

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 following environmental and labor issues were analyzed during project evaluation: legislation, solid waste management, liquid industrial effluents, emission of foul odors, pest and insect control, food quality control, occupational safety and health, labor issues, and environmental protection.

Legislation: "The Company" holds Ministry of Health Sanitary License No. LS-24-462, which covers the Company's processing plant (slaughterhouse) and was valid as of April 2005. "The Company" also holds a Certification of Environmental Compliance issued by the Ministry of the Environment and Natural Resources (MARENA) in 2002. In recent years, "the Company" has been working with MARENA on the development of its comprehensive incremental plan for reducing industrial pollution (*Plan Gradual Integral de Reducción de la Contaminación Industrial* - PGIRCI) at its processing plant. In this regard, "the Company" receives regular inspection visits from MARENA, which monitors compliance with environmental standards. "The Company" is required to keep all of its licenses, permits, and certifications up to date and will implement an Environmental Management Plan to the satisfaction of the IIC.

Solid waste management: The solid waste generated by the poultry farms is converted into compost (organic fertilizer) and taken to COESA, which uses it to produce concentrated cattle feed made from chicken manure. Waste from the chicken processing area (slaughterhouse) is made into marketable chicken meal. According to MARENA's November 2002 technical inspection report, these activities are an environmentally appropriate form of solid waste management.

Liquid industrial effluents: The liquid waste generated by the chicken slaughtering process represents a significant process water contaminant load, as reflected primarily in the increased biochemical oxygen demand (BOD) and suspended solids due to the presence of blood, fat, feathers, and bones in the wastewater produced by this type of industry. "La Estrella" keeps most of the blood from mixing with the wastewater by using a container to catch the blood for subsequent use in the rendering processes for producing meal for poultry feed; this also avoids increasing the contaminant load (BOD) in the water. Gross solids consisting of bone, feathers, and fat are separated out from the wastewater by a rotary filter that also pretreats the water. Subsequently, the wastewater flows through an open ditch to three oxidation ponds for biological treatment. In the ponds, the organic load and suspended solids are biodegraded, thus reducing the contaminant load of the water. Operation of the ponds has monitored by MARENA in conjunction with the preparation of the Company's comprehensive incremental plan for reducing industrial pollution (PGIRCI). Wastewater is ultimately discharged into Lake Managua. All discharges of wastewater will be in compliance with national standards as well as with IIC guidelines for this type of industry; improvements will therefore need to be made to the existing wastewater treatment system in keeping with the PGIRCI plan and MARENA recommendations. The IIC has asked "the Company" to provide a progress report on the PGIRCI and on implementation of the MARENA recommendations.

Emission of foul odors: The byproducts generated in the processing plant (viscera, bones, blood, and feathers) are used to produce meal for poultry feed by a series of cooking, separating, and drying processes referred to jointly as rendering. In this process, the most significant atmospheric emission is odor. In the case of Avícola La Estrella, odor emissions are not expected to create a nuisance for people living near the plant. Odors are controlled by installing equipment in enclosed areas, and "the Company" has installed a closed-circuit water system that absorbs much of the odor from the processing equipment. This water is periodically replaced when its odor absorption capacity has been exhausted. The facilities consist of large tracts of land, with the poultry farms typically located in the middle. This helps isolate the facilities physically. There are no towns located close enough to the Company's facilities to suggest that the odors might constitute a nuisance. The

potential risk of the foul odors' creating a nuisance for local residents is minimal, because the Company's facilities are in an area where the prevailing winds blow from east to west (toward Lake Managua), i.e., away from the nearest towns. Another factor that mitigates the problem of foul odors is the reforestation program implemented by "the Company"; this, together with the conservation of the plant cover in the area, keeps odors from spreading beyond the Company's facilities.

Pest and insect control: The entrances and exits at the grow-out farm in the town of Pénjamo have a fumigation system to prevent contamination by parasites or microorganisms. The chicken grow-out sheds provide a controlled environment in keeping with specifications provided by EU technical advisors. To control the proliferation of flies in the area around the grow-out sheds, "the Company" has planted a tree species known locally as *nime*, whose seeds have insecticidal properties. The seeds are usually sold to a German firm that produces a natural insecticide known as *snip*. Nevertheless, at the IIC's request, "the Company" will, as necessary, improve maintenance and cleanliness in areas such as the compost heaps in order to help control flies and localized odor.

