

# Environmental Services

Befesa Medio Ambiente, the holding company of Abengoa's environmental services Business Unit, focuses its activity on providing environmental services for industry and on the construction of environmental infrastructures, while conducting aluminum waste recycling, zinc recycling, industrial waste management and environmental engineering activities.



With wastes... we produce new materials by recycling, and we also treat and desalt water to achieve a sustainable globe

International leader in industrial waste treatment and environmental engineering

[www.befesa.es](http://www.befesa.es)



2005 has been an important year for Befesa. Firstly, the changes made in various business areas have been consolidated and secondly, the foundations to bring about a quantitative and qualitative shift in the development of the company have been established. More than 1,653,000 tons of industrial waste were treated in 2005, with more than 708,000 tons going towards the production of new materials through recycling, and we have increased our desalination capacity to 900,000 m<sup>3</sup>/day, equivalent to supplying 4.5 million people.

The restructuring processes in the Aluminium Waste Recycling unit that began the previous year have been concluded and are already showing positive results.

In the Zinc Wastes Recycling unit the modernisation works of the Aser plant have begun and will be completed by mid 2006. These works will allow us to increase the volume of treated waste by more than fifty percent. In addition, long term supply contracts for steel powder have been signed with the most important steel producers, guaranteeing the supply of raw materials until 2016.

It has also been an important year for the Industrial Waste Management business, which has maintained its leadership position in the hazardous wastes and industrial cleaning market and has experienced a significant increase in the treatment of non-hazardous wastes. The drive to sign a significant number of facilities management contracts with large companies also deserves special mention.

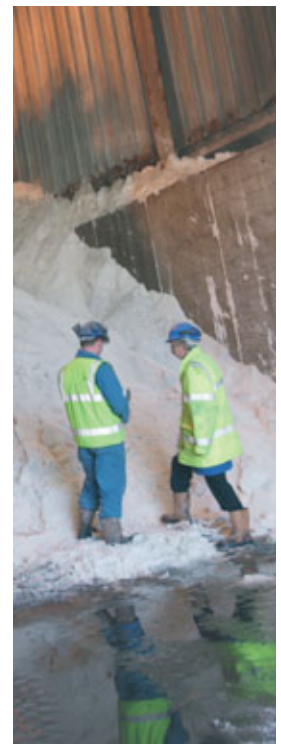
Finally, the internationalisation of Environmental Engineering which was initiated in previous years was completed in 2005, most significantly in the desalination business. With the contracts awarded in 2005 for the desalination plants in Chennai (India) and Tlencem-Hounaime (Algeria), combined with contracts from previous years, Befesa is consolidating its position as the global leader in desalination, with an installed production capacity of 400,000 m<sup>3</sup>/day and projects in progress for a further 500,000 m<sup>3</sup>/day.



In relation to Latin America, Befesa has continued to satisfactorily carry out its business in Argentina, Chile and Peru. Furthermore, it has obtained all the necessary licences to begin the works in the hazardous industrial waste treatment and confinement center that it is going to construct in Mexico. This center, with a capacity of 170,000 t/yr, expects to meet the waste management requirements of industries in central Mexico.

In 2005, Befesa has continued with its R&D&I policy, primarily focusing on projects related to aluminium and the management of industrial wastes, which has allowed Befesa to meet the objectives set the previous year. Befesa has also developed a strategic three year research and development plan which will be implemented in 2006. This plan establishes the objectives and lines of action that the company will follow through to 2009, which will involve significant investment and effort in terms of technical and human resources in order to consolidate the plan.

From a quality and environment perspective, in 2005 a concerted effort was made to develop and implement the ISO 14001 and ISO 9001 quality and environmental standards, respectively. To date, nearly all the entities in the company have a valid management system in accordance with these standards.





An additional important development has been the achievement of the Occupational Risks Prevention certificate based on the OSHAS 18001 standard, which underlines the concern and the growing interest of the company to stay at the cutting edge, as well as for the occupational health of its employees. Similarly, in relation to human resources, we have continued to work with the competence management system during the year, which promotes employee development within the company.



volume of treated wastes, but also due to the integration in the same company of the two processes that close the aluminum recovery cycle: Firstly, the recovery through the metallurgical processes of the metal aluminum and, secondly, the recovery of the fluxes utilized and of the aluminum oxide.

Also of note within the Business Unit is the Technology and Machinery Sales Division where we execute the design, construction and installation of a wide range of equipment for the aluminum industry. Out most outstanding product in recent years is the ingot belt for both aluminum and zinc, which has the highest performance rate in the market.



The conjunction of the three aforementioned pillars; Recycling of the metal, recycling of the oxide, and the pursuit of technology, form a unique and referential mode in the world of recycling.

