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Market study on pollution and
environmental control in Mexico.
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Market Study on Pollution and Environmental Control in Mexico.

Dept. of External Affairs
Min. des Affaires extérieures

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INFORMATION FOR CANADIAN BUSINESSMEN
PREPARED BY THE COMMERCIAL DIVISION,

Market Study on Pollution and Environmental Control in Mexico.

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This market guide booklet has been prepared with the problems inherent to the initiating exporter in mind. However it is not exhaustive; individual circumstances, interest and needs will dictate how companies should tailor their approach and strategy to the Mexican market. While every attempt has been made to ensure accuracy in this study, no responsibility can be accepted for errors or omissions.

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Further assistance can be obtained by addressing requests directly to the Commercial Division of the Canadian Embassy in Mexico City located at Calle Schiller No. 529, Colonia Polanco, 11560 México, D.F. Telephone 254-32-88, telex 177 1191 and fax (sending from Canada) 011 (525) 545-17-69; or the Latin American Division Department of External Affairs, Industry Science and Technology Canada, 125 Sussex Drive, Ottawa, Ontario K1A 0G2, Phone 9950460 Fax (613) 996-06-77.

APPENDIX

- Listing of Ministry for the Environment and other related government agencies
- List of environmental organizations
- Registration procedures for selling to the Mexican government and deregulated agencies
- List of potential agents/representatives

MARKET STUDY ON POLLUTION AND ENVIRONMENTAL CONTROL IN MEXICO

1. BACKGROUND

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ECONOMIC ENVIRONMENT

1. BACKGROUND

Mexico is one of the richest countries in the world in its ecological diversity. In its territory it has almost all existing climates and environments. Even though it is the 14th largest country in the world, it has 1,000 species of birds and 2,500 species of butterflies, as opposed to 650 and 700 respectively in all of the U.S. and Canada, and its 30,000 plant species are above those known either in the U.S., the USSR or China. These resources are in serious danger due to the extensive use of land for agriculture and for the very destructive cattle raising. Deforestation is advancing at 500,000 Ha. per year to open areas for cattle. This in addition to increased agricultural land, urban expansion and fires translates into one million hectares of natural vegetation lost annually. Despite all this, Mexico only has 48 officially protected areas and 39 in the process of being approved as such, for a total of 7.4 million Ha. or 3.8% of the Mexican territory.

The contamination of the environment in Mexico has reached an alarming state. Approximately 25 million people, or 30% of the country's population, live in the metropolitan areas of Mexico City, Monterrey and Guadalajara. Over 25% of all industry is concentrated in the valley of Mexico, placing tremendous pressure on existing services and infrastructure. Some 52 thousand tons of garbage must be handled daily, 19,000 tons of which in Mexico City alone. Industries, internal combustion engines and public transportation services expel thousands of tons of harmful gases into the air, such as sulphur dioxide, carbon monoxide, suspended particles, lead and ozone. Mexico City has suffered extremely high levels of air pollution in recent years, as a result of its industrial development, increased demand for services, low fuel quality, inadequate combustion processes due to its high altitude and an increase in motor vehicles. Mexican citizens have been clamoring for strict corrective measures and the Government has finally responded with concrete actions aimed at fighting the onslaught of pollution, the most important of which is the Federal Law on Ecological Equilibrium and Environmental Contamination enacted on March 1, 1988.

When taking up office, president Carlos Salinas de Gortari pledged to publish increasingly strict regulations to reduce air polluting emissions, waste waters and hazardous wastes. A major National Program of Ecological Conservation and Environmental Protection is under way, including tighter supervision of industrial pollutant sources, improvement of fuels, natural gas supply to thermoelectrical plants in the Mexico City area and improvement of the city's public transportation system. President Salinas has also relied on international and multilateral cooperation conferences and agreements and will continue to do so in the future.

NOTE: All values in this report, unless otherwise stated (Mexican pesos, Canadian dollars Can\$, etc.) are quoted in United States dollar equivalents.

2. ECONOMIC ENVIRONMENT

Over the past two years, Mexican economic policy has featured a tough anti-inflationary program called the Economic Solidarity Pact, combining traditional austerity measures (tight fiscal and monetary policies) and non orthodox measures (price, wage and exchange rate controls). The program has been successful in reducing inflation, from an annual 159.2% in 1987 to 51.7% in 1988 and 19.7% by 1989. The general criteria for Mexico's macroeconomic policy in 1990, are to consolidate and fortify the progress made in price stabilization, to reaffirm gradual and sustained economic recuperation, to increase investment, both national and foreign, and to improve living standards.

