication, I am presenting to you the Environmental Impact Report for 2019 on behalf of BorsodChem MCHZ, s.r.o. The following pages of this Report show that our effort, carefulness, continuous improvement and permanently responsible approach in the field of care for the environment, process and technical safety, occupational health protection and energy management system is rewarding and brings its fruits.

Systematic approach to environmental protection, occupational safety and reduction of energy demand

- At the end of the year, we asked the local labour inspectorate to verify the programme for the next period in order to meet the requirements of a voluntary Safe Enterprise programme.
- In April and October 2019, a supervisory audit was conducted by Lloyd's Register Quality Assurance in our company, focusing on the quality, environmental protection and energy management systems. They confirmed that our Integrated Management System complies with requirements of international standards.
- In 2019, we spent approximately 77% of total investment funds on actions that significantly contribute to reducing the environmental impact and energy intensity and which contribute to increasing the procedural safety of technologies we operate.
- As part of our agreement with the Ostrava Municipal Council, we once again provided a financial contribution of CZK 150,000 for curative stays of children from the Ostrava region in 2019.

Environmental and safety profile of the company

- Compared to 2015, we managed to reduce the organic pollution of waste water discharged into the Odra River by about 20%.
- Compared to 2015, we reduced nitrogen oxide emissions released into the atmosphere by 65% and emissions of organic substances to a minimum value of 0.1 ton per year.
- In the area of waste management, we transfer ca. 12% of generated waste for further use as secondary raw materials, 68% of generated waste is handed over for disposal with energy-generation use (power generation) in the incinerator of hazardous waste and only 20% of our waste is dumped at internal and external dumping sites.



Fulfilment of long-term objectives and compliance with European legislation

- In accordance with the REACH regulation – Registration, Evaluation and Authorisation and Restriction of Chemicals, we have registered all products of our company with the European Chemicals Agency in Helsinki since 2018.
- We have introduced the required monitoring of greenhouse gases in accordance with the EU ETS (Emission Trading Scheme) legislation. Thanks to optimization of technology production facilities carried out in the previous period, we have a sufficient number of emission permits at our disposal.

We are confident that from information provided above and also below in the form of charts presented in the 2019 Environmental Impact Report, you can see and positively appreciate that our Company fully supports environmental, energy and safety-related solutions that form an integral part of our responsible and professional business approach.

March 2020

Mgr. Miroslava Jeřábková
HR and Communication Director



More detailed information can be obtained from:

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2019



ENVIRONMENTAL REPORT

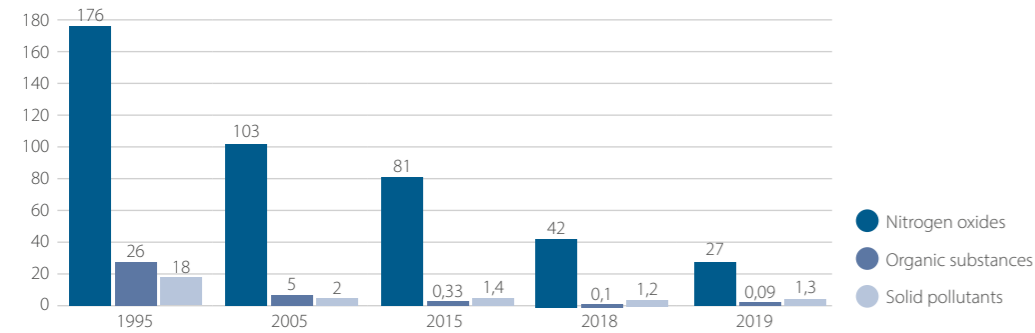


AIR PROTECTION

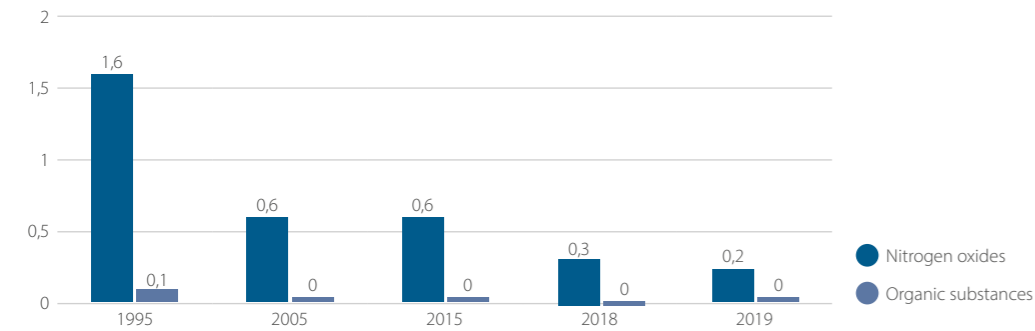
The level of technical measures implemented in existing production facilities in recent years has enabled us to reduce the total amount of air emissions in the long term to a minimum amount that is below the emission limits stipulated by the relevant legal regulations. Nitrogen oxide emissions from the operated nitric acid and hydrogen production plants and, to a smaller extent, emissions of organic substances are among the most important.

The air pollution sources operated by our company correspond, in terms of their equipment, to state-of-the-art technologies and their operation is fully in compliance with the valid integrated authorizations.

Emissions of pollutants discharged into atmosphere (t/year)



Emissions of selected pollutants discharged into atmosphere per relevant production unit (kg/t of production)

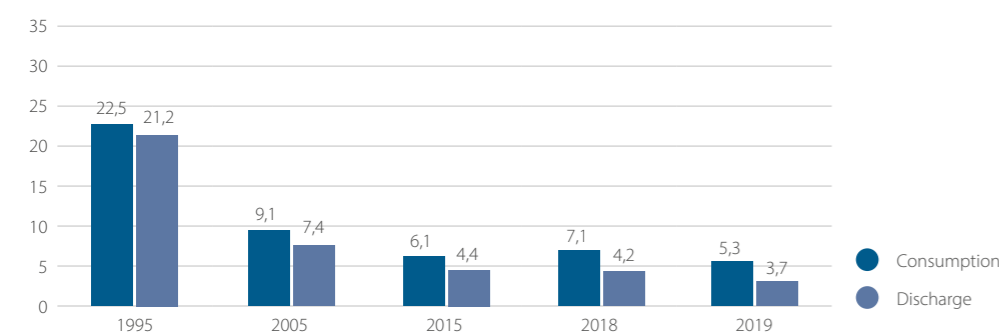


WATER PROTECTION

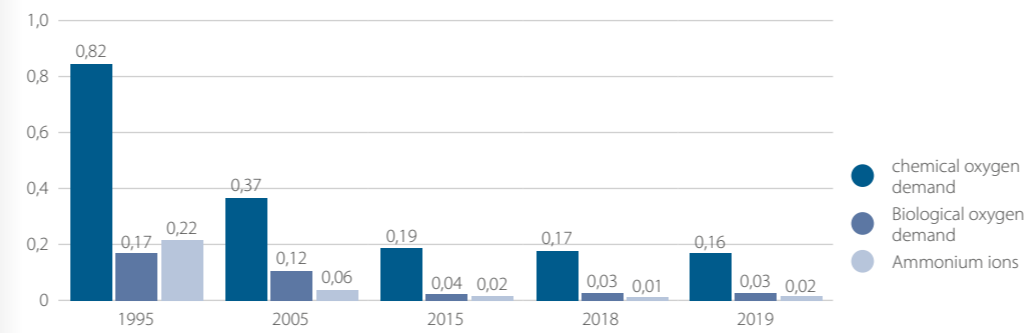
Our main objective in the area of water conservation is reducing the consumption of this natural resource, which we have been achieving by long-term attention paid to minimizing waste water pollution and optimizing the use of water as a cooling medium. These measures lead not only to a gradual reduction in the demand for consumption of crude water from the Odra River, but also to the reduction of pollution by waste materials, although there is a growth of production.