### Aluminum and Salt Slag Recycling

The objective of the Business Unit is the integral recycling of aluminum-content industrial and household wastes, in a global manner and without generating solid wastes in the process, irrespective of whether their origin lies in the recycling process itself or in the contamination that accompanies the waste itself. This mission is carried out through the pursuit of the signing of stable long-term agreements, with both customers and providers that guarantee a framework for growth and the providing of services in addition to the simple delivery of the high-value product/waste, and quality

Befesa is the leader in Spain and Europe, not only as a result of the position it occupies owing to the

The sale of aluminum alloys for smelting is mainly to the automotive industry and for the manufacturing of components. Within this sector in Europe, there are bright and dark sides to the business of light metals such as aluminum. On the one hand, they are the key to the future strategy that pursues lower consumption and less contaminating cars while, on the other, they are right in the middle of the sector's structural problem and the demand for them has not yet managed to set out on the road to sustainable growth.





In this context, Befesa wishes to continue to play an important role and to this end, it has made the necessary adjustments to provide its facilities with the flexibility the demand requires and a cost structure suited to the high level of demand from the entire chain of value. In this sense, in 2005 and as a continuance of the restructuring efforts made in previous years, we have reduced the activity in the Galdan plant to 50% with Fagor Ederlan. This action enabled a clear reduction of operating costs and guarantees not only the fulfillment of our plans, but it is also a tool for the strategic development of our customer. In addition, we invested five million euro in 2005. The objective with all the actions taken was to increase the productivity of the facilities, reduce operating costs and enhance the quality of the services provided to our customers.



The salt recovery plants of Befesa that operate as part of this Business Unit presented very high production and productivity indexes, way above the demanding programs we had established. Globally, they treated 198,000 tons, a 13% increase on the previous year's figure, which was then considered a record. During the year, the restructuring of the facility in Wales was successfully completed.

Production levels were consolidated there and an array of measures that brought the facility up to the group's production standards were developed and implemented. In spite of the steps that were taken,

the economic profitability of the facility is below that which the group demands of its investments and additional steps must be taken to guarantee the medium-term viability of the facility. To this end, we are holding negotiations with our customers to achieve a framework that will allow us to continue to provide salt slag recycling services, at the current high levels of quality, and develop the aluminum recycling industry in the UK in a sustainable manner.

In 2005, the total volume of treated wastes was 318,000 tons, a 10% increase on the previous year's figure.

### Zinc and Desulphurization Waste Recycling

Befesa's zinc and desulphurization waste recycling activity is executed by the following companies: Befesa Zinc Aser, Befesa Zinc Sondika, Befesa Zinc Amorebieta, and Befesa Desulfuración.

#### Befesa Zinc Aser

In 2005, Befesa Zinc Aser received more than 100,000 dry tons of steel powders originating from electric arc furnaces and die-casting processes, and 3,220 dry tons of other wastes with high zinc content, which represented 100% of the raw material supply.





Most of the common wastes from the home market were captured thanks to framework agreements signed with Oñeder and Arcelor for the management of the powders generated in the main Basque steelworks.

It is important to underline the contracts signed in 2005 with the Basque steelworks, and with others from the area of influence of these siderurgy groups, for the valorization, through the recycling of zinc, of 100% of the powders captured in the sleeve filters installed in their kilns up until December 31, 2016. These agreements are part of the Hazardous Waste Management Plan of the CAPV 2003-2006 and, with them, Befesa Zinc Aser ensures the availability of the raw material required to cover the growth capacity of its Asúa-Erandio facilities in forthcoming years.

The marketing and sale to end-customers of Befesa Zinc Aser's zinc concentrate was done by Befesa Zinc Comercial, who sold 40,200 tons of treated Waelz Oxide. The product deliveries went to the national and European market. In this sense, of note is the strengthening of the presence of the D-L.W.O., in its historic areas, and the sold product went to the traditional large-size customers from the zinc electrolysis sector, such as Asturiana de Zinc and Umicore.

As part of the Company's investment plan, of note is the Modernization and Environmental Improvement Project for its Asúa-Erandio facility. The most important activities carried out under this Project included the signing of two contracts for 16.3 million euro for the installation, in the latter months of 2005, of a new cleaning system for the gases from the Waelz plant and for the replacement of the existing Waelz kiln with a larger-sized and more technologically advanced one that will come into operation in September 2006.

This Project is being developed in harmony with the Company's environmental strategy to ensure fulfillment of the Voluntary Agreements signed by the Territorial and Environmental Planning

Department of the Basque Government and the main companies from the Ferrous Smelting, Non-Ferrous Smelting and Non-Ferrous Metallurgy sector and to anticipate the coming into force of Act 16/2002 of July 1 governing Integrated Pollution Prevention and Control (IPPC). In virtue of these commitments, Befesa Zinc Aser requested the Integrated Environmental Authorization (AAI) of the Basque Government in April 2005.

As a result of the semi-industrial scale tests performed in 2004 and 2005, the efficiency of Ferrosita<sup>®</sup> (waste from the Waelz process) as a coagulant for the treatment of the Cr(VI) and other heavy metals contained in the effluent from the galvanizing industry was proven. Nonetheless, in order to determine the viability of the manufacturing at industrial level of the coagulant obtained from Ferrosita<sup>®</sup>, a new project will have to be developed.

