

LIPOR II Monitoring Plan

Internal and External Monitoring

Managing a unit like the Energy Recovery Plant requires permanent performance supervision and monitoring. Given the nature of the facility, the challenges and requirement levels that arise daily are even higher.

In this regard, the monitoring of the Plant's operation and the emission levels, both in a productive and environmental aspect, has always been one of LIPOR's priorities, which is why a Monitoring Program was established that responds clearly and continuously to this goal.

In this area, the emissions resulting from the municipal waste recovery process are particularly relevant, in their different states, in which gaseous emissions play an important role.

The continuous monitoring of the gases emitted by the Plant is one of the attributes of the facility's Single Environmental Title (TUA). Parameters such as particulates, acidic gases, nitrogen compounds, organic compounds are thoroughly followed up and monitored, including mercury. Organochlorine compounds (including dioxins and furans) and heavy metals follow a plan set forth by the activity's restrictive legislation and are periodically assessed.

At the same time, the content and quality of the byproducts generated by this process, some of which include slag, ashes and even ferrous scrap extracted in the process, are followed up and periodically monitored.

In addition to internal monitoring, an External Monitoring Program (PMExt) has been developed by a team of researchers from the Universities of Aveiro, Lisbon and Porto, which was designed to assess and monitor the effects of the LIPOR II complex on the surrounding environment, encompassing a vast set of environmental descriptors and also psychosocial and public health aspects.

The External Monitoring Program has three distinct and complementary plans:

- Environmental Monitoring Plan;
- Public Health Monitoring Plan;
- Psychosocial Monitoring Plan.

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Monitoring Plans

Environmental Monitoring Plan

The activities of this Plan integrate several monitoring stations within a 10km radius of the plant and include various interrelated descriptors: air, water resources, land and aquatic biota, noise.

The different aspects studied are divided into two topic areas: the environmental topic area, with air, water, sediment and agricultural soil collection and sample analysis, noise measurements, and the biological topic area, with the sampling and analysis of products such as Portuguese cabbage leaves, corn, potatoes, eggs and cow's milk, as well as others.

Public Health Monitoring Plan

This component involves the biological monitoring of populations, assessing the levels of heavy metals and organochlorine compounds in organic fluids. Screening for risks and adverse effects is also carried out through surveys related to smoking habits, number of deaths from cancer, as well as others.

Psychosocial Monitoring Plan

In this area, indicators of psychosocial impacts such as stress, anxiety and depression are also assessed, enabling us to estimate the quality of life in the community.

Developed as independent plans, the three sectoral plans aim to examine the existing interrelations between the various sectors. The direct relationship between potential environmental contamination and public health is an example of this set of interrelations.

The External Monitoring Program is an ambitious program, covering the study of a diverse set of environmental descriptors, as well as the study of psychosocial and public health aspects related with this project.

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Air Quality Control

The Energy Recovery Plant is equipped with highly reliable equipment for filtering and neutralizing gaseous effluents, thus aiming to protect the air that is breathed in the region. In order to characterize and control possible effects of pollution, LIPOR also participates in the Air Quality Measurement Network in the metropolitan area of Porto.

The objective of this project is to analyze the distribution and concentrations of several pollutants, allowing knowledge to be obtained on the behavior of the atmospheric layers in the region, the prevention of possible problems and the assessment of acceptable levels for public health. The following air pollutants are analyzed at the stations: Sulfur Dioxide, Carbon Monoxide, Ozone, Particulates and Nitrogen Oxides.