



PETROHEMIJA



Environmental protection 2021



Environmental protection management



Sustainable improvement of conditions in living and working environments and responsibility of the employees

The activities of the Environmental Protection Department in 2021 are planned by the Action Plan for HSE Strategy Implementation for the 2020-2025 period. The goals directed to keeping the healthy and safe environment include the following:

- application of technologies which contribute to the environmental protection management;
- encouraging new competences, getting information and taking responsibilities by the employees regarding the environmental protection requirements, especially in the field of waste management;
- generating, temporary storage and disposal of the wastes produced during the operating process;
- lowering pollutant emissions to all environmental media.



Environmental protection management system

On a yearly basis each organizational unit in HIP-Petrohemija a.d. Pančevo makes a review of the following:

- Identified environmental aspects that affect operations, products, and services;
- Plans on operation control regarding the identified environmental aspects;
- Analysing the impact of all the aspects;
- Impact assessment for identified aspects, and **re-assessed** Register of significant environmental impacts is made.

The environmental management system regulated in accordance with the **ISO 14001** enables the Environmental Protection Department to be efficient in performing its activities to fulfil the requirements regarding the environmental protection, to complete the planned measurements within the given deadlines in accordance with the legal regulations and measures imposed by the state and provincial inspectors.

Monitoring environmental status in HIP-Petrohemija a.d. Pančevo

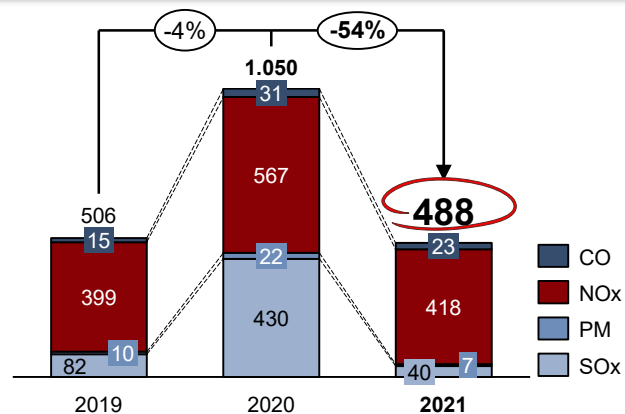
The monitoring system in HIP-Petrohemija a.d. Pančevo covers the following environmental entities:

- air quality / pollutants emission in the air
- waters quality / pollutants emission in the waters
- soil quality / pollutants emission in the soil and ground waters

Monitoring is based on repeated measures and observations made at appropriate frequency, in accordance with the legal and sub-legal regulations referring to the field of environmental protection, and with internal procedures. The information gathered are used for supervising the correctness of the process operations, for checking the compliance with the ELV, and for making decision about production process improvement.

Waters and air contamination monitoring

Total annual pollutant emissions in the air



Measuring of pollutant emissions in the air



100% measuring of pollutant emissions in the air

- Measurements of pollutant emissions in the air were made on all emitters which were in operation - there were a total of 2 measurement campaigns
- **All measured parameters were below ELV**

Measuring of pollutant emissions in the waters

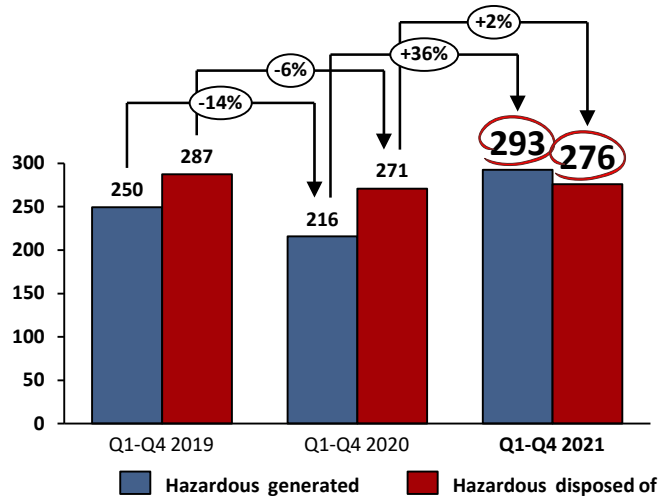


100% measuring of pollutant emissions in the waste waters in HIPP, Petroplast and FSK

