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ARGENTINA

AGUAS PROVINCIALES DE SANTA FE (APSF)

AR-0211

ENVIRONMENTAL REPORT

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(Revised after consultation with APSF)

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ENVIRONMENTAL SUMMARY

ARGENTINA

AGUAS PROVINCIALES DE SANTA FE

(AR-0211)

BORROWER: Aguas Provinciales de Santa Fé (APSF)
EXECUTING AGENCY: Aguas Provinciales de Santa Fé
TOTAL COST: US\$219.0 million
IDB LOAN: US\$ 30.0 million
COFINANCING: US\$ 55.0 million
CASH FLOW GENERATION AND FUTURE BORROWING: US\$134.0 million

I. INTRODUCTION

- 1.1 This Environment Report addresses CMA recommendations as stated in the Environmental Brief dated as of January 30, 1996. It is based on project documentation presented by the borrower and on an environmental analysis performed by a Bank consultant.
- 1.2 Given that the present operation is similar to a traditional Bank time-slice operation, the environmental assessment of this project will be carried out in a similar manner, i.e. through an environmental analysis to be performed for the first year investments and the design of guidelines aimed at ensuring that the investments planned for the following years are carried out in an environmentally sound manner.

II. PROJECT BACKGROUND

- 2.1 In August 1995, as a result of an international public tender, the Consortium Aguas Provinciales de Santa Fé ("APSF", or "the Company") was awarded a thirty-year Concession Contract to provide potable water and sewerage services to fifteen districts in the Province of Santa Fé. The Consortium took over operations from the Dirección Provincial de Obras Sanitarias (DIPOS) in December 1995.
- 2.2 The members of the Consortium are Lyonnaise des Eaux (32.8 % ownership), Sociedad Comercial del Plata S.A. (19.2 %), Sociedad General de Aguas de Barcelona (16.3 %), Banco de Galicia y Buenos Aires (12 %), and Meller S.A. (9.6 %). All these companies are also shareholders of Aguas Argentinas S.A., which provides water and sewerage services to the Buenos Aires area under a similar concession contract.
- 2.3 The employees of the Company will have a 10 percent ownership share through the Company's employee stock ownership program. APSF will be operated by Lyonnaise des Eaux, a world leader in the provision of potable water and sewerage services.
- 2.4 Under the Concession, the Company is required to complete an investment plan of about US\$1 billion, 30% of which should be completed during the first five years of the Concession.

APSF's shareholders are required to contribute at least US\$60 million in capital within the first two years of the Concession.

- 2.5 APSF has requested US\$85 million in long-term loans from the Bank, which would be used mainly to cover the first three years of its investment program spanning from 1996 to 1998. That program amounting to US\$219 million, aims at rehabilitating and expanding the existing facilities, increasing efficiency and improving the quality of services.
- 2.6 The components of the investment program can be summarized as follows:

(US\$ thousands)	Year 1	Year 2	Year 3
Treatment of:			
Potable Water	8,789	4,281	5,983
Waste Water	1,763	7,463	5,213
Canalization of:			
Water Distribution Network	7,906	14,073	14,422
Sewage Collection Network	9,245	22,420	25,037
Connections:			
Water Supply	2,372	4,222	4,327
Waste Water	2,773	6,726	7,511
Start-up Costs	17,000	0	0
Others	15,453	19,877	12,125
TOTAL INVESTMENT	65,301	79,062	74,618

- 2.7 APSF's service area comprises fifteen cities of the Province of Santa Fé and covers a territory of 17,500 hectares: Cañada de Gómez, Capitán Bermúdez, Casilda, Esperanza, Firmat, Funes, Gálvez, Granadero Baigorrea, Rafaela, Reconquista, Rosario, Rufino, San Lorenzo, Santa Fé y Villa Gobernador Gálvez. The Company provides potable water to approximately 1.5 million customers (50% of the total population) and sewerage services in eleven districts to 750,000 inhabitants. ^{1/}

III. REGULATORY AND INSTITUTIONAL ENVIRONMENTAL CONTEXT

- 3.1 The provinces and the Federal Government share some jurisdiction over environmental matters. The nature of environmental issues makes it difficult for provinces to enact effective environmental laws without taking into account interprovincial and international trade, criminal regulations and other matters reserved to the National Congress.
- 3.2 The Constitution recognizes citizens' right to a healthy environment and to productive activities able to satisfy the needs of human development without compromising the needs of future generations, as well as the obligation to restore the environment should any environmental damage occur. Likewise, the Constitution establishes that the Federal Government shall

^{1/} See Annex I for the Map of the Concession.

enact environmental laws to establish minimum protection levels.