Mexico's gross domestic product (GDP), after increasing 3.7% and 2.7% during 1984 and 1985 respectively, diminished by 3.6% in 1986. In 1987, it increased a moderate 1.6% and an additional 1.4% in 1988. Domestic economic activity recovered for the third consecutive year in 1989 with a growth rate of 2.9% in 1989 to reach \$200 billion (1). With an 84.5 million population, per capita GDP is estimated at \$2,375. During the 1990-1994 period GDP is expected to maintain an average annual growth rate of 2%-3%.

In an effort to revitalize and open the Mexican economy, the Mexican Government undertook a series of structural changes, including the accession to the General Agreement on Tariffs and Trade (GATT) on August 24, 1986 leading to an extensive trade liberalization process: import permits were eliminated on all but 325 of the total 11,960 tariff items on the recently adopted Harmonized System. Official import prices are no longer applicable, nor the 5% export development tax, and the maximum import duty has been lowered from a maximum 100% in 1982 to 20% in January 1988. The automotive and computer industries have also been liberated.

Major changes were made in the Foreign Investment Law, which now allows direct foreign investment of up to 100% in several sectors of the economy, previously restricted to a minimum 51% Mexican ownership.

According to official data from the Mexican Secretariat of Commerce and Industrial Development (SECOFI), Mexico's previous trade surplus changed to a deficit of \$1.7 billion in 1989. Total exports increased 10.7% totalling \$22.7 billion, while imports increased 24% from \$18.9 billion to \$23.4 billion. Imports of consumer products increased 82%, while those of intermediate goods grew by 17% and capital goods by 18% in 1989. Total Mexican imports from Canada increased 24% in 1989 to Cdn\$603 million. In 1989, total trade between Mexico and Canada was valued at Cdn\$2,301 million: Cdn\$603 million in the sale of Canadian goods and services to Mexico and Cdn\$1,698 million in Canadian purchases from Mexico. Mexico and Canada have traditionally been strong trading partners. According to Mexican figures, in 1989, 1.9% of Mexico's imports came from Canada, while 1.3% of its exports were to Canada. This makes Canada Mexico's fifth largest exporter and sixth largest importer.

1. NOTE: All values in this report, unless otherwise stated (\$Mexican pesos, Canadian dollars Cdn\$, etc.) are quoted in United States dollar equivalents.

3. MARKET ASSESSMENT

Total apparent consumption of pollution control equipment and instruments has grown at a very steady pace in the last three years, increasing seven percent, from \$188 million in 1987 to \$202 million in 1988, and an estimated eight percent in 1989. This was prompted both, by a growth in domestic production of equipment and by a major increase in imports.

Demand is expected to grow at an average annual rate of nine percent between 1989 and 1992, from \$217.7 million to \$280.4 million (see Table 1). Domestic production, which consists exclusively of equipment, is projected to grow from \$198 million to \$249.4 million by 1992 at an average annual rate of 8%. Imports represented approximately 12% of the total market or \$26.4 million in 1989. However, given the need for more sophisticated and specialized instrumentation, all of which is imported, and Mexico's trade liberalization policies, imports are expected to grow at a faster pace than local production. Imports are estimated to grow at an average annual rate of 15%, and reach \$39.8 million by 1992 or 14% of the total market.

The total pollution control market can be divided into two distinct areas: instruments and equipment. Instruments account for approximately two percent of the total market and amounted to \$5.3 million in 1989. By 1992 this segment of the market is expected to reach \$7.4 million, all of which will continue to be imported. The total market size for equipment, on the other hand, was \$212.4 million in 1989. Of this amount, \$198 million corresponds to equipment manufactured domestically, while \$21.1 million was imported. By 1992, equipment sales are expected to reach \$273 million, of which 12% or \$32.4 million will be imported.