### Befesa Zinc Amorebieta

In 2005, Befesa Zinc Amorebieta recycled 13,850 tons of diverse zinc waste: 2,600 tons of raw zinc ashes, an 18% increase on 2004, and 2,071 tons of zinc scrap, which was a 40% increase.

Product manufacturing increased 14% to 11,850 tons. Of special note, the 3,100 tons of raw zinc ingots and the 600 tons of electrolytic zinc ingots. In addition, the production of fine zinc ashes rose to 2,500 tons.

There was significant optimization of the production of zinc oxide and a 95% increase in the output of this product was achieved compared to the previous year, which led to 3,000 tons of ZnO being put on the market.

The increase in the average price of zinc on the London Metal Exchange (LME) in 2005 results in additional margins when the time comes to sell-off the accumulated stocks. This circumstance has a positive effect on the company's competitiveness as it results in higher prices for the end-product than for the raw material.





In addition, the following have been established as priority objectives for the next twelve months: to go deeply into the pursuit of alternative materials for the manufacturing of zinc oxide and to optimize the transformation processes, of both ingoting and crushing of raw materials, so that the company may increase its processing capacity to 14,500 tons of wastes.

**Befesa Zinc Sondika**

In 2005, the Sondika facility recycled 12,300 tons of different zinc wastes, most of which came from the galvanizing industry. This figure represents a 32% increase on the previous year.

In order to achieve this higher treatment volume, agreements were signed with large waste producers, zinc foams, and 3,200 tons were captured, which is equivalent to 26% of the overall supply for the period.

Zinc mattes represented 28% of the total raw material supply with 3,563 tons having been utilized (763 tons more than in the previous year) for the manufacturing of zinc oxide. Of the mattes acquired, 1,700 tons were supplied by Befesa Zinc Amorebieta and the remainder was purchased from galvanizers or intermediaries.

The production of zinc oxide rose to 11,650 tons, a 12% increase on 2004, due to the improvements made in the process. The generation of subproducts also increased to 1,372 tons intended for direct sale or subsequent reutilization.

Product sales rose to 11,400 tons, 1,000 tons more than in 2004.

**Befesa Desulfuración**

The Befesa Desulfuración industrial facility, located in Barakaldo (Biscay) and initially conceived as a production plant for sulfuric acid from pyrite, is a further example of Befesa’s commitment to the Environment. Since 1995, and following its re-conversion, Befesa Desulfuración recycles residual sulfur recovered through the processes operated by oil refineries.



Befesa Desulfuración is a recycling facility capable of solving one of the environmental problems of the oil companies, by applying the cleanest and safest process for residual sulfur exploitation. At the same time, the products obtained, sulfuric acid and oleum (a compound with a high concentration of  $SO_3$ ) is, due to its high-quality level, well-received in the market by customers from the chemical, papermaking, pharmaceutical, foodstuffs, manure and fertilizer, and water treatment sectors.

In 2005, 103,000 tons of sulfur originating from desulphurization wastes were processed to obtain 315,300 tons of acid equivalent, with an associated generation of electric energy of 80,500 MWh which, after deducting auto-consumption, resulted in the sale of 53,000 MWh of surplus electric energy. Both the production and surplus electric energy figures are an absolute record in the history of the Company, in both the pyrite and the sulfur phases.

As regards the origin of the sulfur, the supply from Repsol Derivados increased from 60% in 2004 to the current 64%, to the detriment of the supply from France. The supply of liquid sulfur also continued but large quantities were not reached.

The investments made in the year focused especially on the improvement of port terminal, road and rail infrastructures, the adapting of machines and installations to the requirements of safety inspections, and the acquisition of spare parts for process equipment.





## Befesa Industrial waste and industrial cleaning

This Business Unit operates through the following activities: industrial waste management, industrial cleaning, PCB management, and plastic material management.

### Industrial Waste Management

Befesa Gestión de Residuos Industriales focuses its activity on providing integral environmental services for industry, in accordance with a clear waste hierarchy: minimize, reutilize, recycle and valorize.

Befesa is currently one of the leaders on the Iberian Peninsula in the integral management of industrial wastes and maintained its notable position as an authorized final manager. The non-hazardous waste management activity has been developed with in-house means of transportation, together with containers and compactors. In addition, integral management was developed in 2005 by assigning personnel to production centers to ensure greater control of the procedures.

Based on a highly-qualified and experienced team of professionals, Befesa provides its management services for any type of company and for a wide-ranging list of industrial wastes.

The waste management services it provides include transportation, removal, treatment, environmental assessment, minimization studies, advance storage, on-site treatment and conditioning, and the handling of the wastes.

During 2005, Befesa achieved a 9% increase to 652,296 tons in its management activity. This growth came about thanks to the dependability it offers its customers, and to the commercial and coordination efforts made by the company's entire team of professionals.