- 3.3 The evolution of environmental institutions and regulations has also been slow particularly with respect to environmental impact assessment requirements. Environmental Audits and Environmental Impact Assessment are not required as a general rule, despite the fact that they are being increasingly used for certain activities. There are not consolidated basis rules for environment licensing.
- 3.4 Environment concerns at the federal level are the responsibility of the National Secretariat of Natural Resources and Human Environment (SRNyAH) operating under the Office of the President of Argentina. The Argentine environmental legislation is composed of national, provincial and municipal regulations with a focus on pollution of air and water, hazardous waste, dangerous substances, occupational health and safety.
- 3.5 The SRNyAH was created in 1991 with the support of the Bank. The principal functions of the SRNyAH are to draw up proposals for nationwide environmental protection policies, to ensure compliance with them once they have been promulgated, and to interact with the various provincial and municipal agencies that oversee natural resources under the Argentine federal system and are directly within their respective jurisdictions. The national government can play no part in these areas without the express and voluntary consent of the provincial governments. The geographical scope of the SRNyAH's competence is limited to issues with national ramification and matters related to Buenos Aires' Municipality.
- 3.6 Environmental management in the Province of Santa Fé is not yet governed by an environmental law. A draft of the "Law of Environment and Sustainable Development" has been elaborated and presented to the Parliament.
 - A. Provincial authorities
- 3.7 The law regulating the privatization of APSF demands the creation of a government body which shall have complete environmental competence, shall absorb all the competences that the different provincial administrations have been executing, and shall have the power to delegate, fully or partially, its competence to municipalities. Such body, to be called the Undersecretariat of Ecology and Environment, was created on October 18, 1996 by decree 1.550.
- 3.8 Certain environmental competence is being held by various provincial authorities. Their capacity to enforce environmental standards is restricted due to their diversified and overlapping nature which is hindering effective environmental management. In the lack of environmental authority, most of the ministries have environmental departments, but the responsibility for water and pollution control remains in the former public sanitary utility (DIPOS). The creation of the Undersecretariat of Ecology and Environment will significantly enhance environmental management within the Province.
 - B. Communities and NGO activities

- 3.9 In the municipalities, environmental knowledge and concern has yet to be further developed. Only a few years ago, colleges, universities and NGOs started, with international funds, to hold seminars and training courses on environmental management, principles, and practices. There is considerable environmental expertise among the 8 province's universities, various technological centers and NGOs as well as among experts and specialists acting on an individual basis.

IV. CONCESSION: GENERAL AND ENVIRONMENTAL ASPECTS

- 4.1 According to the privatization process, the Company was formed to provide the following services:

- (i) production, treatment, storage, transportation and distribution of potable water;
- (ii) production, storage, transportation and distribution of crude water; and
- (iii) collection, treatment, discharge and commercialization of domestic and pluvial sewage, as well as industrial effluent that can be received in the network as allowed by law. Disposal of sludge and by-products is also included.

A. General aspects of the Concession Contract

- 4.2 Under the Concession Contract: (i) all the plants and equipment, both those transferred under the Contract and those acquired by the Company, are the property of the Province of Santa Fé; (ii) in case of termination of the Contract, Aguas will be entitled to receive from the Province of Santa Fé an amount in cash equal to the net asset value of the Company's last-approved balance sheet; and (iii) in case of infractions in compliance with the terms of the Contract, the Regulatory Entity may impose fines on the Company that may range from US\$5,000 to US\$500,000 depending on the type and severity of the infraction.
- 4.3 The Concession Contract requires that APSF achieve concrete objectives with respect to the scope and quality of (i) potable water supply (supply and demand balance, water quality, water pressure, water treatment, service expansion and upgrading, etc.) and (ii) sewerage services (supply and demand balance, quality of sewage and effluent, disposal of sludge, effluent treatment, service expansion and upgrading, etc.). APSF is required to achieve these objectives within determined periods.
- 4.4 For example, APSF is required to fully cover potable water demand within the first 8 years of the concession. Demand for sewerage services has to be satisfied within the first 10 years. Treatment of sewage will have to be provided within specific periods determined for each district.
- 4.5 A Plan General de Mejoras y Desarrollo del Servicio (PGMDS) outlining the action plan and works that APSF intends to implement to fulfill the above requirements was submitted as part of APSF's bid and incorporated in the Concession Contract. Every year, APSF has to submit a progress report comparing service targets to actual work progress and explaining discrepancies. Measures to compensate discrepancies shall be submitted to the Regulatory Entity (Ente Regulador de Servicios Sanitarios or "ENRESS") for its approval.

