

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, air emissions, solid waste management, fire safety, and personal safety and emergency response.

Liquid Effluent Management. Carrascal's main liquid industrial waste comes from pulping the paper in an aqueous medium and preparing the pulp for feeding the papermaking machines. The effluents undergo a physical-chemical treatment with a flotation stage that uses injected air and added flocculants. The fiber that is recovered with the separated solids is reused. The purified water remaining after this process is treated by the sanitation company.

Neopak's plant produces no industrial effluents because it has a water recovery system. All of this water is used to make adhesive for making corrugated cardboard. The main sources of liquid effluents are the corrugating process, which generates a water and starch mixture; the printing process, which generates a water and ink mixture; and the boiler purges. The volume of water used by Neopak is only a fraction of that used by Carrascal because Neopak does not produce paper and can therefore recycle all of the process water.

Other liquid waste generated during the industrial process (perchloroethylene and lubricants) is sent to authorized recycling plants.

Solid Waste Management. Carrascal's main solid industrial waste is plastic (fasteners and bags) from the bales of paper, wood from pallets, wire from the bales, and dirty paper and cardboard. Some hazardous waste is also generated: soot from the boiler, cloths soaked in lubricant, and empty chemical containers. Carrascal complies with all Secretaría Regional Ministerial (SEREMI) of the Ministerio de Salud de Chile regulations on the generation, storage, transport, and final disposal of solid industrial waste. Each type of waste is treated by an authorized company; records are kept of the type and amount of waste, the carrier, and the final disposal destination. The company submits a consolidated report to the SEREMI de Salud of the metropolitan region.

Air Emissions. Carrascal has three steam generators (boilers) with an installed capacity of 30,000 kg/h of steam. The boilers run on diesel, heavy oil (fuel oil 6), and natural gas. Due to the lack of natural gas, only two of the boilers are currently in operation, running on heavy oil (fuel oil 6). A sleeve filter was installed in order to keep particulate matter emissions below the permissible limits, even during environmental emergency conditions in the Santiago metropolitan area.

The plant has three diesel electric power generators with an installed capacity of 2,825 KVA, which are used when the electric company cannot supply power to the plant. For Carrascal, they are used forty-two days a year, between April and September, from 6 P.M. to 8 P.M.. Emissions from the generators fall within the authorized limits for normal environmental conditions; however, they do not fall within the required levels for environmental emergency conditions.

Fire Safety. Both industrial plants have fire detection and firefighting systems. There are different types of detection systems according to the specific needs of each area and the products stored there. The detection systems and alarm buttons are connected to a control panel that activates audible alarms located throughout the plant. A third-party contractor maintains the detection systems, which are tested regularly. Both plants have sprinkler systems with water tanks and self-contained pumping systems. There is a fire brigade that trains biweekly and is in constant contact with the fire department (Cuerpo de Bomberos de Quinta Normal). The company has radio

communication with the fire department, which also provides training for the company.

Personal Safety and Emergency Response. Carrascal and Neopak have a Health, Hygiene, Safety, and Environment Audit Manual, which covers the main hygiene and safety issues in the company's plants. They also have a Hazardous Waste Management Plan.

The company is a member of the Chilean safety association Asociación Chilena de Seguridad (ACHS), which provides medical coverage for occupational accidents and diseases. The ACHS provides training on safety issues, examines the facilities, recommends improvements, and implements safety plans.

Monitoring and Reporting. Carrascal and Neopak shall develop an Environmental Management Plan (EMP) to ensure compliance with domestic regulations and the IIC's environmental and workplace health and safety guidelines. The EMP shall provide for a yearly report on liquid effluent and solid waste management; health, occupational safety, and emergency response training; and accident reporting.