IDBInvest Jamaica Broilers II

## **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, and design criteria. The following potential environmental issues were analyzed during project appraisal: third-party certification in good environmental practices (i.e. ISO 14001, ISO 9001), quality control and food safety management, waste handling, liquid effluent, general worker health and safety, and other labor-related issues.

**Environmental and Social Management:** Several of the companies in Jamaica Broilers Group have obtained international certifications for environmental management and quality control. The Best Dressed Chicken Processing facility is ISO 14001 certified in Environmental Management System; JB Ethanol Limited is ISO 9001 certified in Quality Management System; Aquaculture Jamaica Limited is ISO 9002 certified in Quality Control System as well as HACCP (Hazard Analysis and Critical Control Points); the Best Dressed Feed Mill anticipates obtaining certification in ISO 22000 in Food Safety Management System.

**Emergency Preparedness and Response:** The Group's overall emergency preparedness and fire prevention programs were observed to be adequate. All locations have Hurricane Preparedness Plans and Procedures in place. The ethanol plant, which has the highest risk of fires, is compliant with U.S. NFPA fire safety guidelines, as well as with U.S. OSHA (Occupational Safety and Health Administration) regulation 29 CFR 1910.119 (Process Safety Management of Highly Hazardous Chemicals). The ethanol plant also has safety manuals, an Emergency Action Plan and a Fire/Explosion Safety Plan in place. It has 800,000 gallons of fire water stored on site, 23 fire hydrants, 4 reeled 131-pound extinguishers and 25 charged handheld fire extinguishers, a sprinkler fire suppression system in the motor control center, and alcohol-resistant foam water, amongst other fire prevention features. As a safety measure for preventing the risks of explosion and fire in storage tanks and facilities, there are systems of grounded tanks and retaining walls for tanks storing flammable liquids. First aid training and monthly fire drills are conducted and the plant shares an ambulance with the nearby feed mill. Incident records are maintained and accidents are investigated. Hazardous chemicals at the various facilities were observed to be properly stored with adequate signage and corresponding material safety data sheets (MSDS). Various companies within the Group will complete the improvement to the emergency exit and evacuation route signage, including emergency lighting, as recommended by the IIC within the agreed timelines.

**Quality Control:** Workers receive basic hygiene training and possess food handlers permit as required by the Ministry of Health for the handling of poultry and other food products. The dress code and hygiene at the facilities was observed to be adequate as workers are required to wear clean uniforms and footwear before commencing work, as well as to disinfect footwear and hands before entering the facilities. The chicken processing facility and the hatchery also have sanitation programs, which are critical to the success of these operations. In addition, periodic laboratory tests including swab tests are done in several areas of the chicken processing plant and hatchery to assess the quality of the cleaning job being carried out. The chicken processing facility has also been working on implementing HACCP measures.

**Animal Welfare:** The chicken processing plant, hatchery, and farms have an animal welfare program in place to ensure that all workers are trained in appropriate handling of the chicks and chickens. In addition, the Company's clients audit the facilities to determine whether the birds are handled humanely and any suffering is minimized. For instance, the Company ensures that birds are housed on farms in shelters that are clean, well ventilated, and that the birds are free to roam through the shelters. The birds are caught and transported carefully, minimizing injury. Stunning equipment is maintained to confirm that birds are relaxed and not frightened prior to slaughter, and

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slaughter equipment is maintained to ensure that birds are slaughtered quickly.

Waste Management: One of the main sources of waste, which consists of offal and feathers from the chickens, is the chicken processing plant. This waste is separated from the waste stream and collected by a third-party contractor that removes and transports it to the government approved disposal site. It is buried on a daily basis in accordance with the National Solid Waste Management Authority protocol. The waste at the hatchery, which consists primarily of eggshells and excrement, is similarly collected and transported to an authorized off-site landfill. The company's waste management practices have reduced the odor to negligible levels. The other kind of waste, blood from the chickens, is drained and carried via cesspool truck off site to a waste treatment facility operated by the National Water Commission. The Group will continue to ensure that the waste management practices at all of its companies are in compliance with the requirements of the National Solid Waste Management Authority, as well as international best practices.

