

Classification: This is a category III project according to the IIC's environmental and labor review procedure because it could produce certain effects that may be avoided or mitigated by following generally recognized performance standards, guidelines, or design criteria. The environmental and labor considerations related to the project include: water supply, liquid effluent management, atmospheric emissions, solid waste, firewood supply, personal safety, fire prevention measures, and emergency response.

Water Supply

All the company's water needs are supplied via deep wells. This water is analyzed and treated through disinfection (chlorination), sand filtration, activated carbon filtration, and ultraviolet light. This produces low-hardness, potable water suitable for making beverages or for bottling.

Liquid Effluents

The plant's main liquid effluent comes from bottle-washing machines. These machines use caustic soda for washing and water for rinsing, with no other added chemicals. Although the caustic soda is reused, a small quantity is lost in the final rinse. Because of this, pH levels must be neutralized with sulfuric acid before the effluent is treated. Other sources of liquid effluents that need to be treated are rinse water from PET bottles, water used to wash fruit before extracting juice, general washwater, plant and office sewage, and water purged from the boiler and the cooling system.

In the new plant, liquid effluents will be separated into three categories to reduce the amount of effluents to be treated and optimize the process: water with an organic load, water with no organic load, and clean water (rainwater). The company has presented SEAM (Paraguay's Secretariat of the Environment) with a preliminary plan for an activated clay treatment system that will discharge treated water into a waterway. However, the company is also considering using the treated water to irrigate fruit trees that will be grown on the premises.

Atmospheric Emissions

Once the new plant is on-line, the company will begin to burn firewood in a reconditioned boiler that has been fitted with updated controls. In addition to being a renewable fuel source, wood burning produces low levels of particulates and sulfur oxide. The plant has two gasoil-powered electric generators. Since they provide power during outages, they do not operate continuously.

Solid Waste

BPy does not generate hazardous waste. Solid waste is classified into three groups: waste with an economic value, made up of recyclables such as paper, cardboard, plastic, iron, and scrap metal, which the company donates to the employees' benefit society to help fund it; organic waste from the extraction of citric juice (orange, grapefruit, and lemon peel), which is removed by cattle farmers for use as cattle feed; and trash (from the cafeteria, bathrooms, and offices), which is removed by the municipality.

Supply of Firewood

Firewood for the boiler is in the form of wood briquettes, coconut shells, sawmill scrap, and, eventually, purchased wood planted specifically for this purpose (eucalyptus). All firewood entering the plant, regardless of its origin, must be accompanied by a Guía de Traslado (tracking certificate) issued by the Servicio Nacional Forestal (National Forest Service), which is the agency responsible for regulating the wood trade and verifying that it comes from a legal source. The company files copies of these documents for inspection by SEAM.

Occupational Safety and Health

From an occupational safety standpoint, the greatest challenge is the handling of caustic soda and citric acid. To address this issue, the company's Departamento de Aseguramiento de Calidad (Quality Assurance Department) runs an employee training program and supplies the safety equipment needed to handle these substances. There are also safety teams to respond in the event of an accident, particularly in the case of an ammonia leak. The machine room, where ammonia-handling equipment is located, is physically separated from the plant, is adequately ventilated, and has personnel specialized in fire prevention and fire fighting. The plant has smoke detectors, alarms, a sprinkler system for fighting fires, and ammonia detectors.

Labor Practices

BPy is in compliance with domestic labor laws and International Labour Organization (ILO) standards. Mandatory core labor standards include social security benefits, freedom of association, organization of workers' unions, prohibition of forced labor and exploitative and abusive child labor, and nondiscrimination in the workplace. The Instituto de Previsión Social (IPS, Institute of Social Security) provides employees with medical coverage.

Monitoring and Reporting

BPy shall develop to the satisfaction of the IIC an Environmental Management Plan (EMP) to ensure compliance with domestic regulations and the IIC's environmental and workplace safety and health standards. The EMP shall provide for a yearly report on liquid effluent management, including the implementation of the liquid effluent treatment plant, atmospheric emissions, firewood consumption, occupational safety and health training, emergency response training, and accident reports.