

4. Works plan characteristic and tentative schedule.

The activities included in the required cooperation will be accorded between the cooperation agency and the Electrical Energy secretary.

The relations with other government agencies will be in charge of Electrical Energy Secretary in order to obtain the established objective.

At first, the National Commission of Atomic Energy (CNEA) would participate on these activities, will participate in the data collection and laboratory analysis, according to the condition that will be accorded with the Electrical Energy Secretary.

For the achievement of the results above mentioned, will be executed the following activities:

- Preliminary guideline for implementation study. (It is necessary one expert during about one month)
- Basic equipment for gas emission evaluation, training and execution measurement for adjusting and evaluation.
- Planning and execution of determination of gas emission in conventional thermal plants.
- Analysis of the operation condition about gas emission.
- Gas treatment study and suggestion.
- Design of information system and proposal of necessary equipment.
- Systematization and evaluation of the information in order to prepare a diagnostic of the situation.

Main phase estimation

- | | |
|--|----------|
| - Formulation of detailed works plan | 1 month |
| - Equipment supply, training, exploratory test and gas emission evaluation work programme. | 2 months |
| - Determination of emission at different condition of the plant operation | 6 months |
| - Study of probable gas treatment and analysis of necessary equipment | 1 month |

ANNEX 1

Characteristic of necessary equipments.

The equipment to be use would be an analyzer of mentioned gas in 2.2 from sample collection in chimney.

The equipment must be portable and must include the accessories for sample collection.

The sample sounding line must have the sufficient length for arriving at required sector.

The necessary materials for 12 months must be included, and spare parts too.

The scale range for SO_2 and NO_x will be in direct relation with the usual value of international level (200-2,000 mg/m^3). For particular materials shall be 50 -500 mg/m^3 .

The equipment should satisfy the specification for that purpose. (EPA, TUV)

2. 予備調査時の討議議事録 (M/M)

Minutes of Meeting

Between

the Preparatory Study Team and Secretaria de Energia Electrica of the Government of Argentina concerning a study on air pollution control for thermal power plants in Argentina

The Japanese Preparatory Study Team (the Team) organized by the Japan International Cooperation Agency (JICA) and headed by Mr. Hiromi FUJITA (Director, Energy & Mining Development Study Div., Mining & Industrial Development Study Dept., JICA) visited Argentina from July 13 to July 23, 1992.

During its stay in Argentina, the Team exchanged views and had a series of discussions with Secretaria de Energia Electrica (SEE) and Authorities concerned of the Government of Argentina (Argentine Government) on the official request from Argentine Government to the Government of Japan (Japanese Government) about the collaborative implementation of the study on air pollution control for thermal power plants in Argentina (the Study).

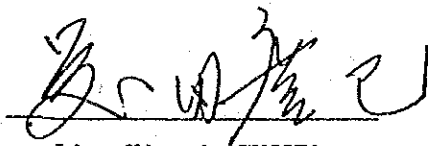
The followings are items which were discussed between both sides.

1. Argentine side explained the necessity of air pollution control for thermal power plants in Argentina in taking into account the following background.
 - (1) Argentine Government and Buenos Aires Municipal Office promulgated the ambient air quality standard in 1973 and 1983 respectively. However the emission standard for air pollutants has not been embodied in form of laws and regulations until now.
 - (2) So far the emission of pollutants from the thermal power plants in Argentina has scarcely been measured. Due to use of the better quality of fuel and substitute energy sources, etc., the environmental conditions of atmosphere seem to be still benign.

- (3) Argentine Government has promoted the privatization of the energy sector recently. In order to avoid further deterioration of the environmental conditions after the privatization, the introduction of technical assistance from foreign countries has been recognized by Argentine Government to contribute to the evaluation and control program of air pollution from thermal power plants.
2. Through the understanding of the above-mentioned situation and the preliminary investigation of some thermal power plants, the Team recognized the necessity of the Study and stated that it would be reported to the Japanese Authorities concerned with the recommendation to dispatch a mission in few months' time for the settlement of the scope of the Study.
3. The terms of reference (T/R) for the Study was discussed and prepared by both sides as shown in Appendix attached herewith, though alteration might be made to some extent with further consideration for effective implementation of the Study.
4. Argentine side was well acquainted with the JICA's technical cooperation schemes and agreed that the Study would be carried out within the framework of the JICA's " Development Survey Scheme ".
5. Both sides confirmed that SEE should act as counterpart agency to the Japanese study team for the conduct of the Study and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the Study.
Argentine side explained that Comision Nacional de Energia Atomica (CNEA) might be nominated as executive body for measuring the concentration level of air pollutants from thermal power plants in the course of the Study, though the confirmation of its tasks would be one of main items for the next meeting with the mission.