TABLE 1
APPARENT CONSUMPTION OF
POLLUTION CONTROL EQUIPMENT AND INSTRUMENTS
(\$000 U.S. dollars)

	1987	1988	1989e	1992p
<u>INSTRUMENTS</u>				
Production	-	-	-	-
+ Imports	3,191	4,388	5,276	7,412
- Exports	-	-	-	-
= TOTAL	3,191	4,388	5,276	7,412
<u>EQUIPMENT</u>				
Production	174,475	186,709	197,977	249,394
+ Imports	13,020	16,684	21,077	32,412
- Exports	2,558	5,700	6,649	8,850
= TOTAL	184,937	197,693	212,405	272,956
<u>TOTAL POLLUTION CONTROL EQUIPMENT AND INSTRUMENTS</u>				
Production	174,475	186,709	197,977	249,394
+ Imports	16,211	21,072	26,353	39,824
- Exports	2,558	5,700	6,649	8,850
= GRAND TOTAL	188,128	202,081	217,681	280,368

Three categories account for approximately 85% of expenditures in pollution control equipment and instruments: industrial wastewater, municipal wastewater and potable water treatment and air pollution control. These areas, together with noise pollution control, are the ones with the greatest market potential for imported products. At the same time, it is expected that these areas will grow at a proportionally faster pace in the coming years.

U.S. products dominate the market for both instrumentation and equipment, with an import market share of 72%. It is followed by West Germany (9%), Switzerland (3%), Japan (3%), France (2%) and Canada (1.6%). U.S. products are identified in the Mexican market as incorporating the latest technological advances and being of the highest quality. In addition, due to the geographical proximity of both countries, delivery and service are quick and trustworthy. Several U.S. companies have also established joint ventures with Mexican companies to penetrate the market. These factors have allowed U.S. products to enjoy a high preference among Mexican users. Nevertheless, third country competitors are forcefully trying to gain a greater part of the market by offering lower prices, more liberal credit terms, more flexible licensing and joint venture agreements and increased servicing facilities. In order to keep or increase their market share, Canadian suppliers need to be more aggressive in the market and promote their products, particularly now that the market is expanding as a result of the increased awareness of pollution hazards and more stringent environmental regulations.

TABLE 2
CANADIAN IMPORTS AND EXPORTS OF POLLUTION
CONTROL EQUIPMENT AND INSTRUMENTS
WITH MEXICO
 (000 Cdn \$)

	1988 IMPORTS FROM MEX	1988 EXPORTS TO MEX	1989 IMPORTS FROM MEX	1989 EXPORTS TO MEX
boilers over 45tons			973	
centrifugal pumps				18
compressors	6	48	32	40
heat exchange units	37	385	19	161
heat treatment un.	22	2	195	222
water filers	9			32
oil filters engines	72	4	105	4
liquid purifiers		17		5
air filters engines		4		
gas purifiers	26,285	427	35,627	2,349
parts purifiers	2,147	157	21	100
catalytic converters		1,322	176	1,268
control valves	606	75	899	260
TOTAL EQUIPMENT	29,175	2,450	37,074	4,459

	1988 IMPORTS FROM MEX	1988 EXPORTS TO MEX	1989 IMPORTS FROM MEX	1989 EXPORTS TO MEX
microscopes			34	2
barometers		9		
other meters	25	2	64	
liquid meters	1	6		156
liquid & gas meas.		4	1	
smoke analyzers				4
chromatographs		23		208
instr. radiation		7		
phys chem analysis		35		
TOTAL INSTRUMENTS	26	86	99	370

Source: Statistics Canada - International Trade Division

Table 2 lists Canadian imports to and exports from Mexico by product for 1988 and 1989. Since these are general categories of products, which can be used for many different purposes, these figures do not only reflect items used for pollution control exclusively. Based on these data, Canadian exports to Mexico of equipment related to pollution control increased 82% in 1989 to Cdn\$4.5 million. In the instrument sector, exports increased threefold to Cdn\$370,000. Canada is also a significant importer of Mexican products, in particular of gas purifying equipment. These data also show Mexican exports of certain instruments within general categories, but none of them are for environmental control specifically.

4. ENVIRONMENTAL PROBLEMS

4.1 AIR POLLUTION

It is estimated that over 23% of all air pollutants are concentrated in Mexico City, the largest city in the world, four percent in Guadalajara and three percent in Monterrey. Currently, around five million tons of pollutants are emitted into Mexico City's atmosphere through hydrocarbon combustion and suspended dust particles. SEDUE (The Secretariat for Urban Development and Ecology), the administrative and control body for environmental matters, attributes 83% of air contamination in Mexico City to the use of internal combustion engines by the public transportation system and private vehicles. Mobile pollution sources, including cars and airplanes, account for 100% of carbon monoxide emission, 63% of nitrogen oxides and 17% of sulphur dioxide. Industry accounts for the balance. Average nitrogen oxide levels in Mexico City are 0.047 ppm with a 0.322 maximum; sulphur dioxide levels average 0.043 ppm with a 0.075 ppm maximum; carbon monoxide levels average 18.1 ppm with a 31.6 ppm maximum (8 hour mean); and suspended particles 93.4 micrograms/m³ and 170 micrograms/m³ respectively. Recommended values are 0.13 ppm for sulphur dioxide, 0.21 ppm for nitrogen dioxide, 13 ppm for carbon monoxide.

