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; SO_2 control, NO_x control and combined SO_x/NO_x control.

With respect to SO_2 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 SO_2 emission regulations.

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

Combined SO_2/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 SO_2 and NO_x reduction for fossil-fuel-fired electrical generation processes and industrial boilers, process and control technology development projects for the control of SO_2 emissions from non-ferrous smelters and projects to improve emissions inventories.