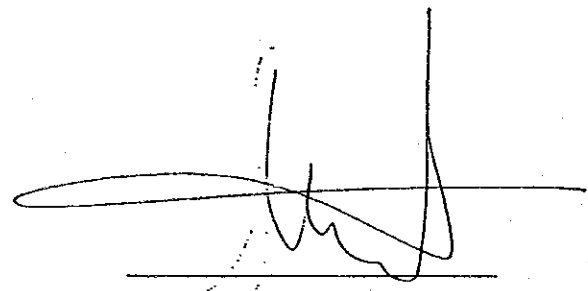
6. Both sides agreed that some thermal power plants, as model plants for the Study, would be selected with certain criteria in the course of the Study.

BUENOS AIRES, JULY 22, 1992



Lic. Hiromi FUJITA
Leader
Preparatory Study Team
JAPAN INTERNATIONAL
COOPERATION AGENCY

坂本



Lic. Mónica SERVANT
Directora Nacional
de Planificación Eléctrica
SECRETARIA DE ENERGIA
ELECTRICA

TERMS OF REFERENCE
FOR
THE STUDY ON AIR POLLUTION CONTROL
FOR THERMAL POWER PLANTS
IN ARGENTINA

I. OBJECTIVE OF STUDY

The main objectives of a study on air pollution control for thermal power plants in Argentina (the Study) are to contribute to the evaluation and control programme of air pollution from thermal power plants in accordance with the policy of Secretaria de Energia Electrica and to pursue the technology transfer to Argentine personnel during the Study conducted in Argentina.

II. SCOPE OF STUDY

In order to achieve the above objective, the Study will cover the following items.

1. Review of existing policy and present situation of air pollution control
 - (1) Review of macro-economic condition and economic development policy
 - (2) Review of national policy and present situation of the energy sector
 - (3) Collection and review of existing data concerning air pollution
 - (4) Review of policy and regulations of air pollution control
 - (5) Review of future plan of air pollution control

2. Investigation of present status of the thermal power plants on air pollution
 - (1) Review of outline of each plant (organization, management, finance, facilities, operation and maintenance, fuel, etc.)
 - (2) Analysis of emission of pollutants from each plant
 - (3) Selection of model plants for measuring the emission gas
 - (4) Measurement of emission gas at each selected model plant
 - (5) Estimation of environmental impact by pollutants from each model plant
 - (6) Evaluation of measured emission gas data and existing power plants from the viewpoint of air pollution control

3. Study on air pollution control plan on thermal power plants
 - (1) Study on air pollution control strategy
 - (2) Study on measures for air pollution control from the technical and economic viewpoints

4. Formulation of inspecting and monitoring systems for emission of pollutants from thermal power plants

- (1) Planning of inspecting system for emission of pollutants from thermal power plants
- (2) Planning of monitoring system for emission of pollutants from thermal power plants
- (3) Cost estimated
- (4) Scheduling

5. Economic evaluation

- (1) Analysis of cost effectiveness
- (2) Analysis of impact to national economics
- (3) Evaluation of socioeconomic effects

III. STUDY SCHEDULE

The period of the Study shall be tentatively twelve (12) months

IV. REPORTS

JICA shall prepare and submit the following reports in English to Argentine Government

- (1) Inception Report
- (2) Progress Report
- (3) Interim Report
- (4) Draft Final Report and its Summary
- (5) Final Report and its Summary

V. SEMINAR

A seminar regarding the Study as well as environmental protection in case of Japan will be held in pursuit of technology transfer to Argentine counterpart personnel during the Study conducted in Argentina.