Approximately 2.5 million motor vehicles circulate in the metropolitan area and emit non-combustible gases and suspended particles into the air, such as carbon monoxide, carbon dioxide, nitrous oxides, sulphates, lead and hydrocarbons. Slightly over two million cars are for private use, 280,000 are gasoline fueled public transportation

vehicles and 120,000 are diesel trucks and buses. Of these motor vehicles, 33% are over twelve years old and another 27% are between eight and twelve years old. Over 70% of all cars and buses are in poor mechanical condition and operate inefficiently due to the high altitude. In addition, almost none of the vehicles circulating in Mexico carry anti-pollution devices.

During the 1989-1990 winter season, four measures were taken to reduce air pollution levels in the Mexico City area:

- Additioning gasolines with oxigenated compounds to improve fuel efficiency in high altitudes;
- Replacing fuel oil by natural gas in the Mexico City area power plants;
- Reducing car circulation through the one day without a car ban;
- Mandatory semiannual exhaust emission vehicle inspection.

With these measures, SEDUE has estimated a global improvement of air quality in the Mexico City area of 10%-15% through a 23% reduction in emissions, or over 2,000 tons a day. During 1990, these measures will continue to be applied in addition to:

- Mandatory diesel vehicle smog check;
- Re-location of steel smelters and strict control over industrial emissions;
- Replacement of gasoline by LP gas on in-city cargo transportation truck fleets;
- Gradual substitution of fuel oil by natural gas in highly polluting industries;
- Installation of vapor recovery systems in receiveing terminals and gasoline stations;
- Launching of the reforestation and ecological restauration program for the valley of Mexico;
- Installation of catalytic converters in public transportation units and sufficient production of unleaded fuel;
- Begin investments to produce low-sulphur diesel and fuel oil and to set up two sulphur recovery plants in the PEMEX Azcapotzalco refinery.

In addition, by 1991 all new cars will have to be equipped with catalytic converters, provided PEMEX can supply the necessary unleaded fuel. Owners of old cars will also be persuaded to install anti-polluton devices and to use the cheaper unleaded fuel. Through these measures, SEDUE expects to cut down hydrocarbon emissions by 65%, carbon monoxide fumes by 70% and the release of nitrogen oxide by 40%.

An estimated 13% of air polution is generated by fixed sources, or industry, and the remaining four percent by natural sources. There are approximately 33,000 industrial sources of air pollution around Mexico City of which 15,000 have been classified as severe polluters, such as electrical energy generation plants, smelters and foundries, pulp and paper mills, soap and detergent manufacturers, asbestos plants, chemical plants, cement plants, refineries, plastic producers, ceramics producers, paint and solvent producers, food processing plants, textile industries, sugar refineries, bakeries and public baths. Industry is the main producer of sulphur dioxide , which is even more harmful to humans than the carbon monoxide produced by cars. SEDUE is periodically inspecting industries and has closed down several of them, forcing them to install anti-pollution equipment in their plants. It is presently estimated that only 30% of all industries in the valley of Mexico have installed any kind of anti-pollution equipment.

An important source of air pollution is the use of heavy fuel oil for industrial purposes. Two thermoelectric power plants located in Mexico City generate some 36% of the sulphur dioxide expelled into the air, through the use of heavy crude as fuel. The Federal Electricity Commission (CFE), the sole producer and distributor of electricity in Mexico, has converted 25% these to natural gas plants; however the necessary amount of gas is not yet produced to allow these changes to be made on a large scale. PEMEX, the national oil monopoly, is installing smokeless burners using natural gas

instead of heavy fuel in several of its refineries and it is in the process of substituting natural gas or other light fuels for heavy fuel in its boilers and heaters in most of its facilities. At its Azcapotzalco refinery, it is already using natural gas, it installed internal membranes on its tanks to avoid evaporation and it regenerates carbon monoxide into carbon dioxide. By the end of this year, this refinery will reduce emissions by half through these measures.

Approximately 25 monitoring stations have been strategically located throughout Mexico City to measure the level of air contaminants such as sulphur dioxide, carbon monoxide, ozone, suspended particles and concentration of hydrocarbons. These readings, which are published daily in major newspapers, permit the identification of the level of contamination and its source, which further permits the elimination of emissions, installation of anti-pollution equipment and/or to temporarily or definitely close down the offending industry and evacuate people in case of emergency.

