



# Environmental protection 2019



# Environmental protection management

**Environmental protection is a part of the development strategy of “HIP-Petrohemija” a.d. and it is directed towards sustainable improvements of conditions in living and working environments and responsibility of the employees**

The goals of our business strategy regarding the environmental protection include:

- ✓ Responsible attitude towards resources;
- ✓ Application of up-to-date technologies;
- ✓ Encouraging competences, getting information and taking responsibility by the employees regarding the environment protection requirements;
- ✓ Generating, temporary storage and disposal of wastes produced during the operating processes;
- ✓ Lowering pollutant emissions to all environmental media and the impact of operating process to climate changes.



## Environmental protection management system

At annual 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 ;
- ✓ Analyses of all aspects impact;
- ✓ 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

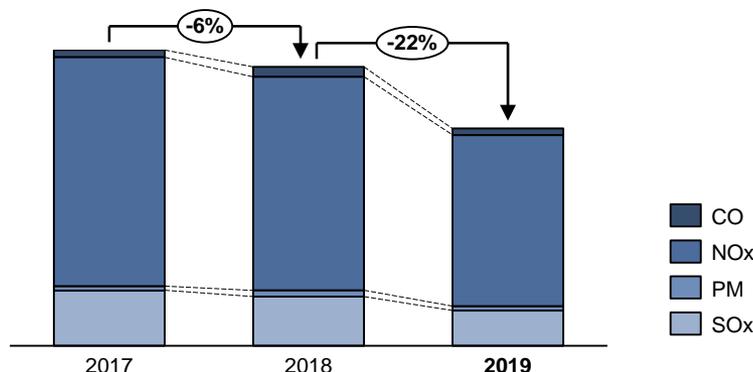
**The monitoring system in “HIP-Petrohemija“ a.d. Pančevo** covers the following environmental entities:

- ✓ 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



## 100 % measuring of pollutant emissions in the air

- **2 campaigns** - regular measuring of pollutant emissions in the air were made at all point stationary emission sources which were in operation (57 of 66 emitters).
- **2 campaigns** for diffusion stationary emission sources.

**Pollutant emissions in the air were not above the ELV.**

## 100 % measuring of pollutant emissions in the waters

- **100 %** campaign for pollutant emission in the waters at FSK, all parameters were **below ELV**, except for **total phosphorus**. In **2022**, the project of phosphorus removal from the waste waters is expected to be realized – **chemical precipitation with ferric chloride (FeCl<sub>3</sub>)**.
- **100 %** campaign for pollutant emission in the waters at HIPP, all parameters were **below ELV**.
- **100 %** campaign for pollutant emission in the waters at Petroplast, all parameters were **below ELV**.

# Soil contamination monitoring

A report has been made about the soil and ground waters status at the location of Pančevo

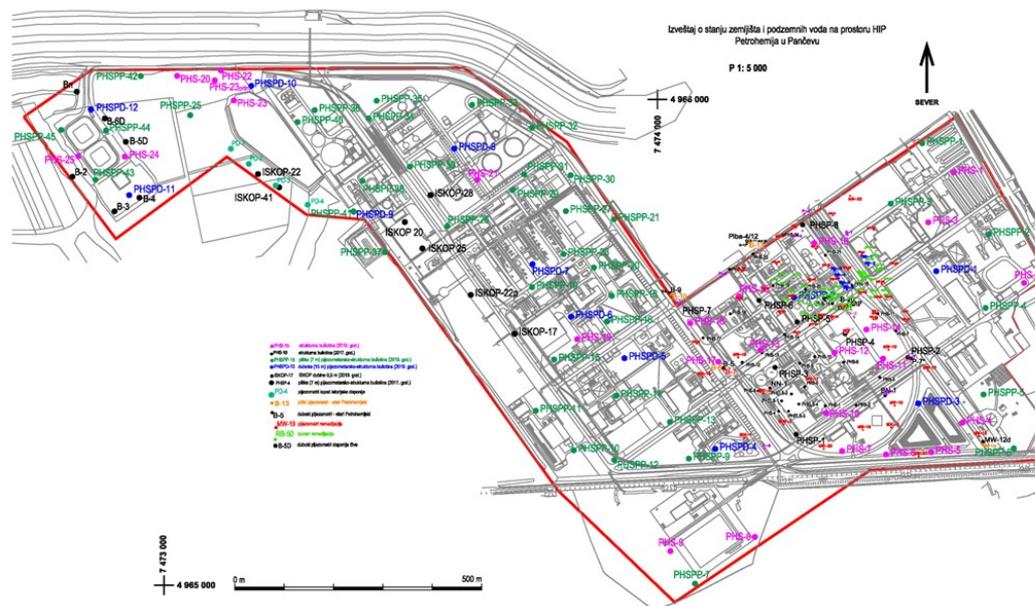
**Extensive research works (in field and laboratory)** were performed in order to obtain a clear picture about geological and hydrogeological structure in the area examined, first of all to establish a level of soil and ground waters contamination. The works performed included:

- ✓ Drilling 78 wells, 66 shallow structural and structural-piezometric (7-8 m deep) and 12 deep structural-piezometric (15 m),
- ✓ Laboratory analyses for 200 soil samples 77 ground water samples,
- ✓ Two campaigns of monitoring ground waters level

