

Environmental Classification: This is a category III project according to the IIC's environmental review procedure because specific impacts may result that can be avoided or mitigated by adhering to generally recognized performance standards, guidelines and design criteria. The main environmental and labor issues related to this project include air emissions, noise, fuel spill control, firefighting and emergency response, occupational health and workplace safety, and other labor issues.

Environmental and Labor Issues:

Ternor has complied with its commitment under the IIC loan granted in 2002 by developing an environmental management plan (EMP) that meets the requirements of Panamanian law and IIC policies and establishes a timetable for implementing and monitoring an environmental and safety system. Panama's environmental regulatory agency is the Autoridad Nacional del Ambiente (ANAM), whose regional inspectors regularly assess compliance with Panama's environmental regulations for industry in general, including oil power plants. The company carried out a voluntary environmental audit in 2004 that will be submitted for ANAM approval in 2005.

Air emissions (nitrogen oxides, sulfur oxides, and suspended particles): These emissions depend on various factors, such as the quality of the fuel used, its sulfur content, and the design of the combustion and pollution control systems installed on the equipment. Although the Santa Fé power plants are small (3.84 megawatts of installed capacity), the combustion and exhaust gas treatment systems, as well as stack height, were designed to keep sulfur oxide, nitrogen oxide, and suspended particle emissions within acceptable levels. A dispersion analysis for these oxides and particles was carried out using U.S. Environmental Protection Agency (EPA) techniques and based on emission levels guaranteed by the manufacturer of the power generation equipment. The concentration of pollutants outside the boundaries of the properties related to the project is within the acceptable limits set by domestic regulations, the World Bank, and the IIC. Ternor has a continuous monitoring plan that includes regular analyses of motor emissions based on the specifications for the fuel used, the number of hours each motor is in use, the power generated, and the amount of fuel consumed, among other data, in order to calculate pollutants released to the atmosphere at each plant. These calculations are based on EPA standard AP-42. Ternor will continue to monitor air emissions and will comply with the timetable for 2005.

Noise: Although the power plants are in rural areas, the surrounding areas are usually inhabited. Ternor has taken the following noise mitigation and reduction steps to avoid disturbing the inhabitants of the neighboring towns of Garachine, Otoque, and Taboga: controlling the time the plant is operating; building walls around the facilities; relocating equipment; and, in the future, closing down the Contadora Island plant. Ternor has a plan for closing down the Contadora Island plant and moving it to Saboga Island; the close-down plan was delivered to the ANAM in 2004 and is currently under review. Workers are provided with hearing protection gear and are supervised to ensure that they use it.

Fuel spill control: The fuel storage tanks have containment structures. Areas where spills could occur drain into oil separators. Accidental fuel spills can also occur during transport. All of the companies that transport fuel for Ternor are certified by appropriate government agencies and are subject to annual inspections. They are also required by contract to cover the cost of cleaning up accidental spills. One of the mitigating factors is the fact that shipments are relatively small (8,000 to 30,000 gallons). In response to an accidental hydrocarbon spill in 2003, Ternor implemented an action plan including spill containment and collection, monitor wells, soil and water hydrocarbon level diagnostic testing, and bioremediation of affected areas. The absorbent materials used to collect the spills were incinerated appropriately. The oily sludge was piped to a specialized company for safe disposal. ANAM officials visited the spill area and verified the bioremediation measures.

Firefighting and emergency response: All of the power plants, the workshop, and the offices are equipped with extinguishers and other firefighting equipment; there are also emergency response plans (for hydrocarbon spills, fires, natural disasters, and other events). There are safety, prevention, and firefighting manuals at the facilities, and employees are trained to respond to the principal risks and types of accident potentially associated with Ternor's operations. Fire drills are held regularly and are supervised by the local fire department.

Occupational health and safety: Ternor's occupational health program includes vaccinations, medical exams, and talks on disease prevention. Ternor's facilities have signs on safety and how to use the protective gear provided to operators and workshop personnel (work clothes, dielectric gloves, ear protectors, and industrial footwear, among others). Compliance with safety measures for electrical work at the power plants and fuel tankers that supply the plants is supervised on an ongoing basis. The fuel transport contractor is committed to compliance with Ternor's safety procedures. Nevertheless, Ternor must take action to step up employee training and the use of personal protection gear at all of its facilities, in order to improve its performance in this area.

Labor Issues: Ternor is in compliance with domestic labor laws and core labor standards, the ban on forced labor, and a child labor code that protects children.