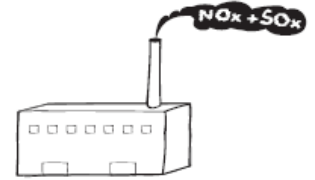


# ENVIRONMENTAL FOOTPRINT COMPARISON TOOL

*A tool for understanding environmental decisions related to the pulp and paper industry*



## TRADE-OFFS AND CO-BENEFITS ACCOMPANYING SO<sub>x</sub> CONTROL

### Technology Options for SO<sub>x</sub> Reduction

Systematic reviews of technology options for controlling SO<sub>x</sub> emissions from pulp and paper mills have been carried out by governments in Europe and Canada, as well as a regional body in the United States. Taken together, they suggest the following approaches for SO<sub>x</sub> emissions reduction:

- controlling emissions from recovery furnaces on a site-specific basis by firing more highly concentrated black liquor and/or using a flue gas scrubber;
- equipping lime kilns with wet scrubbers employing supplemental caustic control;
- reducing power boiler emissions by using bark/wood waste, gas and low-sulfur oil and coal, or otherwise controlling sulfur emissions with alkaline scrubbing;
- incineration of concentrated malodorous gases in either a recovery furnace, lime kiln, or a separate thermal oxidizer, with control of resulting SO<sub>2</sub> emissions; and
- incineration of dilute malodorous gases, with control of resulting SO<sub>2</sub> emissions.

These recommendations embrace the notion of practicing prudent combustion practices and the selective application of post-combustion controls. The reviews undertaken by governments do not specifically endorse general application of the most aggressive post-combustion controls: selective catalytic reduction, selective non-catalytic reduction, and flue gas desulfurization.

With the exception of the very few wood products mills that burn oil or coal, SO<sub>x</sub> controls are not needed or used in the wood products industry.