

SUMMARY

ENVIRONMENTAL IMPACT ASSESSMENT OF THE NEW NITRIC ACID PLANT

The new nitric acid plant affects the factory II (industrial area) and the nearby areas.
Impacts to the different environmental media:

AIR

Technology of NO_x and N₂O reduction:

A selective catalytic system, EnviNO_x Combined Reactor (developed by TKIS former UHDE) is capable of removing NO_x and N₂O simultaneously. The EnviNO_x reactor contains specific zeolite catalysts (Envicat N₂O and Envicat NO_x). The catalytic reduction of nitrogen oxide and dinitrogen oxides takes place with ammonia and methane (natural gas).

The emissions of the new plant do not influence the size of the affected area.

Air emission compared with BAT:

	BAT value		Guaranteed emission in new nitric acid plant
	kg/t 100% HNO ₃	ppmv	ppmv
N ₂ O emission	0,12–0,6	20–100	<50
NO _x emission	-	5-75	<25

SOIL

The nitric acid plant is going to be built in the existing industrial area (factory II). The actual place was previously built-in, so during the site work the soil will not be affected. The project does not pollute soil and does not influence the quality, usage and productivity neither on site nor nearby.

SURFACE AND UNDERGROUND WATER

The affected surface water is Pét channel in which the collected raining waters of the factory and the cleaned technological waters of the existing plants are also entered. The water of Pét channel goes through a biological post-treatment facility and than run into the receiver natural water.

The clean raining water from the new nitric acid plant will be entered into Pét channel too.

The pH of the effluent water is measured. If the effluent water is contaminated (became sour), then it will be recycled into the technology.

The nitric acid tanks will be placed in emergency reservoir to prevent the pollution of the soil and underground water. There will be some monitoring wells as well.

WASTES

New type of wastes is not predicted from the new nitric acid technology. There is no technological waste. Solid wastes are from maintenance. The hazardous wastes are collected separately in closed vessels in a special store-place of the factory. The wastes are transported than to licensed waste management companies.

NATURE AND LANDSCAPE PROTECTION

The project does not have more impact on nature and landscape than it is tolerable in any stage (building, operation, shut down). There is no sensitive area nearby.

HEALTH EFFECTS

The project does not influence the health, quality of life or lifestyle of the effected population. The air pollution is very low and the predicted noise does not disturb them.

A potential disaster can be prevented or the unfavourable effects of such disaster are minimized due to the safety measures, maintenances, technological instructions and operating manuals.

CONCLUSIONS

The new nitric acid plant does not cause significant change in environmental media. The predicted emissions and impacts are low.