3. エネルギー庁と原子力公団との協定書（スペイン語版及び英語訳）

(1) スペイン語版

SECRETARIA DE ENERGIA ELECTRICA - CNEA

ACUERDO DE COOPERACION TECNICA

CONSIDERANDO:

Que la SECRETARIA DE ENERGIA, en adelante SE, organismo dependiente del Ministerio de Economía y Obras y Servicios Públicos, y la COMISION NACIONAL DE ENERGIA ATOMICA, en adelante la CNEA, organismo de la Presidencia de la Nación, cada uno en el marco de su competencia, desarrollan acciones orientadas a optimizar el abastecimiento energético y su vinculación con las distintas áreas del quehacer nacional.

Que la SE, a través del Ente Regulador, tiene entre sus responsabilidades realizar el control del cumplimiento de las normativas referentes a efectos ambientales de emisiones y descargas procedentes de centrales de producción de electricidad, en particular las centrales térmicas alimentadas con combustibles de origen fósil.

Que la CNEA, en función de sus políticas de investigación y desarrollo y de operación, evaluación y control de sus centrales, dispone de personal, estructura y experiencia en problemas ambientales en general y en el análisis de líquidos y gases en particular.

Que ambos organismos han identificado oportunidades y actividades que pueden emprenderse en forma conjunta y/o complementaria.

Que en función de ello es posible establecer una estrecha colaboración que redunde en beneficio de ambas partes y del mejor cometido de las funciones de fiscalización de la gestión ambiental en el sector eléctrico a cargo del Ente Regulador de la SE.

La SECRETARIA DE ENERGIA, representada por su titular Ing. Carlos Bastos y la COMISION NACIONAL DE ENERGIA ATOMICA, representada por el presidente del Directorio, Dr Manuel Angel Mondino, ACUERDAN.

Art. 1°. Celebrar el presente convenio con la finalidad de elaborar y poner en marcha en conjunto programas vinculados con la evaluación de los problemas ambientales asociados al abastecimiento energético, como ser:

- a) estudios de emisiones y descargas originadas en instalaciones de generación eléctrica.
- b) evaluación de indicadores de calidad ambiental en el área de influencia de centrales.
- c) desarrollo de actividades de capacitación orientada a optimizar el manejo de equipos de vigilancia ambiental y el tratamiento de la información generada.

Art. 2°. - La CNEA coordinará, ejecutará por sí, o a través de terceros, y realizará el control de gestión de las tareas necesarias para la concreción de los programas aprobados por el COMITE COORDINADOR.

Asimismo, la CNEA se compromete realizar a su cargo las mediciones que el Ente Regulador considere necesario para el control del

cumplimiento, por parte de los responsables de las centrales eléctricas, de las normas establecidas por la SE para residuos sólidos y efluentes líquidos y gaseosos.

Art. 3º.- Las partes convienen que la metodología y organización de los procedimientos de obtención de datos y manejo de la información serán establecidos de común acuerdo, reservándose la SE la orientación general de los estudios en función de las políticas que la misma establezca.

La CNEA podrá, a su vez, proponer la realización de programas a ser ejecutados dentro del presente convenio.

Art. 4º.- La coordinación y control de las acciones que se inicien, así como la aprobación de los planes de trabajo estarán a cargo de un COMITE COORDINADOR integrado por un representante titular y un alterno de la SE y un representante titular y un alterno de la CNEA. La representación de la SE presidirá el COMITE COORDINADOR. La representación de la CNEA se ejercerá a través del titular del Departamento Fuentes y Uso Racional de la Energía.

El COMITE COORDINADOR se reunirá cada vez que fuese necesario para la programación, evaluación, revisión o ajuste de los planes de trabajo, con miras al mejor cumplimiento de los objetivos propuestos. Las actas de las reuniones resolutivas pasarán a formar parte del presente convenio.

Art. 5º.- El COMITE COORDINADOR tendrá, entre otras, las siguientes funciones:

- a) determinar los aspectos específicos de la cooperación y establecer el plan de actividades del programa conjunto.
- b) gestionar y obtener los recursos materiales y financieros necesarios para ejecutar los programas acordados.
- c) someter anualmente a consideración de la autoridades signataria los términos de referencia bajo los cuales se implementarán las acciones programadas.
- d) elaborar cada seis (6) meses un balance de las acciones realizadas y remitirlo a las autoridades signatarias.

Art. 6º.- Para la realización de las actividades a que se refiere el presente convenio, la SE efectuará aportes propios o de otras fuentes, nacionales o internacionales; en particular la SE integrará a la CNEA en la contraparte técnica del Convenio que gestiona sobre el tema con la Agencia de Cooperación Internacional de Japón (JICA) y la designará como tenedora del equipamiento que provenga de dicho convenio de asistencia.