A key role in the long-term positive trend of reducing the main pollution indicators is played by the operation of the corporate waste water treatment plant, which includes a highly effective biological treatment system, allowing us to reduce the organic and nitrogen pollution to a large extent, and a neutralization treatment system with a technological node for gypsum separation.

Consumption and discharge of water from/to the Odra river per relevant production unit (m3/t production)



Indicators of pollution of waste waters discharged to the Odra river per relevant production unit (kg/t production)

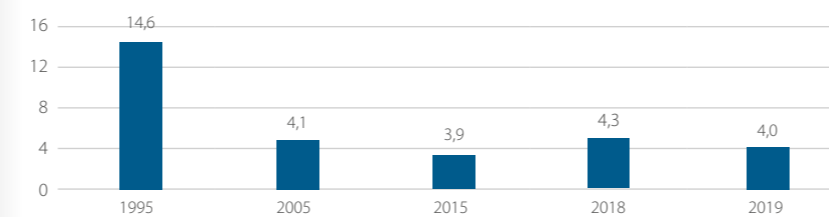


INDUSTRIAL WASTE

We have focused systematically on minimizing waste production and subsequent waste management since 1992. In recent years, waste production from the operated technologies has been reduced to a minimum level of ca. 4 kg of waste per tonne of relevant production. In accordance with the legislation, in the subsequent management of that waste, we prefer its material recovery and power generation under outsourcing contracts.

In 2019, we generated a total of 4,031 tons of waste, of which ca. 12 % was transferred for material recovery and 68 % for power generation, while the remaining quantity (20 %) was removed for dumping.

Waste generation per relevant production unit (kg of waste/t of production)



Relevant production – production with a decisive impact on waste generation

Waste generation – generation of waste from production activities during the monitored period

PREVENTION OF MAJOR ACCIDENTS, SAFETY OF OPERATED TECHNOLOGIES

Given the production portfolio of our company, we are classified under plants covered by the Act on Prevention of Serious Accidents.

Our technology operations are subject to continuous monitoring. In our technology, we use active and passive components allowing us to ensure early detection of any non-standard situation and implementation of immediate measures to avoid accidents.

In the past years, we installed ammonia detection sensors around the ammonia storage area, with a direct connection of the monitored data to IBC (Integrated Safety Centre in Ostrava). Then, in 2019, we have installed 6 more autonomous sensors located at filling points, allowing us to respond even faster and more effectively to the impending danger.

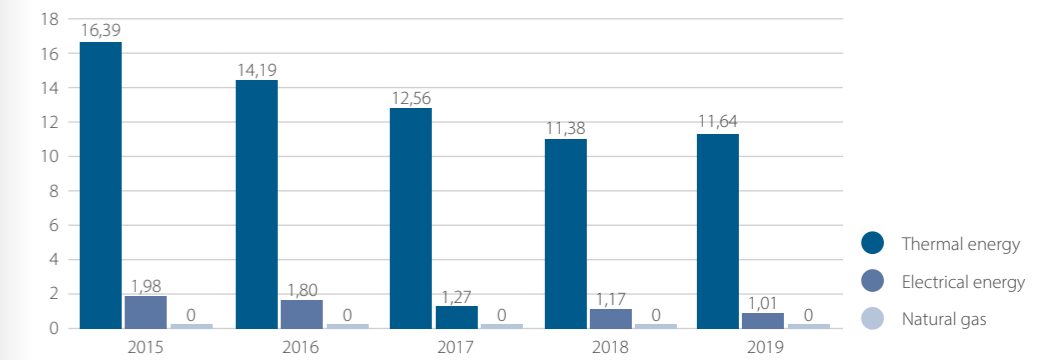
Emergency preparedness drills take place on a regular basis at all workplaces in the company in cooperation with the corporate fire brigade and, in some cases, also with the Fire Rescue Service of the Region of Moravia-Silesia.