In April 2005, the non-hazardous waste transfer and classifying facility in the municipal district of Alcalá de Guadaíra, in Seville, was inaugurated. The Ajalvir non-hazardous waste facility continued its consolidation process and, through the incorporation of this activity, strengthened and provided an integral waste management service for

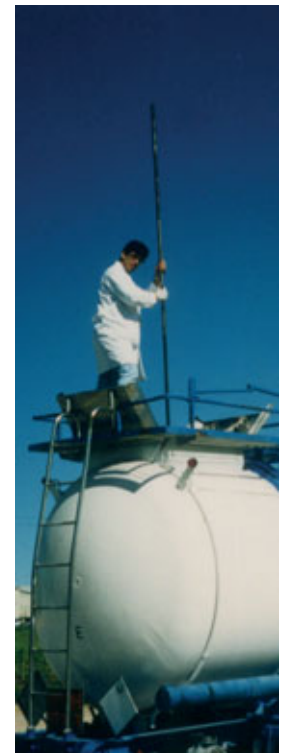


its customers. Of note in this non-hazardous waste management activity was the consolidation of the Cevico de la Torre deposit, which represented Befesa's positioning in Castilla y Leon in the non-hazardous waste management sector.

In the last quarter of the year, an industrial waste, organic and inorganic, conditioning plant that utilizes leading-edge technologies was inaugurated, with satisfactory results, in the center Albega S.L. (Alianza Befesa-Egmasa) has in Palos de la Frontera. The hierarchy principles employed are those established in the European Community for hazardous waste management, as well as those in the National and Autonomous Regions' Plan for the management thereof (minimization, reutilization, recycling, valorization and disposal). This project represents an advance in research into new waste management techniques.

The company Residuos Industriales de la Madera de Córdoba (Rimacor), in which there is a 69.97% interest through Albega, technically completed the Lucena hazardous waste transfer center. It is scheduled to be brought into operation in January 2006.

Befesa signed an agreement with Empresa de Gestión Medioambiental, S.A (Egmasa), by which it has purchased the fifty percent shareholding in Albega that was in the hands of Egmasa, which now makes it the 100% owner of the company. At the time of signing of the agreement, the assets and elements of the Industrial Waste Treatment Environmental Platform belonging to Egmasa were integrated into Albega.





**Industrial & Hydrocarbon Cleaning**

This company carries out its activities in the industrial services sector for public and private sector customers. It offers a wide range of services that include suction and blowing of solids, liquids and sludge, high pressure cleaning works, the utilization of water at extremely high pressures for demolition, cutting and cleaning operations, the on-site management and treatment of wastes at oil refineries, chemical cleaning, loading, unloading and management of used catalysts, as well as waste management and treatment services at the customers' own facilities, tank cleaning services in refineries and large oil product facilities, chemical cleaning, loading, unloading and management and recovery of contaminated soils.



Following the merging process of the different companies involved in this activity and the completion of the geographic area structuring process, 2005 represented the consolidation of the company and its different activities such as: chemical cleaning, extraction, loading and unloading of catalysts, tank cleaning with automatic processes, management and operation of mobile, centrifuge and filter press plant.

New activities and services to be made available to its customers were developed in 2005, such as hydrodemolition, hydrocutting, oxycutting operations, and the integral management activity for large customers. Different offers of these characteristics were made with very satisfactory results.

In addition, activities abroad were consolidated during the year and, as regards tank cleaning with the automated system, 2005 saw the commencement of a contract awarded by Grupo Total.

**Befesa Plásticos**

Befesa Plásticos is specialized in the manufacturing of special screenings from low-density polyethylene by recycling sheeting utilized as greenhouse covering. The screenings purchased by its customers are put to different uses, of note among the same is the manufacturing of sheeting for construction purposes (waterproofing and protection); large size sacks and rubbish bags; signal panels, irrigation piping, electric and telecommunication tubing; moulds such as flower pots, jutties and decanter cases; and for obtaining modified asphalts.

Its production capacity, together with the constant and homogenous quality of its screenings has made it the leading provider of recycled screenings in Spain and the European Union, with 80% of its overall production being exported.

As part of its active commitment to the conservation and improvement of the environment, Befesa Plásticos brought an integral management service into operation for the agricultural plastic sheeting generated in the Costa Tropical pool of villages in Granada and the company thereby managed almost 1,000 tons of agricultural plastics, obtaining, on the one hand, the raw material required for its production process and, on the other, managing the waste plastic in the most suitable and environment-friendly manner.







In addition, the importing of PCB-contaminated equipment from Argentina continued. This activity is being carried out with the collaboration of Befesa Argentina since the year 2000. The necessary administrative steps were taken to enable the commencement of imports from Peru and Chile.

It is important to mention that, in 2005, Befesa Gestión PCB was awarded the contract to treat PCB from Hidrocantábrico (HC Energía) for the 2006-2007 period, and the contract to manage the Regional Government of Madrid's PCB-contaminated electrical equipment stored in the San Fernando de Henares Safety Deposit. It also obtained authorizations to manage transformers that are not PCB-contaminated, and thus complete the management service the company offers.

In 2005, Befesa Plásticos recycled more than 11,855 tons of sheeting and used irrigation pipes and achieved a production of 9,600 tons. In addition, it sold 9,550 tons. These data confirm the consolidation of the company as the leader in the low-density polyethylene recycling sector.