Best sales prospects for air pollution control are dust collectors and filters, silencers for exhaust gases, catalytic converters, respirators, gas, dust and particle sampling material, analyzers, monitors, metering instruments, controlling equipment, mobile laboratories, electrostatic precipitators, oxidation systems and gas absorbers.

4.2 WATER POLLUTION

Water contamination is due to three major sources: sewage from the cities, pesticides from agricultural activities and hazardous wastes from industry. Mexico City, Guadalajara and Monterrey together generate 62.7 m³/second of non-solid wastes. Mexico lacks the necessary waste treatment plants to process these materials. The total volume of waste waters generated is of 4,250 million m³ a year, equivalent to 136 m³ per second. Of these, 62% correspond to the population and 38% to industrial sources.

Water demand in the Mexico City area is 70 cubic meters per second, of which 62 cubic meters per second are actually provided, supplied from several sources. Of these, 30% correspond to domestic use in residential areas. Before entering the city, waters are treated and purified through flocculation, chemical treatment, chlorination, precipitation and clarification. There are some 2,000 purifying plants to make waters drinkable. There is, however, no control over the discharge of industrial and domestic waste into the urban water system. Untreated "black waters" cause serious pollution problems within and outside Mexico City, since these waters find their way, via the Pánuco river, all the way to Tampico on the Gulf of Mexico. The National Water Commission is working on the development of alternative technologies for making residual waters drinkable.

Many rivers in Mexico are being contaminated because of effluent discharge and untreated residual waters. Twenty of Mexico's 270 rivers concentrate 80% of total residual water discharges. SEDUE is beginning to install treatment plants in the neighborhood of the most polluted of these rivers, such as the Lerma, the Bravo and the Coatzacoalcos, and lakes, such as Pátzcuaro and Santiago-Chapala, as well as in Mexico's most important ports, including Zihuatanejo, Acapulco, La Paz, Puerto Vallarta, Progreso and Veracruz. A \$2 million project is underway to restore the Lerma river, the Guadalupe lake and the Laguna de Zumpango. The principal contaminants of residual waters come from industries, oil wells, petrochemical products, natural sources, chemical deposition, agricultural chemicals, biological and radioactive factors. The waters of many rivers need to be treated so that they may be subsequently reused for industry, agriculture, irrigation and drinking. At present, there are 220 treatment plants

for waste waters, which recycle 103 cubic meters per second. The heaviest industrial users of water are the sugar, paper and cellulose, chemical and petroleum industries. These industries have been approached by SEDUE to persuade them to treat and recycle their waste waters.

The process of treating residual waters consists of: 1) pretreatment to eliminate heavy solids; 2) primary treatment to separate oils, solids in suspension, colloids and to control pH; 3) secondary treatment to eliminate harmful biological materials through the use of microorganisms; 4) tertiary treatment to eliminate organic materials, non-biological materials in suspension and salts; and 5) special treatments, for the elimination of muds, for example. The highest demand for equipment and instruments is in the areas of primary and secondary treatment. Equipment with best sales potential are aerators, pumps, scrapers and accessories, filter presses, screw conveyers, chlorinating equipment, absorption towers, band conveyers, screens, water clarifiers, cooling towers, demineralizers, flocculators, ionic interchangers, samplers, leak detectors, analyzers, spectrometers, colorimeters, polarimeters, refractometers, measuring equipment and laboratory equipment.

4.3 LAND POLLUTION

The daily production of garbage throughout the country is of 52,000 tons, of which 75% is collected, while the remainder lies scattered on streets, roads, empty land, etc. Of the total urban residues collected, 65% are deposited in open air, while only 35% is taken to landfills.

Industrial waste has been identified as one of the worst culprits in the contamination crisis. SEDUE is beginning to monitor and regulate industrial hazardous waste and municipal waste disposal. Since March 1989, all industrial waste producers are required to fill the Hazardous Waste Declaration consisting of a 15 point questionnaire on what wastes the company generates and how it intends to dispose of them. The most polluting industries identified to date are petrochemical, pharmaceutical and chemical plants, foundries and smelters, cement and all industries using solvents, automobile, electronic, furniture, paint and other industries that treat metals. It is estimated that 900,000 tons of industrial hazardous waste is produced annually. Every day in Mexico City, 15,000 tons of domestic waste and 20,000 tons of industrial waste are produced, of which 5,000 tons are considered "highly dangerous". Of these, only one percent is properly treated or destroyed, the rest finding its way into the urban drainage system, clandestine dumps or industry backyards.

