



## International Finance Corporation

# Environmental, Health and Safety Guidelines for Office Buildings

### Siting

Office development projects should be chosen through a systematic, documented process that includes consideration of alternatives and their environmental impacts. Projects being developed to promote an area's aesthetic, recreational or educational/scientific values must take particular care not to degrade the resources that are the basis for those values.

### Liquid Effluents

Liquid effluents should be treated to meet the following specified limits before being discharged to surface waters:

<i>Parameter/Pollutant</i>	<i>Maximum Value</i>
pH	6 to 9
BOD <sub>5</sub>	50 mg/L
Oil and Grease	10 mg/L
Total Suspended Solids	50 mg/L
Coliforms	Less than 400 MPN/100 mL (MPN - Most Probable Number)
Temperature increase	Less than or equal to 3°C <sup>1</sup>

<sup>1</sup>The effluent should result in a temperature increase of no more than 3 degrees Celsius at the edge of the zone where initial mixing and dilution take place. Where the zone is not defined, use 100 meters from the point of discharge.

Liquid effluent discharges to a public or private central wastewater treatment system may be subject to pre-treatment requirements. Sponsors should provide information from the local authority or private central wastewater treatment company, to confirm that the treatment

system has the capacity to adequately treat the project's liquid effluents.

### Stack Emissions

Concentrations of contaminants emitted from stacks, including boilers, furnaces, incinerators and electrical generating equipment should not exceed the following limits:

<i>Parameter/Pollutant</i>	<i>Maximum Value</i>
Particulate Matter (PM <sub>10</sub> )	
≥50 MWe	50 mg/Nm <sup>3</sup>
<50 MWe	100 mg/Nm <sup>3</sup>
Nitrogen Oxides, as NO <sub>2</sub>	
Coal fired	750 mg/Nm <sup>3</sup>
Oil fired	460 mg/Nm <sup>3</sup>
Gas fired	320 mg/Nm <sup>3</sup>
Sulfur Dioxide	2,000 mg/Nm <sup>3</sup>

### Solid And Liquid Wastes

- a) Project sponsors should recycle or reclaim materials where possible.
- b) If recycling or reclaim is not practical, wastes must be disposed of in an environmentally acceptable manner and in compliance with local laws and regulations.
- c) All hazardous materials, process residues, solvents, oils, and sludges from raw water, process wastewater and domestic sewage treatment systems must be disposed of in a manner to prevent the contamination of soil, groundwater and surface waters.

## **Other General Environmental Requirements**

- a) Formulations containing chromates should be avoided in water treatment processes.
- b) Transformers or equipment containing polychlorinated biphenyls (PCBs) or PCB-contaminated oil should not be installed, and existing equipment involving PCBs or PCB-contaminated oil should be phased out and disposed of in a manner consistent with the requirements of the host country.
- c) Processes, equipment and central cooling systems involving the use or potential release to the environment of chlorofluorocarbons (CFCs), including Halon, should not be installed, and their use in existing processes and systems should be phased-out and disposed of in a manner consistent with the requirements of the host country.
- d) Storage and liquid impoundment areas for fuels, raw and in-process materials, solvents, wastes and finished products should be designed with secondary containment (e.g. dikes, berms) to prevent spills and the contamination of soil, groundwater and surface waters.

## **Life and Fire Safety (L&FS)**

All new and existing buildings accessible to the public and financed by IFC must be designed and operated in full compliance with IFC's Life and Fire Safety (L&FS) guideline. Please refer to the L&FS guideline document for specific requirements.

## **Hazards Protection**

- a) Facilities should be located to minimize potential risks from earthquakes, tsunamis, floods, windstorms and fires from surrounding areas.
- b) Structures must be designed to criteria appropriate to the local seismic risk, wind loading or any other dynamically imposed loads associated with climatic and geological factors inherent at the location; certification of the criteria

used and their application to the project should be provided by the structural engineers and architect.

## **Recordkeeping And Reporting**

- a) The sponsor should maintain records of significant environmental matters, including monitoring data, accidents and occupational illnesses, and spills, fires and other emergencies.
- b) This information should be reviewed and evaluated to improve the effectiveness of the environmental, health and safety program.
- c) An annual summary of the above information should be provided to IFC.