Chapter 1 INTRODUCTION

1.1 Foreword

This is a main section of the Final Report resulting from the Study on Environmental Criteria for Installation and Extension of Thermal Power Plants in Argentina (the Study).

The Argentine Republic (Argentina) depends on thermal power plants for half of its electrical consumption. In order to satisfy increasing demands, it is necessary to stress the compatibility of power plant development with environmental preservation. The Government of Argentina has been enacting laws and regulations to preserve environment. However, it is necessary to consider different local conditions in order to promote environmental preservation in populated or industrialized areas and also to establish clear environmental criteria for new or extended installations of power plants. Therefore, the Government needs to introduce general and comprehensive criteria for evaluating proposals for new or extended power plants.

With the above background and Argentina's previous experience with Japan in "The Study on air pollution for thermal power plants (1994, JICA)", the Government of Argentina requested the Government of Japan for cooperation in formulating comprehensive environmental criteria for acceptance of power plant installation in environmentally important model areas.

At the request of the Government of Argentina, the Japan International Cooperation Agency (JICA) as the Japanese executing agency, surveyed situations related with the Study in Argentina as the preliminary step and concluded the Scope of Work with its Argentine counterpart in July 2000. Based on this survey, JICA developed a plan, and awarded the full-scale study project to the consortium of Suuri-Keikaku Co. (SUR) and Tokyo Electric Power Environmental Engineering Co. (TEE) in November 2000, after a technical and commercial competition. The executing agencies in the Argentine side were Ente Nacional Regulador de la Electricidad (ENRE) and Comision Nacional de Energia Atomica (CNEA).

The Final Report contains the results of the Study carried out by the JICA Study Team composed of members from the consortium. It is divided into two sections: a summary and a main. The Support Volume is prepared separately from the Final Report.

1.2 Objectives

The following were described in the Scope of Work (S1-A1 in the Support Volume) as the Objective of the Study.

"The main objective of the Study is to evaluate environmental criteria for installation and extension of thermal power plants in Argentina and to formulate necessary recommendations. The Study will be carried out in the model areas, where air quality is assumed to be seriously affected by pollutant emissions from existing power plants, industries and other pollutant sources. The Study will include review of existing data regarding pollutant emissions, measurement of present air conditions, development of a simulation model for air quality prediction, evaluation of measures to prevent air pollution, formulation of environmental criteria for installation and extension of thermal power plant. Technology transfer to counterpart personnel will also be conducted in the course of the Study to formulate the criteria in areas apart from the model areas."

1.3 Summary of Study

Three model areas are listed in Table 1.1 including model (or target) power plants in the areas.

Table 1.1 Model Areas and Power Plants

	Model Area	Model Power Plant
A	City of Buenos Aires - Total area: around 200 km^2	a) Nuevo Puerto b) Puerto Nuevo c) Central Termica Costanera d) Central Buenos Aires
B	San Nicolas - 20 km from the Power Plants	a) Central Termica San Nicolas b) AES Parana
C	Lujan de Cuyo - 20 km from the Power Plant	a) Centrales Termicas Mendoza

The Study had been carried out over 14 months including 4 Field Work stages and 3 Analytical Work stages. Table 1.2 shows the summary of the tasks and periods of the Work stages.

Table 1.2 Summary of Tasks in Study Work Stages

Work Stages	Periods	Main Tasks
Preparation	November 7 to November 15, 2000	Preparation of Inception Report
1st Field	November 24 to December 23, 2000	Explanation and Discussion on Ic/R, Collection of Information and Data, Preparation for Air Quality Monitoring
1st Analytical	January 16 to January 30, 2001	Preparation of Pr/R, Compilation and Analysis of Collected Information and Data, Simulation Model Programming
2nd Field	January 31 to March 17, 2001	Explanation and Discussion on Pr/R, Seminar, Collection of Additional Information etc., Summer Air Quality Monitoring
2nd Analytical	May 31 to June 14, 2001	Preparation of It/R, Analysis of Collected Information etc., Verify and Evaluate Model, Study to Predict Future Emissions
3rd Field	June 15 to August 17, 2001	Explanation and Discussion on It/R, Workshops, Winter Air Quality Monitoring
3rd Analytical	October 15 to November 13, 2001	Re-evaluate Model, Establish Emission Standards, Application of Emission Standards, Preparation of Df/R
4th Field	November 30 to December 17, 2001	Explanation and Discussion on Df/R, Holding Seminars

1.4 Introduction to Final Report and Support Volume

The Main Section is composed of six chapters, of which Chapters 5 and 6 are for the major interest of the Study. The Summary outlines the issues discussed in the Main Section that is prepared to follow the Scope of Work as needed and has the contents given below.

- Chapter 2 Socio-economical aspects for the JICA Team's understanding of Argentina and 3 model areas
- Chapter 3 Overview of the Argentine electric sector and study results of target power plants' specifications and operations
- Chapter 4 Laws and institutional aspects of air pollution in the nation and 3 model areas
- Chapter 5 Proposal for establishment of emission standards for new or extended thermal power plants, application of the proposed method in three model areas, and presentation of political and technical matters that require attention in applying the standards.
- Chapter 6 Recommendations for air pollution control related with power plants as observed by the JICA Team during the Study.

The Support Volume is to assist understanding of the Main Section and has compositions similar to the Progress and Interim Reports issued by the JICA Team in the course of the Study. Where a description of the Support Volume is cited in the Main Section or others, the cited chapter of the Support Volume is indicated with a code of S, such as Article 5.3.1 in Chapter S5. The List of References is attached at the last section of both Main Report and Support Volume. The List includes literature, and information

and data collected for the Study. Cited references are identified in the text by their number (with # mark) in the List of References.

The following is a brief introduction to the chapters in the Support Volume.

Chapter S1	Compilation of Scope of Work, Minutes of Meetings on S/W and Ic/R, Organizations of Study Teams, Schedule and Work Flow, List of JICA Equipment
Chapter S2	Background data of population, refineries and consumption of oil and gas
Chapter S3	List of Thermal Power Plants, and Air Pollution Control in Thermal Power Plants
Chapter S4	National and Local EIA Procedures in Argentina
Chapter S5	Analyses of air qualities monitored by the Study and by other organization
Chapter S6	Study results of emission sources other than power plants
Chapter S7	Issues of air dispersion simulation in the modeled areas
Chapter S8	Predicted activities of emission sources in 20 years

1.5 Remarks

Both Argentine and Japan sides had agreed that the phrase ‘environmental criteria’ in the title of the Study meant the emission standards, from the beginning of the Study as in the Minutes of Meeting of Discussion on the Inception Report. Therefore, except in the main title and objectives, the phrase ‘emission standards’ is used instead.

Social and political chaos occurred from the economical slump after the final Field Work stage. The Argentine Government cut loose a decade-old fixed currency policy and devalued the peso in the early January 2002. The JICA Team was unable to reflect the events and outcomes in the Final Report and the Support Volume, because of timing.