There are five ways of handling hazardous waste: using "clean technologies", recycling, treatment, incineration and landfills. In order to fight land pollution, SEDUE is encouraging the use of "clean technologies" to reduce the generation of pollutants through the use of new processes, technologies and raw materials and/or the optimization of existing plants. Waste recycling plants include six public plants processing 35 million liters of solvents a year in addition to 15 million liters processed by privately owned recycling plants, nine plants recycling 60 million liters a year of used oil, and other plants processing heavy metals and other hazardous wastes. Some companies, such as Química Omega, offer to buy industrial waste, which it then treats according to SEDUE guidelines. What the company can extract, it resells to other industries. The government publishes a list of companies selling off industrial waste products and a list of those eager to buy them.

Remaining hazardous wastes are either physically, chemically or biologically treated and stabilized, incinerated or buried in controlled confinements, of which there are

approximately eight in use and five under construction. The government is encouraging private enterprises to operate landfills on a profit-making basis under the close scrutiny of SEDUE. A U.S.-Mexico joint venture called Protecol has proposed opening a stabilization plant and landfill on the dried-up bed of lake Texcoco within the Mexico City area. SEDUE is also proposing the repatriation of substantial amounts of industrial waste produced along the Mexican border by American businesses. New regulations regarding hazardous waste disposal are now in effect. All waste products listed by SEDUE and any that cannot prove that they are not corrosive, reactive, explosive, toxic or inflammable are considered hazardous and their improper disposal is subject to heavy fines, factory closure and imprisonment.

The chemical industry has a potentially high impact on the environment and major companies in the sector, such as Dupont, Dow Chemical, Colgate-Palmolive and 3M are facing stricter policies and legislation on health and environmental protection. In response, they are devising special technologies to adequately handle dangerous substances and their waste products, including recycling, cutting the amount of waste materials generation, waste incineration and directly working with training programs and community work.

4.4 NOISE POLLUTION

The most important sources of noise contamination are: industries using internal combustion engines, such as electricity generating plants, steel rolling mills, metal fabrication and paper mills, bus terminals, airports, recreational centers, airplanes, automobiles, trucks and buses, railroads and motorcycles. Noise control is mostly an administrative inspection activity undertaken by SEDUE with the objective of determining the source of noise and designing the action to control, reduce or eliminate it and to impose the sanctions applicable. Instruments and equipment with best sales potential for noise control are the following: noise dosimeters, analyzers, vibration monitors, recording equipment, calibrators, insulation materials, earmuffs and plugs.

5. ACTIONS AND PROJECTS

By presidential order, a comprehensive program to combat atmospheric pollution in the Mexico City area was published in 1989. It is based on five strategic areas:

- Rationalization and reorganization of the urban transportation system;
- Improvement of fuel quality;
- Introduction of alternative fuels;
- Installation of emission control systems for vehicles and industry;
- Ecological recovery of deteriorated areas.

The specific measures proposed along these guidelines, of which four have already been taken, are the following:

- Rationalization of vehicle traffic: one day without a car campaign and expansion of non-polluting public transportation services;
- Mandatory vehicle and diesel bus verification and tune-up;
- Ecological restoration of 26,000 Ha. in the Eastern and Southern areas of the city;
- Tune-up, overhauling, new buses and less polluting engines on the publicly owned R-100 bus lines;

- Introduction of catalytic converters on the 15,000 official vehicles and 60,000 public transportation vehicles;
- Emission control in small businesses;
- Research and development of environmentally acceptable strategies, products and technologies;
- Manufacture of unleaded and low volatility gasoline;
- Sufficient supply of unleaded fuel for the 1991 model vehicles equipped with catalytic converters;
- Replacement of fuel-oil by gas in thermo-electric power plants and in highly polluting industries;
- Establishment of an emission monitoring system at the PEMEX refinery in Azcapotzalco;
- Testing program for alternative fuels, oxygenated compounds and anti-pollution devices;
- Relocation of steel smelters outside city limits;
- Addition of oxygenated compounds to gasolines in the Mexico City area to compensate the low efficiency in gasoline burning due to the high altitude;
- Establishment of strict fuel control systems in refineries;
- Establishment of internal membranes in tanks at the Azcapotzalco refinery to reduce evaporation;
- Research projects to be undertaken with foreign institutions with respect to atmospheric photochemical phenomena;
- Replacement of gasoline by LP gas in 45,000 city cargo trucks;
- Manufacture of low sulphur fuel oil;
- Manufacture of low sulphur diesel;
- Expansion of the national storage, transportation and distribution system for new ecological fuels in PEMEX;
- Construction of oxygenated compound plants;
- Modernization of the existing PEMEX sulphur recovery plant and installation of a HC and a sulphur recovery plant;
- Fitting out measures for HC vapor recovery at receiving and distribution terminals and service stations throughout the valley of Mexico.