Por su parte, la CNEA afectará su infraestructura técnico-científica-administrativa, en general, y toda la infraestructura del Departamento de Fuentes Renovables y Uso Racional de Energía, en particular, para la ejecución de los programas.

Art. 7º.- La CNEA podrá efectuar convenios con organismos nacionales y provinciales, universidades y centros de investigación, tanto estatales cuanto privados, cuando las tareas acordadas así lo requieran.

Art. 8º.- Los bienes y equipos adquiridos y/o incorporados en virtud de la ejecución del presente convenio serán propiedad de

la CNEA y estarán a disposición de las partes durante la vigencia del mismo, en la forma que el COMITE COORDINADOR la determine. El equipamiento referido en el Art. 6º pasará a ser propiedad de CNEA en las condiciones que establezca el Programa de Cooperación respectivo.

La CNEA podrá prestar servicios a terceros haciendo uso del equipamiento al que se refiere el presente artículo.

Art. 9º.- Las partes se comprometen a observar rigurosamente el carácter confidencial de las informaciones obtenidas en función del presente acuerdo, y a informar sobre la estricta observancia de estas reglas al personal interviniente. Los resultados que se obtengan como consecuencia de las actividades, desarrollos y/o investigaciones realizadas, relacionadas con el presente convenio serán de propiedad común y, con la salvedad de que no se perjudique a terceros, podrán ser difundidos con mención de la participación que les cupo a las partes y autorización del COMITE COORDINADOR.

Los documentos, informaciones técnicas y tecnológicas desarrollados en virtud del presente acuerdo no podrán ser utilizados con fines ajenos a los objetivos que el mismo persigue.

Art. 10º.- A los fines de ser tenidas por válidas las comunicaciones emergentes del presente convenio, las partes constituyen los siguientes domicilios legales: la CNEA en Avda. del Libertador 8250 (1429) Buenos Aires y la SE en Avda. Julio A. Roca 651 (1322) Buenos Aires.

Art. 11.- El presente acuerdo entra en vigencia a partir de la fecha de su firma.

Tendrá una vigencia de cinco (5) años a partir de dicha fecha y se renovará automáticamente por periodos de un (1) año, a menos que cualquiera de las partes optará por rescindirlo mediante comunicación fehaciente con una antelación no inferior a los NOVENTA (90) días de la fecha prevista de denuncia.

En caso de rescisión del presente convenio, las partes se comprometen a asegurar la realización completa en las acciones que estuvieran en desarrollo al momento de la caducidad, salvo decisión en contrario tomada conjuntamente y que no perjudique a terceros.

En prueba de conformidad se firman dos (2) ejemplares de un mismo tenor y a un solo efecto en la Ciudad de Buenos Aires a los

ELECTRIC ENERGY SECRETARIAT - CNEA (NATIONAL COMMISSION FOR
ATOMIC ENERGY)

TECHNICAL COOPERATION AGREEMENT

WHEREAS:

The ENERGY SECRETARIAT (hereinafter SE), an organization depending on the Ministry of Economy and Public Works and Services, and the NATIONAL COMMISSION FOR ATOMIC ENERGY (hereinafter CNEA), an organization depending on the Presidency of the Nation, each one within its own framework of competence, perform actions aimed at optimizing energy supply and its relation with the different areas of national activities.

The SE, through its Regulating Body, includes in its responsibilities the control of the compliance with regulations referring to the environmental effects of emissions and discharges from electricity-producing centrals, particularly thermal centrals fed with fossil fuel.

The CNEA, as a function of its research and development, operation, evaluation and control of its centrals policies, has the necessary personnel, structure and experience in environmental problems in general, and the analysis of liquids and gases in particular.

Both organizations have identified opportunities and activities which may be undertaken jointly or supplementarily.

It is therefore possible to establish a close cooperation benefiting both parties for the better achievement of the monitoring functions of environmental management in the electrical sector, in charge of the SE's Regulating Body.