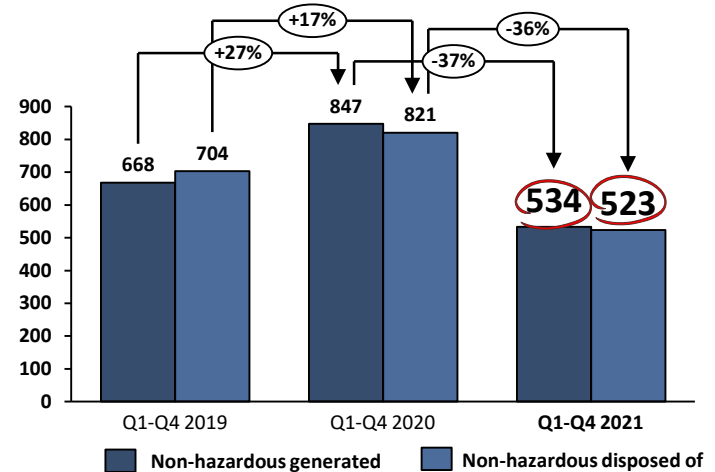
- At the Pančevo location there were a total of 6 measurement campaigns
- At the location of Petroplast there were a total of 3 measurement campaigns
- **All measured parameters were below ELV**
- At the location of Elemir there were 3 campaigns, and all of them recorded **increased phosphorus at the discharge into recipient**. In 2021, the percentage of Action Plan realization for phosphorus reduction in waste waters was **40%**

Waste management and soil testing

Hazardous waste management (t)



Non-hazardous waste management (t)



 **-6%** hazardous waste disposed of compared to the plan

1,79 generated waste coefficient

- The coefficient of generated waste is for **0,5%** lower than predicted for 2021
- For the waste which is regularly generated the annual contracts have been signed for periodical, successive disposal. The introduction of such waste management system have reduced the daily quantities of waste stored at HIPP locations.

 **-2%** non-hazardous waste disposed of compared to the plan

Soil testing at HIPP and FSK location

- The analyses results of soil quality testing at three depths within 36 positions identified exceedance of remediation value of **Hg parameter** at three positions each at different depth.
- The analyses of soil testing on 17 positions at Elemir location is under process.



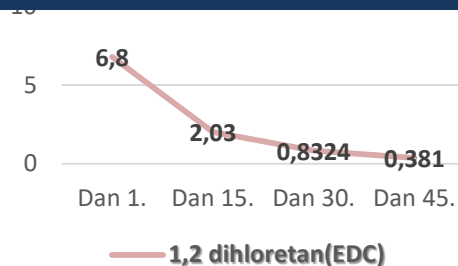
Environmental protection improvement projects



Testing of hydrocarbons degradation In ground waters and sand

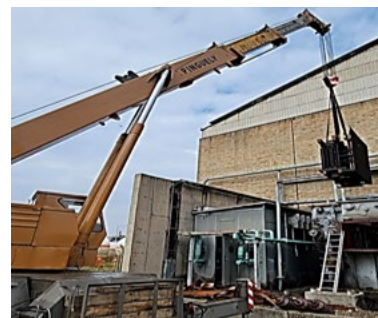
Chlorinated hydrocarbons degradation testing was made at the Pančevo location, with the MPCD chemical in accordance with the recipe of AIKU, Italy. Sampling was done from the piezometer RB-12, in which high concentration of EDC was found. The reports of periodical monitoring of hydrocarbon degradation, issued by the accredited laboratory, **show the trend of EDC concentration lowering.**

Groundwater from piezometer with addition of MPCD and probiotics



Decontamination of PCB oils and transformers disassembling


- The project **Proper management and final disposal of PCB transformers in the Republic of Serbia** has been completed. It was carried out in cooperation with the Global Environment Fund (GEF) and the United Nations Industrial Development Organization (UNIDO), and refers to the disposal of **four PCB-contaminated transformers**, owned by HIPP.
- According to the available information the costs for this project realization amount to approximately EUR 800,000.



Dialogue with the parties concerned

6	Inspector examinations
4	by the Provincial Secretariat for Urban Planning and Environmental Protection
2	by the Republic Inspector for Environmental Protection

3	Inspection measures imposed	Status
	The measures imposed referred to the HSE events investigation in accordance with the Instruction for HSE Incident Investigation MA 1300-UP006 and submission of HSE Incident Reports and Analyses SP0800-OB019, and additional documents.	✓ Completed

 100% completion of legal requirements
<ul style="list-style-type: none"> • Reports on annual balance of the air emissions in 2021, and reports about measurements of the air pollutants emissions • National/Local registers of pollution sources in 2021 • Report on packaging and packaging waste management in 2021 • Report on placing the products (special waste flows) by types on the RS market in 2021 • Submitted Form 3 –Detailed investigation of contaminated location for the locations in Spoljnostarčevačka street and FSK Elemir • Questionary for 2021 for payers of fees for using and/or discharging waters for HIPP, FSK and Petroplast • Questionary completed for 2021, regarding DOS and PSF substances for FSK

Cooperation with the competent government authorities

Cooperation with the competent authorities is being realized through the following:

- Targeted communication for the environment improvement;
- Organization of inspector visits and other required activities of the Company regarding the environmental protection;
- Issuing and keeping up-to-date the Register of measures imposed by inspectors during their visits;
- Participation in preparing/changing of legal and sub-legal acts in the Republic of Serbia;
- Analyses of the measures imposed including proposal of preventive measures in order to minimize the inspectors orders.