Also in 2005, Befesa Gestión PCB completed the authorization process for the hazardous waste collection and transportation activity in all the Autonomous Regions of Spain, eliminating the intermediation of external agents and offering the customer an integral service.

**Befesa Gestión de PCB**

Located in Cartagena (Murcia), Befesa Gestión PCB, S.A. specializes in providing efficient solutions for the collection, transportation and disposal of PCB-contaminated transformers, condensers and materials while recovering, thanks to the utilization of leading-edge technology, all the reusable materials and disposing, in a definitive manner, of the contaminated materials.

In 2005, Befesa Gestión PCB maintained its leading position in the Spanish PCB market and treated more than 2,800 tons of PCB-contaminated devices and materials. These figures confirm the Company's strength at a time in which this market has been showing a tendency to drop since 2003, in relation to the number of treated tons.





**Environmental Engineering**

Befesa’s Environmental Engineering activities are focused on the construction and operation of infrastructures, and the providing of services for the integral water cycle, and waste management.

As an important event in 2005, we would mention the consolidation of Befesa in the international marketplace, especially as regards Desalination. The awarding of two new contracts for the construction and operation of desalination plants, one in Algeria and the other in India reflect this situation and ensure strong sustained growth.

The Environmental Engineering Business Unit is structured into two lines of activity:

Construction, where Befesa Construcción y Tecnología Ambiental, Befesa Fluidos, and Codesa are integrated.

Befesa Construcción y Tecnología Ambiental covers the international market and the construction of hydraulic and major-size waste management infrastructures in Spain. It maintains its leadership in the home Desalination market and is a reference on the international scenario in this sector. As regards Hydraulic Works, its leadership in this field was consolidated in 2005 with the contracts awarded under the National Irrigation Plan. The rest of its activity focused on: supply and purification,

hydroelectric developments, water treatment, automatic information and control systems, and waste plants.

As a reflection of the burden of the ever-increasing international activity, reorganization was carried out in 2005 and two Divisions were established: National and Foreign. In addition, a Department dedicated specifically to R&D&I was set up to agglutinate and strengthen the Environmental Engineering activities that are being developed in line with Befesa’s strategy plan.

There are seven regional branch offices for the home market. These are common for the three companies in the Construction sector.

Codesa, a company specialized in water treatment, supply, purification, and hydraulic activities and environmental measures for public administrations and the private sector. Of note is its consolidation as a reference company in the treatment of effluent from the paper sector and the strengthening of its collaboration activities with the environmental management companies of the Regional Government of Andalusia.

Befesa Fluidos, a company specialized in industrial input, process and waste waters. It complements this activity with others such as powder capturing, handling of fly-ash and slags in Thermal Power Plants for the private sector.





Operation. In the water sector, the activity is developed through Befesa's interest in the company Agua y Gestión S.A. The companies Iniciativas Hidroeléctricas S.A., the concessionary of the Cerrato (Palencia) working fall operation, and Procesos Ecológicos Vilches S.A., proprietor of the pig slurry treatment plant in the province of Jaen, are also included in this line of activity.

### Construction. Main contracts in 2005

Of note was the awarding of the 25-year construction and operation contract for the Minjur (India) seawater desalination plant to the consortium formed by Befesa and the local construction company IVRCL Infraestructuras & Projects. It will produce 100,000 m<sup>3</sup>/day of desalinated water to supply Chennai, formerly Madras. Befesa will execute the design and turnkey construction of the facility for the contracted consortium.

Through the Spanish consortium Geida, a contract was awarded for a third seawater desalination plant in Algeria, in Tlemcem-Hounaine. Befesa holds a 33% interest in this desalination plant. It will be built for the public enterprise Algerian Energy Company (AEC), and will utilize reverse osmosis technology.

When the three desalination plants contracted in Algeria in 2004 and 2005, the Chennai plant and the plants in Spain (Atabal, Carboneras, Cartagena and Almeria) are taken into account Befesa will desalinate 900,000 m<sup>3</sup> per day, and provide water supplies for a population of 4,500,000. Estimates are that earnings from the sale of water from the three plants in Algeria over their 25-year operating life will be in excess of 2,300 million dollars.

Other important contracts:

Befesa Construcción y Tecnología Ambiental

In the irrigation modernization line of business:

- The Sur-Andévalo Irrigation Area (Huelva) expansion and modernization works. The irrigated area will increase from 5,000 to 9,000 hectares.
- The 12,836-hectare Marismas del Guadalquivir Irrigation Area (Seville) modernization works.



Hydraulic works:

- Construction of ten drinking water regulating reservoirs for several towns in Ciudad Real, for the Ministry of the Environment.