The ENERGY SECRETARIAT, represented by its Chief, Ing. Carlos Bastos, and the NATIONAL COMMISSION FOR ATOMIC ENERGY, represented by the Chairman of the Board, Dr. Manuel Angel Mondino, hereby AGREE:

Article 1: To execute this agreement in order to prepare and start up joint programs related to the evaluation of environmental problems associated with the supply of energy, such as:

- a) the study of emissions and discharges originating in installations for the generation of electricity;
- b) the evaluation of environmental quality indicators in the centrals' area of influence;
- c) the development of training activities in order to optimize the handling of environmental vigilance equipment, and the treatment of the information generated thereby.

Article 2: CNEA shall coordinate, perform on its own, or through third parties, and control, the tasks necessary for the concretion of programs approved by the COORDINATING COMMITTEE.

In like manner, CNEA commits itself to the performance, on its own account, of the measurements which the Regulating Body considers necessary for the control of the compliance - on the part of those responsible for the electrical centrals - with the regulations established by the SE for solid wastes and liquid and gaseous effluents.

Article 3: The parties hereby establish that the methodology and organization of the procedures for obtaining data and handling information shall be determined by mutual agreement. The SE shall be in charge of the general orientation of the surveys as a function of the policies it establishes.

The CNEA may, in turn, propose the realization of programs to be carried out within the framework of this agreement.

Article 4: The coordination and control of the actions initiated, as well as the approval of the working plans shall be in charge of a COORDINATING COMMITTEE formed by a representative and a deputy representative for the SE, and a representative and a deputy representative for the CNEA. The representation of the SE shall chair the COORDINATING COMMITTEE. The representation of the CNEA shall be held by the Chief of the Sources and Rational Use of Energy Department.

The COORDINATING COMMITTEE shall meet as often as necessary to program, evaluate, review or adjust working plans, in order the better to fulfill the proposed objectives. The minutes of resolute meetings shall form a part of this agreement.

Article 5: The COORDINATING COMMITTEE shall carry out the following functions, amongst others:

- a) Identifying specific cooperation aspects and establishing the activities plan for the joint program.
- b) Negotiating and obtaining the material and financial resources needed to perform the programs agreed upon.
- c) Annually submitting to the consideration of the undersigning authorities the terms of reference according to which the programmed actions are to be implemented.
- d) Preparing, every six (6) months, a statement of condition of the actions performed, and submitting it to the undersigning authorities.

Article 6: For the realization of the activities referred to herein, the SE shall make its own, or third parties' contributions, whether national or international; particularly, it shall incorporate the CNEA in the technical counterpart of the Agreement being negotiated on the subject with the Japanese International Cooperation Agency (JICA) and shall appoint it as the holder of the equipment originating in said assistance agreement.

Article 7: The CNEA may execute agreements with national and provincial organizations, universities and research centres, both State-owned or private, when planned tasks so demand it.

Article 8: The assets and equipment acquired and/or incorporated by virtue of the implementation hereof shall be the property of the CNEA and shall be at the disposal of the parties during the enforcement of same, in the manner to be determined by the COORDINATING COMMITTEE. The equipment referred to in Article 6 hereof shall become the property of the CNEA as per the conditions established by the corresponding Cooperation Program.

The CNEA may render services to third parties, using the equipment referred to in this Article.

Article 9: The parties commit themselves to a rigorous observation of the confidential nature of the information obtained as a function of this agreement, and to inform the intervening staff about the strict observance of these rules. The results obtained as a consequence of the activities, developments and/or research performed, related with this agreement shall be common property, and, with the proviso that no third party shall be damaged, may be divulged mentioning the participation of the parties, and the authorization of the COORDINATING COMMITTEE.

The documents, technical and technological information

developed by virtue hereof may not be used with purposes other than those stipulated herein.

Article 10: For the purposes of valid communications (notifications) stemming from this agreement, the parties establish the following legal addresses: the CNEA, at Avenida del Libertador 8250, (1429) Buenos Aires, and the SE at Avenida Julio A. Roca 651, (1322) Buenos Aires.

Article 11: This agreement shall be effective as from the date of its execution.

It shall be in force for five (5) years as from said date, and will be renewed automatically for one-year periods, unless any of the parties chooses to terminate it through a reliable notification, no less than ninety (90) days before the date foreseen for termination.

In case this agreement is terminated, the parties commit themselves to ensuring the complete fulfilment of the actions under way at the time thereof, unless they jointly decide otherwise, and said decision does not damage third parties.

In witness whereof, two identical copies are hereby signed, in Buenos Aires, on the

JICA