- 4.6 ENRESS is responsible for approving revisions in tariff levels and structure. The regulatory framework allows for tariff increases of 4% in May of the second, third, fourth, fifth and sixth year, provided that the Company has met all the objectives as laid out in the Concession. Apart from anticipated price increases as stated above, tariffs and prices can be revised under the following circumstances: (i) changes in the PGMS, subject to the Regulatory Entity's approval; (ii) changes in production costs of at least 4%; and (iii) extraordinary revisions (change in water quality standards, change in the Convertibility Law that sets the exchange rate at one US dollar per peso, changes in the tax regime and changes in environmental regulations).

B. Environmental aspects of the Concession Contract 2/

1. Water quality

- 4.7 APSF has to comply with water quality parameters determined in the Law 11.220 and pursuant to requirements stipulated by the regulatory entity. The concession contract contemplates minimum requirements in terms of sampling programs and evaluation of crude and treated water. Every crude water catchment area has to be monitored on a continuous basis.

2. Intake of industrial effluent

- 4.8 APSF is required to accept in its sewerage network industrial effluent subject to sufficient hydraulic capacity and provided that they can be assimilated to residential sewage and satisfy determined parameters. Ineligible industrial effluent have to be pre-treated at the producer's cost. In case of unauthorized discharges, APSF will be entitled to cut the service. Within 18 months from takeover, APSF is required to submit to the regulatory entity and is preparing a registry of industrial effluent producers indicating the type of effluent generated by each one of them.

3. Discharges of residential sewage and industrial effluent

- 4.9 APSF has to comply with parameters determined in the Law 11.220 and according to requirements imposed by the regulatory entity. The concession contract also provides minimum obligations in terms of sampling programs and analysis of discharges.

4. Disposal of sludge and by-products

- 4.10 APSF is responsible for the proper disposal of sludge and by-products resulting from water and wastewater treatment. Disposal methods have to be selected so as to minimize the environmental impact. National and provincial requirements have to be satisfied. Incineration is permitted provided that gas emissions are within limits set out in the concession contract and resulting ashes are disposed of according to national and provincial norms.

5. Prevention and emergency plan

- 4.11 The concession contract requires that APSF submit a plan outlining procedures and measures to be taken in case of situations such as

2/ See Annex II Normas de Calidad del Agua Potable y Efluentes Cloacales.

water contamination, flood, fire, etc. In addition, should situations arise that would prevent APSF from complying with service quality requirements, the concession contract provides for specific procedures to be followed by the Company, in collaboration with the regulatory entity, to mitigate risks and disturbances to users (additional treatment, service interruptions, etc.).

6. Environmental and natural resources protection

- 4.12 APSF is obligated at any time to comply with applicable national and provincial legislation regarding environmental protection and preservation of natural resources.

V. POTENTIAL ENVIRONMENTAL IMPACT OF THE PROJECT

- 5.1 The Project includes the rehabilitation and expansion of the Rosario plant and the rehabilitation of the Santa Fe facility. These works are being partially financed through loans from the World Bank and the Bank that were transferred by DIPOS to APSF at time of takeover. Thus, these works satisfy environmental standards of both institutions.
- 5.2 In addition, the project comprises the rehabilitation and extension of several wastewater treatment plants. The expected environmental impact of these works will be assessed according to the Bank requirements.
- 5.3 Additional works in progress comprise the extension of the water distribution network and the sewage collection network, as well as approximately 30,000 new water connections and 45,000 sewerage connections. The expected environmental impact of these additional infrastructure is well known and can be mitigated. APSF will be installing 10,000 meters in 1996, 25,000 in 1997 and 40,000 each year thereafter which will contribute to reducing water consumption.
- 5.4 The Project will not require any involuntary resettlement, in accordance with the PGMDS presented.