In the medium to long term the government plans to restructure the public transportation system and restore the ecological balance of the valley of Mexico. The total cost of the program is estimated at \$3 billion. Funding for this project is expected to come from loans by the Japanese and European governments and the World Bank.

6. END USERS

The principal end users of pollution control equipment and instrumentation are government and industry. The government sector comprises municipal, regional and central government, port authorities, public utilities, hospitals and research institutes. This sector's expenditures amount to approximately 25% of total apparent consumption. The manufacturing and commercial areas include the following industries: chemicals, pulp and paper, textiles, oil and gas extraction and pipelines, petrochemicals, stone, clay and glass, primary metals, fabricated metal products and transportation. These industries' expenditures account for an estimated 75% of demand. Many of these industries are dominated by state owned companies such as the oil and gas, petrochemicals and electricity generation sectors.

7. REGULATIONS

Between 1972 and 1973 the Government enacted several regulations to specify limits on particulate emission levels from stationary sources and to regulate water pollution. Given the rapidly growing levels of industrialization and urban congestion in the major cities, these requirements were soon obsolete. In January 1984, as a result of increased pressure from the public opinion, the Government published a new set of laws and regulations to supersede, restate or cancel previous laws. Finally, on January 26, 1988 the new Federal Law on Ecological Equilibrium and Environmental Contamination was passed and enacted on March 1, 1988. This law supersedes and abrogates the prior federal law. The fundamental change in the law is organizational as it centralizes power within SEDUE while recognizing the need for inter-agency, state and municipal government participation for successful implementation.

The legal basis for ecological action in Mexico is found in its Constitution. Several articles cover the use of natural resources, human health, safety and pollution prevention and control, as well as the decentralization and definition of responsibilities regarding environmental protection and ecological equilibrium between the federal, state and municipal governments.

The new law covers the following points: cooperation of federal, state and municipal governments; major responsibilities of the Ministry of Urban Development and Ecology (SEDUE), the Department of the Federal District and the National Ecology Commission; general ecological policy and its instruments; creation and protection of protected natural areas; rational use of natural elements, including water and its ecosystems, soil and its resources, non-renewable resources and the effects of their exploitation; protection and control of the environment, including atmosphere, water and land; definition of risky activities, dangerous materials and residues; rules regarding nuclear energy, noise, vibrations, thermal and light energy, odors and visual contamination; promotion of social participation; security and controlling measures and sanctions, as well as regulations on testing and inspection, legal actions and fines. This law is patterned after those in effect in the U.S., Spain, Germany and Japan, and incorporate rules designed by the Environmental Protection Agency (EPA).

The new law touches on three basic aspects of environmental law: the use of natural resources, whether renewable or not, the necessary actions to avoid pollution, and ecological equilibrium to allow for further development. Fundamentally, the law states that any public or private activity which causes ecological disequilibrium or excesses must receive prior authorization from SEDUE. The substantive scope of the law sets forth ecological policy, planning and ordinance, and contains criteria for the promotion and regulation of economic, social and urban development. The law makes detailed provisions for the prevention and control of air, water and soil contamination by regulating vehicular and industrial emissions, depletion and contamination of the existing water supply, importation of hazardous toxic waste, herbicides, pesticides, fertilizers or other toxic substances prohibited in their country of manufacture. The storage, transportation, re-use, incineration or final disposal of waste products also require the prior authorization from SEDUE. Any company producing hazardous waste is legally responsible for its proper disposal in perpetuity. All contamination due to noise, vibrations, thermal energy, odors or visual effects, when it exceeds the limits established by SEDUE and the Secretariat of Health, is prohibited.

The application of these rules, their enforcement and the corresponding administrative and federal sanctions for their violation are contained in the law. Sanctions are potentially harsh: fines of up to 20,000 times the daily minimum wage may be imposed, plants may be shut down and involved individuals may be subject to imprisonment. Federal, state and municipal authorities may inspect and monitor activities to verify compliance. These inspections follow fairly specific procedures. The procedural requisites have also been formalized. All existing and planned operations exceeding the parameters specified in the technical norms require an authorization from SEDUE. An applicant for SEDUE authorization must provide the agency with an environmental impact statement of the project. After evaluating the application, SEDUE may grant or deny the authorization or condition it upon changes in operation or pollution controls.