## Review of reserach works positions at Pančevo location

Situation map with position of structural and structural piezometric wells made in 2019, at the location of HIP Petrohemija

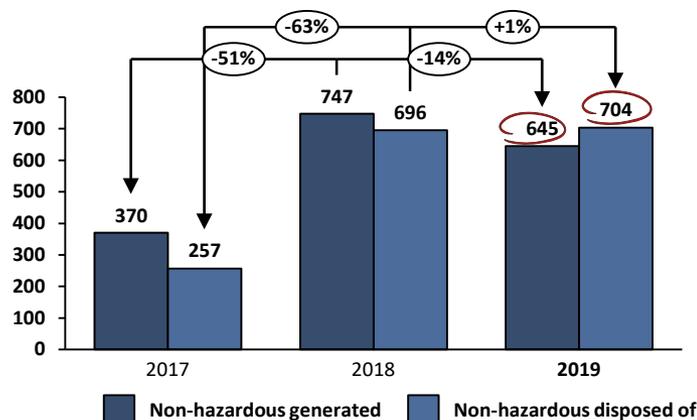
Situaciona karta sa položajem strukturih i strukturo pijeziometrih bušotina izvedenih 2019. godine na prostoru HIP Petrohemija



Report about soil and ground waters status at the location of FSK Elemir has yet to be completed.

# Waste management

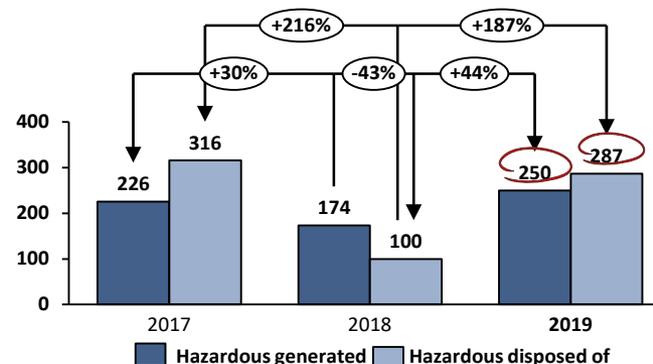
## Non-hazardous waste management (t)



**100 %** non-hazardous waste disposed of

- In 2019, a total of **646 t** non-hazardous waste was generated.
- In 2019, a total of **704 t** non-hazardous waste was disposed of.

## Hazardous waste management (t)



**100 %** hazardous waste disposed of

- In 2019, a total of **250 t** hazardous waste was generated.
- In 2019, a total of **287 t** hazardous waste was disposed of.

- 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.
- In 2019, the good practise was continued regarding:
  - The suppliers' taking back, free of charge, the contaminated packaging from oils;
  - Decrease of total generated quantity of hazardous waste, contaminated metal packaging from chemicals. According to the special procedures, this packaging is washed and transferred to non-hazardous waste, fulfilling in this way the requirements for its further sale to authorized operators.

# Dialogue with the parties concerned

| 3 Inspection measures imposed   | Status  |
|---|---|
| Submission of the complete documentation as a proof of realization the investment project "Chemical Industry Object Reconstruction – Flammable Liquid Tank – Ethylene Tk1101-A" in accordance with the procedures MP0100-PR003 and MP0300-PR001                           | <br><b>Completed</b> |
| Submission of the complete documentation as a proof of realization the investment project "Building of Auxilliary Premises for Purification of Exhaust Air from the Dryer" in accordance with the procedures MP0100-PR003 and MP0300-PR001                                | <br><b>Completed</b> |
| Revision of the documents Safety Report and Accident Protection Plan, due to the process modification i.e. realization of the investment projects – "Ethylene Plant Reinstrumentation - Phase I" and "Reconstruction of turbocompressor control system R-1, R-2 and R-3". | <b>In progress</b>  |

| Submitting reports to competent bodies within the legal deadlines   |
|---|
| <ul style="list-style-type: none"> <li>▪ National/Local registers of pollution sources</li> <li>▪ Report on packaging and packaging waste management</li> <li>▪ Report on placing the products (special waste flows) by types on the RS market</li> <li>▪ Register chemicals imported by HIPP and placed on the market of the RS territory in the Chemical Registry</li> <li>▪ Keeping records about quantites of biocidal products put on the market</li> <li>▪ Annual report about the environmental monitoring by authorized laboratories</li> <li>▪ Balance of air pollutants</li> <li>▪ Report on discrete organic substances (DOS) production</li> <li>▪ Report on processed and released waters and about the waste water treatment plant operation</li> </ul> |

| 3 visits to Provincial Secretariats  |
|--|
| <ul style="list-style-type: none"> <li>➤ <i>Provincial Secretariat for Urban Planning and Environmental Protection</i> <ul style="list-style-type: none"> <li>• Term agreed for supplying supplementing documents for acquiring the <b>IPPC permit</b></li> </ul> </li> <li>➤ <i>Provincial Secretariat for Agriculture, Water Management and Forestry</i> <ul style="list-style-type: none"> <li>• <b>Water permit</b> for oil derivatives tanks, No 104-325-364-2018-04, acquired on 18.10.2019, with validity until <b>22.10.2022</b>.</li> </ul> </li> </ul> |

**Numerous meetings** were held with the companies offering solutions for optimizing the process of soil and ground waters remediation, as well as with the companies offering possible solutions to the historical wastes issue.