Water treatment:

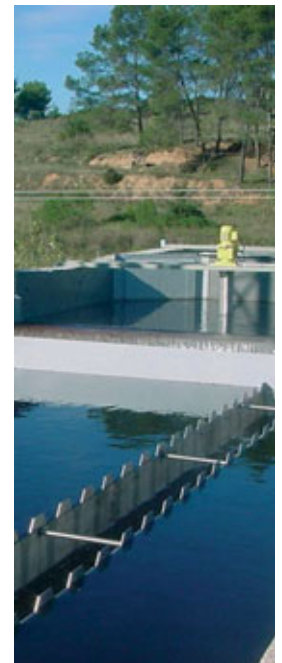
- Drinking Water and Sewerage System works in Ciudad Sandino (Nicaragua), under the European Union's Central America Regional Reconstruction Program (PRRAC), with capturing reservoirs and installations, connection pipelines, sewage system network and a Served Waters Treatment Plant, capable of treating the sewage from a population of 47,450.
- The Villafranca and Villa del Río (Cordoba) collectors and STWs, for the Regional Government of Andalusia, to treat the sewage from 15,000 inhabitants.
- In Madrid, for Canal de Isabel II, the Meco STW will be built. It will treat the sewage from a population of 58,686.

Information and Control Systems:

- Maintenance and Expansion of the river Guadalquivir Automatic Hydrological Information System (SAIH), for the Ministry of the Environment.

Befesa Fluidos:

- In Tarragona port, the supply and installation of eleven units equipped with pumping and treatment systems for the bilge and wastewaters originating from ship engine maintenance operations (classified under the MARPOL, Maritime Pollution legislation).





- Water and effluent treatment plant for Solúcar Energía's PS10 solar power plant, in Seville.
- Lixivate treatment plant for the city of Palencia Urban Waste Treatment Center. It will treat 10,000 cubic meters per year of a high polluting load lixivate.
- Improvement works at the lixivate treatment plant at the controlled non-hazardous waste deposit of Consorcio para la Gestión de los Residuos Sólidos de Asturias (Cogersa).

### Codesa:

- In the private sector, the contract for a third 1,700 m<sup>3</sup>/h capacity effluent treatment plant for the paper sector, for Papelera Guipuzcoana de Zicuñaga.
- In the public sector, the most important contract was for the sewage collectors and Wastewater Treatment Plants (STWs) for the towns of Pedro Abad, El Carpio and Adamuz, for a population of 14,000.

### Other contracts:

- Urgent Major Repair Project and conditioning of the Crevillente (Alicante) drive pipeline electromechanical elements for the Ministry of the Environment. Directorate General for Water Affairs.
- Contract to improve the sewage system of Pozo del Camino and the Román Pérez district in Isla Cristina, Huelva, for the Department of the Environment of the Regional Government of Andalusia. Construction of three collectors that will redirect the flows from the area's four drainage basins.
- Copero STW Deodorization System, entry, pretreatment and dehydration work.

### Construction. Main works in 2005

#### Befesa Construcción y Tecnología Ambiental

### Desalination:

- Completion of the testing and commencement of operation of the Almeria and Nuevo Canal de Cartagena (Murcia) desalination plants, both utilizing reverse osmosis, with a daily product water flow of 50,000 and 65,000 m<sup>3</sup>, respectively, to supply a population of 500,000. One was

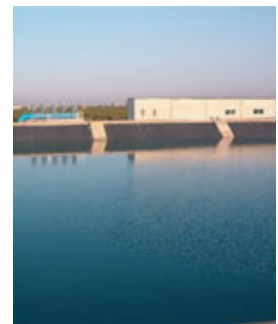


constructed for the City Council of Almeria and the other for the Ministry of the Environment.



### Irrigation:

- Completion of the construction works on Section B of the Alguerri-Balaguer Canal (Lerida), for the Regional Government of Catalonia.
- Completion of the modernization of the 5,792-hectare Tajo-Segura de Totana (Murcia) User Community's irrigation system, for Sociedad Estatal de Infraestructuras Agrarias (SEIASA) del Sur y Este.
- Completion of the modernization, automation and remote control monitoring of the hydraulic infrastructure of the Sector B-XII 15,000-hectare irrigated area of the Lower Guadalquivir, in Lebrija, Seville.
- Work continued on:
  - The Modernization and Consolidation of the Irrigation Systems of the Carlet (Valencia) user community's (693 hectares) common irrigation ditch system, for Sociedad Estatal de Infraestructuras Agrarias (SEIASA) de la Meseta Sur.
  - The modernization of the Guiamets (Tarragona) reservoir user community's irrigation system on 1,978 hectares, for SEIASA del Nordeste.
  - Phase I of the Improvement and Modernization of the Canal de Babilafuente (Salamanca) user community's 3,688-hectare irrigated area, for SEIASA del Norte Salamanca.
  - The two capturing pumping stations and the first section of the drive pipeline for the Segría Sud (6,000 hectares) irrigated area, in Lerida, for Regs de Catalunya, of the Regional Government of Catalonia.





### Hydraulic works:

- The following are under construction:
  - The "Villanueva de Córdoba connection with the water supply system of the Province's Northern Sector", awarded by the Regional Government of Andalusia.
  - Supply works for the new urban areas of Malaga town, for the Malaga Municipal Water Company (EMASA).
  - Hydroelectric harnessing of the Sahechores (Leon), for the Duero Hydrographic Confederation, with two vertical turbines for 40 m<sup>3</sup>/sec and 21,200 kVA.



