

Environmental and Labor Issues:

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 main environmental and labor considerations related to the project are: liquid effluent management, solid waste management and disposal, occupational health and safety, fire prevention and firefighting, and labor practices.

Liquid effluents: The plant generates both industrial wastewater and sewage. The plant's main contributor to the industrial wastewater stream is the processing of instant coffee, which includes a wet process. Dust, stones and other impurities from the coffee beans are removed in the cleaning stage; some wastewater is generated in the extraction, evaporation, and agglomeration stages. In addition, a portion of the solid coffee waste accumulates on the floor and is washed into the industrial wastewater collection system. The roasting of ground coffee, which involves a "dry process" (cleaning, roasting, grinding, and packaging), generates less wastewater. However, some of the roasted ground coffee products are formulated with caramelized sugar, and it is this caramelized sugar operation that generates wastewater with elevated BOD (biological oxygen demand) levels and a low flow volume. The company completed the construction of a wastewater treatment plant, which started operating in July 2005 and has improved the effluent water quality significantly. In addition to installing a treatment plant, the company has implemented various other measures to reduce the generation of liquid contaminants that need to be treated. For instance, it has also implemented methods to remove the solid coffee waste at the source to keep it from falling to the floor and contributing to the elevated suspended solid levels in the wastewater.

Solid Waste: Solid waste generated at the facility consists primarily of office trash, solid coffee waste, and residual plastic used for packaging the coffee. The domestic trash is collected by the local authorities, the plastic is sold to a company that recycles it, and, as a result of the IIC's recommendation, 100% of the solid coffee waste is used as fuel in the boiler combustion chamber, thereby eliminating 30% of solid coffee waste that used to be disposed of in a landfill.

Air Emissions: The plant is connected to the municipal electricity grid, and an emergency back-up generator that relies on fuel oil is rarely used. Café Soluble with the guidance of the Centro de Producción Más Limpia de Nicaragua conducted a study in May 2001 to analyze methods to increase energy efficiency at the plant. The TecAIRE roaster has afterburners that significantly reduce smoke emissions typical when burning sugar is involved. There is also a Probat roaster with afterburners to reduce air emissions. Stack losses from the spray drier and agglomeration unit are small and do not appear to be a pollution consideration. However, the company has implemented an annual ambient air quality monitoring program to ensure that emissions from the plant do not exceed international standards. According to the most recent monitoring report provided by the company, in March 2009, the ambient air concentration of particulate matter, sulfur dioxide, nitrogen oxides, and carbon monoxide at the company's premises comply with the national air quality standard.

Quality Control: Café Soluble received the ISO 9001 certification in February 2002, and in September 2003 100 workers attended a training course in Good Manufacturing Practices and Hazard Analysis and Critical Control Point (HACCP) system in order to identify and minimize all potential sources or points in the process where the coffee could potentially be contaminated. The well water used in the process and for drinking water on-site is tested and complies with the World Health Organization standards for potable water.

Fire Safety: The plant is equipped with a network of fire extinguishers, and fire hydrants with foam, water, and chemicals depending on the type of fire risk in different areas (i.e. from electrical faults,

burning plastic, etc.), and in August 2003 the company installed an alarm system for emergency evacuation. Fire water for the plant is obtained from a 30,000 gallon tank of well water on site. Training with respect to fire fighting and related equipment is periodically offered, and emergency/fire drills are also performed. An evacuation drill was held at the plant in February 2009.

Occupational Health and Safety: The company has an Occupational Health and Safety Operational Procedures/Policy (Plan Anual de Seguridad e Higiene) in which accident prevention measures are defined and risks specific to each of the different work areas in the plant (i.e. the toasting area, the boiler area, the packaging area, the electrical maintenance area, etc.) are addressed. Workers are provided with the appropriate protective equipment, health insurance, and first aid. All work-related accidents are recorded and analyzed continuously. The plant also has a clinic with a nurse and doctor available.

Handling of Chemicals: Methods for appropriately handling flammable substances are included in the company's Reglamento Técnico Operativo de Seguridad e Higiene Industrial. A very small amount of chemicals are used at the plant. The drums containing potentially flammable substances, such as fuel oil, have been appropriately labeled in order to better identify the risks associated with the chemical substance (i.e. flammable, reactive, corrosive). All chemicals stored on site are segregated, as well as labeled in a systematic way to ensure safe storage.

Labor: The company has a policy that persons under 16 years of age are not permitted to work. Workers at the plant are members of a union formed by the workers of Café Soluble, and a Convenio Colectivo de Trabajo has been signed by the Manager of Human Resources of Café Soluble and the union of workers at the company (Sindicato de Empleados y Obreros). This agreement stipulates the obligations of Café Soluble to the union. For instance, the company agrees to maintain an office for the union on company grounds, offer transportation to and from the plant and grant loans to employees in times of emergency. Other benefits are outlined in the Convenio Colectivo de Trabajo.

Monitoring and Annual Reporting: As a result of previous operations with the IIC, the sponsor has been implementing an Environmental Management Plan (EMP) that addresses the issues discussed herein, as well as a monitoring and reporting program to ensure that their facilities are complying with national laws and IIC's environmental guidelines. The sponsor will continue to submit an annual report summarizing the monitoring data related to occupational health and safety, fire safety, accident reports, air emissions, wastewater discharge, solid waste disposal, hygiene and quality control, and labor related issues.