VI. CURRENT ENVIRONMENTAL SITUATION

- 6.1 APSF took over operation under the Concession at the beginning of December 1995. The first 12 months are characterized as the take-over phase during which the Company undertakes a comprehensive audit and diagnosis of the existing facilities so as to determine priorities with respect to capital expenditures that are required to achieve the objectives in terms of service coverage and quality laid out in the Concession. Significant capital expenditures are not expected until the second year of the Concession (1997). An updated version of the PGMDS proposed by the Company in its offer has to be submitted to the Ente Regulador every year beginning at the end of 1996.
- 6.2 The Company also took over responsibility for existing contracts from the Dirección Provincial de Obras Sanitarias (DIPOS) for the rehabilitation and expansion of various facilities. This includes loans from the World Bank and the IDB (No. 206/IC-AR) that were originally extended to DIPOS through the Republic of Argentina. It is worthwhile noting that APSF is subject to the same conditions on these loans as DIPOS was.

- 6.3 A Technical Cooperation to be partially financed by the MIF is currently being prepared by Region 1. Its main purpose is to strengthen the institutional capacity of the ENRESS by providing regulatory, organizational and managerial training to its staff. The ENRESS's overall capacity to conduct its regulatory duties from an environmental standpoint will be improved by this TC.
- 6.4 Furthermore, the Province of Santa Fé has subscribed to one cooperation agreement for the Institutional Strengthening Program for Environmental Management that is being implemented at the national level and cofinanced by the Bank (768/OC-AR and 907/SF-AR). Under this operation, the Province is receiving funds from the SRNyAH for the establishment of its environmental structure.
- 6.5 The infrastructure that was transferred by DIPOS consists of installations for water production (diversion, pump stations, treatment and storage plants), distribution network and house connections, sewerage network and treatment plants. Many of the installations suffered from a lack of maintenance and repair, which resulted in poor quality of water supply, inadequate waste water elimination, and increasingly structural and operational failure.
- 6.6 The weak areas of the former systems were: groundwater extraction at rates higher than the capacity of the aquifer; inadequate potable water in terms of quality and quantity; leakages in the water supply and sewerage systems; inadequate treatment of waste water. A ground water survey is currently being undertaken to identify new water resources.

VII. ENVIRONMENTAL MITIGATION MEASURES

- A. APSF's obligations under the Concession Contract and strategy to satisfy demand
 1. Obligations and standards set out in the Concession Contract
 - 7.1 Two kinds of obligations are laid out in the Concession Contract concerning environmental standards with respect to water supply and discharge, industrial effluent, and sludge. One is in general form and commits APSF to take environmental factors into account, to conserve the natural sources, and to protect human health. An environmental law does not exist and environmental competence in the Province of Santa Fé was distributed among various authorities.
 - 7.2 On the other hand, the Concession Contract commits APSF to observe a list of quality standards for: raw water, potable water, effluent, substance prohibited in effluent, treatment sludge, gas emissions from sludge combustion and monitoring requirements. The standards are comprehensive, well defined, and in line with internationally accepted standards.
 2. APSFs strategy and technical plan to satisfy the demand
 - 7.3 During the initial stage, APSF's objectives are to manage the existing systems through the assessment of the actual technical conditions of the systems; the improvement of the data-base, water

quantity and quality parameters of existing perforations and the Paraná river; the evaluation of weak areas; and the implementation of rehabilitation measures.

- 7.4 The technical plan is in line with the requirements set out in the Concession Contract; as far as it can be judged, the technical and engineering measures intended for implementation are sound and effective; such plan is the equivalent of a Master Plan for Water and Sanitation Services at the level of the Concession. However, the Province does not have a Master Plan yet for the management of the resources per se.
- 7.5 The water quality monitoring program as well as the efforts made to secure a good quality of water supply are considerable. Thus, a good quality of water seems to be a major concern of APSF. Of course, this is an efficient approach for quickly responding to actual rehabilitation and quality demands.
- 7.6 Detailed investment projects that will be implemented in 1997 are being defined by APSF. For projects that were designed by DIPOS, environmental impact assessments are being executed by the Company according to terms of reference and procedures that were prepared by the Bank's environmental consultant and reviewed by the Bank 3/. The Terms of Reference (ToR) have been designed for the use of APSF to serve as a guide for Environmental Impact Assessment (EIA) of water production, treatment, storage and distribution systems as well as wastewater collection, treatment and disposal system. The extent and scope of the necessary work, and the depth of environmental analysis of a particular project proposed may vary according to the magnitude of the project, and according to the physical, biological and human environment in which it is developed.
- 7.7 APSF, before conducting the EIA, whether from its own personnel resources or through consultants, should have conducted and submitted to the Bank, an Initial Environmental Examination (IEE), determining and duly justifying the definite ToR of the particular proposed project. The IEE shall also specify the components and activities of the project as well as the factors and attributes of the receiving physical, biological and human environment.
- B. Screening system to help APSF identify in the early stage of each project measures to be taken to mitigate impact
- 7.8 The environmental analysis of each project comprises an IEE, and when needed an Environmental Impact Assessment and the resulting Environmental Management Plan.
- 7.9 The proceeds of the contemplated financing will be used to pay eligible costs for actual infrastructure projects. The Loan will be disbursed in tranches according to the incurrence of such costs under the financing. First disbursement will be subject to presentation by APSF of appropriate environmental analysis according to 7.7.