### Water Treatment:

- Completion of the Villaviciosa de Córdoba and Casares (Malaga) wastewater treatment plants (STWs), for the Department of the Environment of the Regional Government of Andalusia.

### Information and Control Systems:

- Work continued on the Automatic Hydrographic Information System (SAIH) in the river Duero catchment area.
- Completion of the Regulation and Automation Improvement Project for the Villoria Canal irrigated area, awarded by the Agricultural Technological Institute of Castilla y Leon.

### Waste treatment and management:

- Completion of the four urban waste transfer stations in Guadalajara: Sigüenza, Molina de Aragón, Cifuentes, and Yedra, for the Regional Government of Castilla La Mancha.

### Befesa Fluidos:

- Completion of the supply, installation and testing of the Effluent Treatment Unit for the Primary Phase of the urban waste deposit, for the Ecoparc 3 joint venture, in Sant Adrià del Besos (Barcelona), with a 200 m<sup>3</sup>/day capacity MBR process.
- Works were completed on the Lixivate Treatment Plant for the Los Ruices-Limasa Environmental Center (Malaga), with a 200 m<sup>3</sup>/day capacity MBR process.
- Completion of the following works and installations for Aceralia's factory in Aviles, Asturias:
  - Treatment plant for the effluents from the slag quenching area and a treatment plant for the waters from the B.O.F. for discharge to the public waterway through the Steelwork's perimeter

canal, complying with the legislative parameters in force.

- Installations for the emptying of the scarfer circuit's rectangular settler.
- Completion of the effluent treatment plant and the settler for drawing process water from the river Tormes, for the Biocarburantes Castilla-Leon bioethanol production facility in Babilafuente (Salamanca).
- Completion of the installation of the effluent treatment plant for Ecoinsa, Barcelona.

### Codesa:

- The Benamahoma collector and STW, in Grazalema, Cadiz, for the Department of the Environment of the Regional Government of Andalusia. Capacity for 3,000 inhabitants.
- Improvement works in the recreational areas in natural parks in the southern region of Alicante, for Valenciana de Aprovechamiento Energético de Residuos, S.A.
- Commissioning of the Ence effluent treatment plant at its Pontevedra cellulose production plant.
- For Gestión de Infraestructuras de Andalucía, work is being carried out on the Montemayor (Cordoba) STW, capacity for 5,500 inhabitants, and on the design and construction of the 10,867-inhabitant capacity Fuente Ovejuna STW and collectors (Cordoba).
- Treatment and affected services works in the Aznalcollar Environmental Activities Park in Seville, for the Andalusia Development Institute.
- Work is being carried out on the Facinas (Tarifa M.D.) collector system and STW project, the discharges from which affect the Los Alcornocales N.P., in Cadiz. Capacity for 3,500 inhabitants, for the Department of the Environment of the Regional Government of Andalusia.



- In Tarifa (Cadiz), the Wastewater Treatment Station is being built for Atlanterra Inmobiliaria S.A, for its housing estate. Treatment capacity for 22,000 inhabitants.
- The Arcas del Villar and Villar de Olalla (Cuenca) STWs are being constructed for the Department of Public Works of Castilla La Mancha. Treatment capacity for 5,250 inhabitants.
- Treatment, supply and STW network for 4,000 inhabitants for the Puente Esuri Complex promoted by Fadesa, in Ayamonte, Huelva.
- Services continued to be provided for the Catalonia Water Agency in accordance with the operation and maintenance concession regime for the treatment systems in different townships of Barcelona, Gerona and Tarragona, with an overall treatment flow of 4,000 m<sup>3</sup>/day.

### Operation. Main activities in 2005

Since 2003, Befesa holds, through Befesa Construcción y Tecnología Ambiental and Codesa, a 43,5% interest in the company Agua y Gestión de Servicios Ambientales, S.A.

Over this time, Aguas y Gestión has managed the Municipal Services of El Ejido (Elsur), Almería, and the Water Services of Baena, in Córdoba, San José del Valle, Barbate and Vejer, in Cadiz, Herrera, in Seville, and La Puebla de D. Fadrique and Ugijar, in Granada. This means that Agua y Gestión manages the supply for more than 150,000 inhabitants in Andalusia.

In addition, in 2005, Agua y Gestión operated the Villarejo de Salvanes, Fuentidueña de Tajo, Villamanrique de Tajo, Estremera and Brea de Tajo Urban Wastewater Treatment Plants, in Madrid for Canal de Isabel II, and the Teulada and Moraira STWs in Alicante, for Entidad de Saneamiento de la Generalitat Valenciana, all of which were constructed by Befesa Construcción y Tecnología Ambiental.

In another field of activity, in 2005, Agua y Gestión was awarded, under a joint venture with Befesa Construcción y Tecnología Ambiental and Ayesa, the two-year (extendible to four) maintenance, monitoring and auscultation services contract for eleven dams in Córdoba and Granada provinces, for the Guadalquivir Hydrographic Confederation.



The treatment of pig slurry continued through the operation of the Vilches Treatment Plant (Jaen).

