

A.7 RESEARCH AND DEVELOPMENT SUMMARY

The principal research and development activities currently underway are directed toward the control of sulfur dioxide and nitrogen oxides from fuel combustion processes. They can be grouped into three main areas; SO₂ control, NO_x control and combined SO_x/NO_x control.

With respect to SO₂ control, both wet and dry flue gas desulfurization technologies are being examined with a view to enhanced removal efficiencies. As well, studies are underway to assess state-of-the-art and advanced coal cleaning methodologies as techniques for meeting SO₂ emission regulations.

NO_x controls are being examined from the perspective of combustion modification techniques for a number of different fuel types.

Combined SO₂/NO_x controls are being assessed by the development and evaluation of limestone injection multistage burners (LIMB) and fluid bed combustion.

Recommendations are made in this report regarding other R & D initiatives that could be undertaken. These include further work on SO₂ and NO_x reduction for fossil-fuel-fired electrical generation processes and industrial boilers, process and control technology development projects for the control of SO₂ emissions from non-ferrous smelters and projects to improve emissions inventories.