ENERGY MANAGEMENT SYSTEM

Since 2015, we have had a certified Energy Management System which was re-certified in 2017, together with the Quality and Environmental Management Systems. During the operation of our own technologies, a significant amount of thermal energy is generated, which is preferably used in other production processes of our company.

Losses of the individual energy types show a fluctuating trend. Losses of natural gas are at zero value.

Energy management (%)



RELEVANT EU LEGISLATION

In accordance with Regulation (EC) No 1907/2006 (REACH), we have already registered all the products from our portfolio (a total of 24 products) in past years. This registration includes processing of documentation, which includes risk assessments from the point of impact on the health of employees and public and on the environment, both in production as well as in their processing by downstream users. The registration documentation is continuously amended with new information and risk assessments for all usages according to customers' requirements.

In the area of trading with greenhouse gas emission permits, pursuant to EU Directive and applicable legislation of the Czech Republic, we meet the requirements on monitoring and assessment of greenhouse gas emissions.

OLD ENVIRONMENTAL LOADS

In 2019, the surveying and analytical works were carried out at the company's premises with the objective to update the Risk Analysis (from 2005). The works consisted of drilling of 16 new deep hydrogeological wells, in which the quality of groundwater was analysed. Further, the Ministry of Finance of the Czech Republic carried out the selection of contractor for the survey completion and preparation of the project documentation for remediation of the saturated zone in area SP 8, located in the A-block in close proximity to the nitrobenzene production facility and company waste water treatment plant. In parallel with this survey completion, ground water monitoring has been operated in relation to the water source of Nová Ves. So far the results imply that the quality of ground water is at a stable level and that there is no acute danger jeopardizing the water source.

OCCUPATIONAL HEALTH AND SAFETY

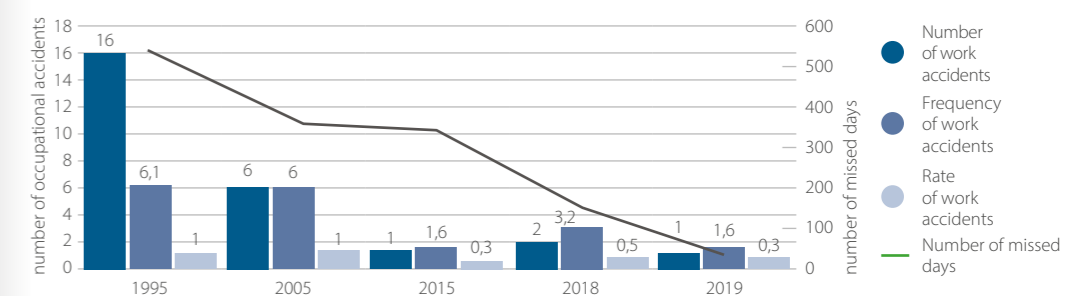
In 2019, one work accident was reported: harm to workers' health upon contact with a chemical substance. There was no fatal injury and no occupational disease was registered.

Year/Indicator	1995	2005	2015	2017	2018	2019
Number of work accidents	16	6	1	1	2	1
Average number of employees	1512	588	360	366	373	379
Number of missed calendar days per an work accident	543	355	343	93	143	46
Rate of work accidents at BC MCHZ	1,05	1,02	0,28	0,27	0,54	0,26
Frequency of work accidents at BC MCHZ	6,11	6,08	1,64	1,60	3,17	1,56

Rate – number of newly occurring work accidents per 100 employees

Frequency – number of newly occurring work accidents per 1 million hours worked (statistical data of European Chemical Industry Council – CEFIC)

Indicators of work accident rate



In all operated technologies, we ensure that the workplace atmosphere is regularly monitored by our company's certified laboratory. The monitoring results are presented to the Regional Public Health Authority of the Moravian-Silesian Region.