Liquid Effluent: The Group has wastewater treatment systems in place for its facilities. Various companies within the Group are also working on further improving existing treatment systems as necessary in order to ensure full compliance with the National Environment and Planning Agency (NEPA) effluent standards. The chicken processing plant has a wastewater treatment system that consists of a dissolved air flotation (DAF) unit, a clarifier, as well as anaerobic ponds, aerated lagoons and maturation ponds. The treated liquid effluent from the wastewater system is used for irrigation. The company has made modifications to this treatment system including installing a chlorination and filtration system which was commissioned in June 2010, as well as reducing water consumption in the plant to further improve the effectiveness of the system. The preliminary results indicate significant improvements and the company expects to be in full compliance within the timeline stipulated by the IIC. Similarly, the feed mill will analyze ways to further improve its wastewater treatment system, particularly focusing on the reduction of phosphates and nitrates in the liquid effluent stream. The corrective actions to be taken by the various companies to ensure compliance with Jamaican regulations are included in the Waste Water Management Plan prepared by the Group and was submitted to the IIC in September 2009.

**Air Emissions:** The majority of the power supply for the companies that are part of the Jamaican Broilers Group comes from the national grid, with the exception of the chicken processing plant, which obtains energy from the adjacent cogeneration plant. The cogeneration plant consists of three medium speed diesel engines (rated at 5 megawatts each), two Caterpillar engines for stand-by purposes, one heat recovery steam generator (HRSG) that utilizes the hot gases from the engines to produce steam for the chicken processing facility, and an auxiliary boiler. The emission sources from the cogeneration facility include the oil-fired boilers, the medium speed diesel engine, as well as the stand-by diesel generators. In January 2009 air quality licence applications with modeling data and compliance plans were submitted to NEPA for the cogeneration, feed mill and the ethanol facilities. The companies received their air emissions discharge licence in March 2010 and are working to ensure compliance with Jamaican Ambient Air Quality Standards (JAAQS) and the conditions of their licenses. As a result of study and requirements of the new air emission licenses, the Group has developed air quality monitoring and compliance plans and submitted them to NEPA to ensure compliance with the emission standards and JAAQS. Additionally, the feed mill plans to assess further alternatives to reduce fugitive dust emissions at its plant. The Group will continue to monitor the air emissions at all of its companies to ensure compliance with national requirements. To further reduce air emissions, several companies within the Group are working towards identifying ways to reduce energy consumption through energy efficiency measures and a basic energy audit funded by the IIC was carried out at two (2) facilities in December 2009.

**General Health and Safety:** Workers at the companies visited were observed to be using the appropriate protective equipment. In addition, all employees are provided with health insurance and

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first aid. Workers handling and applying pesticides are trained and are provided with suitable protective clothing, as per the instructions on pesticide labels, appropriate to the health and safety risks posed.

Labor: The Group maintains harmonious relations with its workers across the organization, by implementing and coordinating several programs, which include training and development, reward and recognition programs, and benefits programs. Employees are free to join a union; however there are no unions presently at the Company. In addition, all workers are provided with lunch and other benefits. The Group complies with Jamaica's requirements in terms of minimum working age, elimination of forced and compulsory labor, the elimination of discrimination with respect to employment and occupation, freedom of association, the right to organize, and collective bargaining. Jamaica is also a signatory to the ILO conventions on the abolition of child labor.

**Monitoring:** Jamaica Broilers Group is implementing an Environmental Management Program, which includes a schedule for the implementation of environmental projects and a monitoring and reporting program to ensure that the companies within the Group comply with national laws and the IIC's environmental guidelines. Jamaica Broilers Group has submitted and will continue to submit to the IIC the Annual Environmental Monitoring Reports summarizing the status of the Environmental Management Program including providing monitoring data related to each of the companies that is part of the Group.