### Latin America

#### Befesa Argentina

##### Most important works executed

- Conditioning, exportation and final disposal of Thallium Sulfate and Lindane: 80 drums (9,050 kg) with Thallium Sulfate and Lindane were exported for treatment. They had been in storage at the City of Buenos Aires Government's Ecological Reserve.

##### Works in progress

- Oil Company Services
  1. Operation of the Alfa Laval Plant and US Filter Plant, La Plata Refinery, Repsol YPF: Two horizontal centrifuge units belonging to Befesa Argentina are being operated. They are installed in the effluent treatment plant (US Filter) and the Alfa Laval Plant is being operated. They are owned by Repsol YPF. These plants operate 24 hours a day, 365 days a year.
  2. Slop Oil Unit, Tank 265, at Repsol YPF's La Plata Refinery: The unit installed by Befesa Argentina continues to operate. It is for the recovery of Hydrocarbons by means of the three-phase separation of the product contained in the 10,000 m<sup>3</sup> capacity Tank 265. This tank also functions as a receiver of the slop oils from the refinery's other tanks. Over 16 months Befesa has processed 42,531 m<sup>3</sup> of product and has delivered to Repsol YPF, as subproducts, 71% of water with HC, 24% of solids and 5% of light HC according to specification. This facility comprises two Horizontal Decanter centrifuge units and two vertical centrifuge units, Alfa Laval make, a laboratory for analysis purposes and workshop modules, a deposit, offices, canteen and changing rooms.



### Transportation, Incineration, Inerting and Final Disposal

The main customers for special waste transportation and treatment services are:

- Automobile Industry: Daimler Chrysler, Ford, Peugeot – Citroen, Toyota Argentina and Volkswagen, for whom transportation, incineration and final disposal by safety landfilling services were provided for maintenance wastes, paint sludge, cataphoresis sludge, oils, empty containers, etc.
- Oil Industry: Esso, Repsol YPF, Shell CAPSA, for whom transportation, incineration and final disposal by safety landfilling services were provided for maintenance wastes, coke carbon, insulating materials, spent catalysts, contaminated soils, etc.
- For pharmaceutical laboratories such as Bayer Argentina, S.A., Lanxess, S.A., Raffo, Glaxosmithkline Argentina and Cardinal Health, transportation, incineration and final disposal by safety landfill services were provided for out-of-date medicines, products outside specification, raw material packing, etc.
- For chemical industry companies such as Rohm & Haas, TFL and Procter & Gamble transportation, incineration and final disposal by safety landfill services were provided for maintenance, effluent plant sludge, raw materials outside specification, etc.

### Contracted works

Conditioning, consolidation, exportation and final disposal of PCB-contaminated material:

Befesa Argentina has been awarded contracts to execute these works for the following companies: Repsol YPF – Comodoro Rivadavia, Sacan, Obras Sanitarias de Mar del Plata and Alpargatas.

### **Befesa Chile**

#### Works in progress

- Design and operation of mining and industrial sector integral waste management systems: during 2005, works continued on the Hazardous and Non-Hazardous Solid, Domestic and Industrial Waste Integral Handling Contract at the Altonorte Steelworks, owned by Falconbridge Chile Ltda. (formerly Noranda).  
During 2005, the volume of wastes treated exceeded 5,000 tons.
- Hazardous and Non-hazardous Wastes Treatment Center in Antofagasta. (CMR Norte): In

Antofagasta, Befesa Chile Gestión Ambiental Limitada is currently elaborating the construction and operation project for the North Hazardous Waste Handling Center to be installed in the Sierra Gorda municipality. It will be the first solid hazardous and non-hazardous waste management company to meet the needs of the mining and industry sectors and, in general, of the companies in the northern Segunda Región, while at the same favoring the conservation of the Environment. This project is being executed on a 40-hectare site in a deserted area, some 40 kilometers from the nearest town, Baquedano. Its waste processing capacity will be approximately 53,700 tons per year, of which 43,200 tons per year will be hazardous waste and the remaining 10,500 tons non-hazardous. The useful life of the facility will be 45 years.

### **Befesa Peru**

In 2005, Befesa Peru increased its customer portfolio by more than 50% on the previous year and currently has more than 113 customers on its books. This number is expected to continue its upward trend in 2006.

During the year, more customers were gained from the industrial sector, and they now number 68. We have observed a growing interest from the market operators (Generators, Administration, Managers), through the number of orders received, in having their wastes managed properly.  
Main Customers: Repsol, Pluspetrol, Antamina, Yanacocha, Petroperú.

### **Befesa Mexico**

Within the activity of Befesa Mexico, the main project underway is that for the construction and operation of a hazardous industrial waste treatment and storage center. This project, which is known as Sustainable Development Systems, consists of a maximum capacity 179,000 tons/year waste inerting/stabilization plant, a 2,150 kg/h capacity lixivate treatment plant and a storage basin that, in a first phase, could accommodate more than 500,000 tons of waste. Construction work is scheduled to commence in the first quarter of 2006 on the center, which is intended to meet the management needs of the industries in the central area of Mexico, once the final permits for construction have been obtained, and start-up is scheduled for early 2007.



