Slovnaft Refinery
A Responsible Neighbour

Smoke

Every combustion unit has a stack discharging combustion gases resulting from burning different types of fuel. Burned fuel releases pollutants or “emissions”.

To prevent emissions from causing significant air pollution, exhaust gases are cleaned and their discharge through stacks regulated. Pollution abatement units, undisturbed free flow of gases and sufficient dispersion of discharged pollutants together, provide health protection to people and the environment. The dispersion of emissions is facilitated by the height of stacks thereby the impact on population near the source is reduced and the emissions into the air are spread away from the source.

The white smoke, above the refinery Slovnaft, mostly comes from a thermal power plant operated by CM European Power Slovakia, s.r.o.

The thermal power plant is discharging, into the atmosphere through 100 m high stack, following emissions:
- carbon monoxide (CO)
- nitrogen oxides (NO_x)
- sulphur oxides (SO_x)
- particulate matter (PM)
- the greenhouse gas, carbon dioxide (CO_2).

Low-emission burners and de-nitrification are reducing NO_x emissions through an ammonia water injection system and a catalyst. A new flue gas desulphurization unit (FGD) serves to reduce SO_x emissions and the thermal power plant uses electrostatic precipitators to capture solid pollutants. With the best techniques available today, it is possible to reduce emissions by up to 90% even though “smoke” or “steam” is still visible to come from the thermal power plant’s stack.

What is the difference between smoke and steam?

Smoke is formed by colourless gases and small visible particles e.g. ash, fly ash, soot, diffused in the wind as a product of incomplete combustion.

Steam is the gaseous phase of a substance. The thermal power plant’s stack primarily releases steam in a white cloud. This signals that the flue gas desulphurization unit is working reliably and is purifying the flues using limestone slurry. Steam is more visible on cool autumn days and in winter, similar to natural gas combustion plants. But, in this case, much more intensive “fuming” is visible, especially in colder weather. Darker smoke would only appear if all the electrostatic precipitators or even the flue gas desulphurization unit itself suddenly shut down. But the probability of such an accident is very low.

Monitoring emissions and air quality

Slovnaft and CM European Power Slovakia monitor discharged pollutants through continuous automated monitoring systems and one-time authorized measurements.

Currently, 26 continuous emission monitoring systems are running. Data from this monitoring system are available on the Slovnaft website: http://www.slovnaft.sk/sk/o_nas/nasa_spolocnost/hse/ams_protokoly/

Slovnaft operates a monitoring network consisting of three automated air quality monitoring systems. They are located at the headquarters in Vlčie hrdlo – Slovnaft, and neighbourhoods Podunajské Biskupice and Rovinka. Data from the system is continuously posted in Slovnaft’s entrance lobby and on an information bulletin board at the monitoring station in Podunajské Biskupice. The data are also provided them to the Slovak Hydrometeorological Institute.

FURTHER INFORMATION

A key aim of the Slovnaft refinery is to minimise its impact on the life quality of the residents in its surroundings and to provide them with accurate information about its activities.

For any questions regarding air protection, please contact us by phone: **+421 (2) 4055 7800** or electronically at **info@slovnaft.sk**

Slovnaft
MEMBER OF MOL GROUP