

Environmental Classification and 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 environmental and labor considerations related to the project include the following: water supply, liquid effluent management, atmospheric emissions, solid waste, personal safety, fire prevention measures, and emergency response.

Water Supply

The company draws water from the Nepeña River reservoir during the rainy season (November to March) as well as from wells and filtration from the river's water table. The Chincas canal, which brings water to the valley from the Santa River and has water year round, was inaugurated in 2001. Although water supply varies from one year to the next, 30% of the company's water needs are currently met by water taken from the river, 35% by water taken from the canal, and 35% by water obtained from wells and filtration. The company is in the process of electrifying its well pumps. It has already built forty ponds into which water is pumped at night when energy rates are lower. The water is then used during the day. The processing plant draws from these same water sources and recycles the condensate water to maximize use.

Agroindustrias San Jacinto is building a reservoir (the Motocachi Reservoir), which will enable the company to store some 5.5 million cubic meters of water upstream from the valley in which the company's crops are grown. This storage capacity is equivalent to some 45% of the company's annual water consumption when river stages are low.

The entire irrigation system is regulated by the National Water Resources Institute, which falls under the Peruvian Ministry of Agriculture.

Liquid Effluent Management

San Jacinto produces various liquid effluents: sugarcane wash water, the water used in the cooling system, vinasse, and domestic sewage.

water used in the cooling system, together with the condensate water from the evaporators and crystallizers, is cooled and reused. The surplus is eventually used to wash the sugarcane. The sugarcane wash water, which contains residual organic matter, flows into ditches and is used to irrigate the sugarcane fields. Vinasse, which is the residue left from alcohol distillation, has a high organic load and is discharged onto salt flats to restore their production potential. Any excess vinasse is discharged into a sedimentation lagoon for anaerobic digestion. Digestion effluent is diluted in irrigation water, and the organic matter is returned to the fields. Sewage from the village of San Jacinto and the bathrooms at the plant is sent to a sedimentation lagoon (San Ignacio) that is run by the municipality.

Atmospheric Emissions

The boilers and the burning of sugarcane in the fields are the main sources of atmospheric emissions at San Jacinto. The boilers run on bagasse, which, in addition to being a renewable source of energy, produces far lower levels of sulfur oxides than oil-based fuels do. The boilers have gas scrubbers. Studies performed by an independent company engaged by Agroindustrias San Jacinto show that the company's atmospheric emissions of the gases analyzed (NOX, SO₂, SH₂) fall within acceptable levels.

Burning sugarcane in the field prior to harvest is a common practice because it reduces the load of vegetable matter entering the processing plant. Cane burning is being restricted in some countries because of the obvious harm that smoke and suspended ash cause. It will not be easy to eradicate the practice, however. Agroindustrias San Jacinto is experimenting with cleaning the sugarcane manually during harvesting, but this is more time-and labor-intensive per unit of volume harvested.

Solid Waste

Solid waste management at Agroindustrias San Jacinto involves minimization of waste, reuse, storage, treatment, and final disposal.

The company and a distributor of agrochemicals are jointly looking at a system for incinerating herbicide containers that is under review by local authorities. The company is also considering ways to stabilize and safely store batteries and other hazardous materials. Metallic waste has value as a raw material and is therefore separated and sold for recycling.

Refuse consists mainly of plastic, cardboard, rags that are not greasy, containers, glass, paper, etc. This waste is handled by the municipality. The company is working with the municipality to build a landfill in order to prevent open air burning and improvised dumps, which are eyesores. The agricultural waste produced in sugarcane farming consists of the bagasse remaining after crushing the sugarcane and leaves that are removed when the cane is harvested. Both are used to feed the boiler. Sugarcane pith removed during harvesting is used as cattle feed by local farmers not affiliated with the company.

Occupational Safety and Health

Agriculture poses one of the greatest occupational safety challenges because of the chemicals handled. The company therefore has an employee training plan that it coordinates with its suppliers; it also provides its workers with the necessary protective equipment for applying these substances (gloves, boots, ear and eye protection, and protective clothing). All agrochemicals used in the fields at San Jacinto are authorized by SENASA (the national health and food safety service).

The plant has an industrial safety manual that provides workers with a set of general procedures to follow in case of emergency. There is also a specific emergency and evacuation plan in the event of earthquakes. The fire prevention plan for the industrial areas of San Jacinto sets out firefighting measures and how to alert the company's fire brigades, the authorities, and the rest of the personnel at the plant. In the agricultural area, there is a field safety committee comprising representatives from crop production and operations.

Labor Practices

Agroindustrias San Jacinto is in compliance with national labor laws and International Labor Organization (ILO) standards. These 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. There are three labor unions at San Jacinto, and workers are free to join any of them (some 920 workers are unionized; approximately 480 are not). There is a collective labor agreement signed between the company and the unions that is valid for two years (until April 30, 2008). This agreement stipulates the wages and other benefits that workers receive during this period.

Monitoring and Annual Reporting

Agroindustrias San Jacinto shall develop an Environmental Management Plan (EMP) satisfactory to

the IIC to ensure compliance with domestic regulations and the IIC's environmental and workplace safety and health guidelines. The EMP shall provide for a yearly report on liquid effluent management, implementation of the solid waste management program, implementation of a good agricultural practices program, occupational safety and health training, emergency response training, and accident reports.