VIII. PUBLIC INFORMATION AND CONSULTATION

- A. Experience in the Province

3/ Annex III. Terms of Reference (ToR)

- 8.1 In the Province of Santa Fé some experience exists with respect to public information and consultation campaigns for major projects of inter-regional character only. These campaigns have consisted of: (i) informing the public on oncoming projects, and (ii) receiving objections. However, they did not follow a systematic approach due to the lack of appropriate regulations. The Concession Contract provides for procedures to ensure proper information to the public, in particular the release of the annual report regarding the progress of the PGMDS.

B. Regulations of the privatization law

- 8.2 The contemplated process for consulting with affected population in the case of APSF's projects is of restrictive nature: (i) it is not in the form of a regular information campaign; and (ii) representatives of communities are invited to participate in sessions of the Ente Regulador.

C. APSF's approach

- 8.3 On request, Aguas Provinciales presented a paper "Procedimientos de consulta con la población afectada con la concesión" in which the Company's intention and the procedures applied are outlined. It is part of the operator's culture to maintain constant contacts with interested population, NGOS and local authorities.

IX. RECOMMENDATIONS TO ENSURE COMPLIANCE WITH BANK REQUIREMENTS

- 9.1 Based upon the Bank consultant's review to date, APSF appears to be in compliance with its obligations under the Concession Contract. As previously indicated, the Company took over responsibility for infrastructure works that were in progress at the date of takeover. The first year of operation was supposed to be dedicated to the identification of additional infrastructure projects to be undertaken during the second year, and to some extent, during the following few years so as to satisfy the Company's initial commitments as per the PGMDS. Infrastructure projects for 1997 have now been clearly defined.
- 9.2 Aguas will be subject to the following requirements:
- a. Based upon terms of reference and procedures referred to in 7.6, the Company will be required to submit an environmental analysis for all projects executed and to be carried out until the end of 1997. Review by the Bank of such documentation will be a condition to disbursement of the first tranche of the contemplated loan;
 - b. For 1998 and each year thereafter, the Company will be required to submit ex ante an environmental analysis report including (i) appropriate environmental analysis of all works scheduled during the following 12-month period; and (ii) a review of the works executed during the preceding 12-month period; and
 - c. Maintenance of outstanding loans will be subject to full compliance with the environmental requirements laid out in the Concession Contract and all applicable environmental regulations.
- 9.3 Environmental compliance will be monitored by the Bank on an ongoing basis. Costs and expenses incurred by the Bank in this

respect will be reimbursed by the Company. Until Project completion, the Company's shareholders will provide the funds necessary to cover the costs and expenses incurred by the Bank.

X. RECOMMENDATIONS TO THE PROVINCE

- 10.1 The following recommendations shall be officially submitted by the Bank to the Province's authorities as a means of strengthening the overall framework within which the contemplated private sector loan will be extended:
- a. to elaborate a Water Resources Development and Management Master Plan to account for long-term, sustainable planning principles and objectives, and to determine basis development options;
 - b. to implement a campaign for water demand management, with the objective of reducing high water consumption. A program for industrial water reuse should be elaborated, primarily in communities with scarce water resources;
 - c. to establish a Standing Review Committee having the function of organizing and reporting on public information and consultation; and
 - d. to emphasize the role of NGOs by incorporating their expertise throughout project preparation, planning and implementation.
- 10.2 The above recommendations are not within the scope of responsibility of the Company. They apply not only to the concessioned area but to the entire territory of the Province.

As such, they are outlined in this document as possible options that could be envisaged by the Province authorities, mainly the recently created Undersecretariat of Ecology and Environment.