Food quality control: "The Company" follows strict quality control procedures for all its products and, accordingly, has implemented a manufacturing best practices program in its production units. The Agricultural, Livestock, and Forestry Ministry (MAGFOR) conducts periodic inspections to certify that the chicken processing plant is in compliance with international Hazard Analysis and Critical Control Points (HACCP) system requirements.

Occupational safety and health: Occupational safety and health issues are addressed through seminars sponsored by the Ministry of Labor dealing with the organization and management of occupational safety and health at companies. Employees are given the individual protection equipment that they require; use of this equipment by employees, however, is a matter requiring greater supervision by "the Company". Ministry of Labor inspectors conduct periodic visits, and "the Company" is currently in the process of addressing the inspectors' recommendations. The IIC has asked "the Company" for a progress report including, among other concerns, implementation of corrective measures for occupational safety and health issues and proper supervision of the use of individual protection equipment. "The Company" is currently preparing the information requested.

Labor issues: "The Company" is in compliance with Nicaragua's national labor code and has its own labor regulations, which were authorized by the Ministry of Labor in 2003. Through the Ministry of Labor, the government of Nicaragua has set at 17 the minimum age for working in any company. All individuals hired by "the Company" are over 17 years of age. Staff is hired on the basis of each applicant's skills and experience, after which he or she receives instruction from the immediate supervisor, particularly as regards areas of risk. Individuals who have not received proper training or appropriate protective gear are free to refuse to perform the task, without fear of dismissal. A labor union is currently in operation at the firm, and all workers are free to join the union or not. The firm's minimum wage is greater than the minimum wage set by the government for this sector. A collective agreement on working conditions is currently in effect and is signed every two years and approved by the Ministry of Labor. Employment and Social Welfare regulations have been approved and authorized by the Ministry of Labor and the National Social Security Institute (INSS).

"The Company" provides all employee benefits to which each worker is entitled and has maintained cordial management-labor relations. "The Company" has been recognized by the Ministry of Labor for complying with labor legislation and achieving and maintaining good employee relations. Moreover, management-union relations are characterized by mutual respect, as a result of which "the Company" has approved a Collective Bargaining agreement providing workers at all levels with benefits such as promotions to positions of increased responsibility, uniforms and footwear, leave and financial assistance for childbirth, leave and financial assistance upon the death of workers and family members, financial assistance for renewing licenses, financial assistance for the purchase of

eyeglasses, transportation, reimbursement of medical expenses not covered by the INSS, safety equipment for all workers in accordance with the assigned work area or task performed, per diems, seniority bonuses, sale of products to staff at low prices, Christmas baskets, and training at all levels.

Inspections conducted by the Ministry of Labor in 2003 and 2004 showed that "the Company" is in compliance with labor legislation regarding the prohibition of child labor. The Ministry has formally recognized the Company's participation in the Ministry's Program for the Gradual Elimination of Child Labor.

Environmental protection: "The Company" has reforested land within its facilities, planting approximately 200 *manzanas* (345 acres) in a variety of tree species, including *Leucaena leucocephala*, *Azadirachta indica*, *Eucaliptos sp.* and *Gliricida sepium*, per a certificate issued recently (March 2005) by MARENA. These actions have helped mitigate environmental impacts by preserving plant cover, and the Company's reforestation program has received recognition from the local NGO *Movimiento por la Paz, la Acción Forestal y el Medio Ambiente* (MOPAFMA).

Monitoring and compliance: "The Company" will implement an Environmental Management Plan that is acceptable to the IIC. At a minimum, the Plan will include (1) a description of projected environmental improvements, including keeping environmental permits and authorizations up to date and taking appropriate steps to ensure that the existing effluent treatment system (biological oxidation ponds) is in compliance with national regulations and IIC standards; (2) a schedule for implementing all of the environmental recommendations identified in this summary; and (3) the items to be monitored annually. Throughout the life of the project, the IIC will monitor compliance with its own environmental and labor review policies by reviewing the Company's regular monitoring reports and conducting site visits as part of the project supervision process.