Seven industrial categories are particularly scrutinized for their environmental impact:

- federal public works;
- water works, oil, gas, carbon and general transportation networks;
- chemical and petrochemical plants, iron and steel mills, paper factories, sugar refineries, manufacturers of beverages, cement, automotive parts, and electricity generating and transmission plants;
- mineral and non-mineral exploration, extraction, treatment and refining;
- federal tourism developments;
- hazardous (including nuclear) waste treatment, storage and disposal plants;
- exploitation of slowly regenerating vegetation in forests and tropical jungles.

To supplement the law and assist in its interpretation and application, various regulations and technical norms have been issued. The regulations outline the procedures required by the law, while the norms provide quantitative parameters for the evaluation of hazardous waste.

8. MARKET ACCESS

Sales in Mexico are usually made through local agents and distributors, normally operating on a commission basis. Decisions should be taken on whether to use an agent, joint venturing or licensing with a Mexican company. Mexico's market is highly competitive and companies which maintain an active presence in the market and establish a good track record by virtue of product performance, competitive price and service will do well.

All suppliers of equipment or services, whether local or foreign, to a Mexican Government entity must be registered with the Secretariat of Programming and Budget (SPP) and with the Purchasing Department of the agency itself. All purchases over a specified minimum are subject to bidding.

As a result of Mexico's accession to GATT, the Mexican Government has gradually opened the economy to international suppliers. Import duties have been lowered from a maximum 100% in 1983, to 20% since December, 1988. The official import price system has been totally eliminated and import permits are required on only 325 of the total 11,950 items in the Mexican Tariff Act, none of which correspond to this industry. Mexico adopted the Harmonized System of Tariff Nomenclature on July 1, 1988.

Imports of pollution control equipment and instruments are subject to a 0% to 20% ad valorem duty assessed on the F.O.B. invoice value. In addition, a 0.8% customs

processing fee is assessed on the invoice value. A 15% value added tax is then assessed on the cumulative value of invoice plus the above taxes.

There are no official metric requirements applicable to imports into Mexico, However, since the metric system of units is by law the official standard of weights and measures in Mexico, importers will usually require metric labeling for packaged goods, although the English system is also used. Dual labeling is acceptable. Imported products should be labeled in Spanish containing the following information: name of the product, trade name and address of the manufacturer, net contents, serial number of equipment, date of manufacture, electrical specifications, precautionary information on dangerous products, instructions for use, handling and/or product conservation and mandatory standards. Mexico adheres to the International System of Units (SI). Electrical standards are the same as in the U.S. Electric power is 60 cycles with normal voltage being 110, 220 and 400. Three phase and single phase 230 volt current is also available.

Prepared by:
Caroline Verut
for the Canadian Embassy
Mexico City
July 1990

SECRETARÍA DE MEDIO AMBIENTE Y ENERGÍA	SECRETARY OF ENVIRONMENT AND ENERGY	DR. FRANCISCO COVARRUBIAS GAYTAN	2711248 2715063
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SECRETARÍA DE VIVIENDA	SECRETARY OF HOUSING	DR. HUMBERTO CHAVEZ MARTINEZ AV. CONSTITUYENTES NO. 947 EDIFICIO C COL. BELLEN DE LAS FLORES 01116 MEXICO, D.F.	2711441 2712074
COORDINADORA EJECUTIVA DE LA COMISION NACIONAL DE ECOLOGIA	COORDINATOR OF THE NATIONAL ECOLOGY COMMISSION	DR. EDMUNDO DE ALVA ALCARAZ RIO ELBA NO. 20 PISO 14 COL. CUAUHTEMOC 06500 MEXICO, D.F.	2369208
DIRECTORA GENERAL DE CONSERVACION ECOLOGICA DE LOS RECURSOS NATURALES	GENERAL DIRECTOR OF CONSERVATION	DRA. GRACIELA DE LA GARZA GARCIA RIO ELBA NO. 20 PISO 10 COL. CUAUHTEMOC 06500 MEXICO, D.F.	2859576 2859576
DIRECTOR GENERAL DE PLANEACION	PLANNING DIRECTOR	LIC. MARIO PESCADOR OSUNA VICENTE EQUIA NO. 46 PISO 7 COL. SAN MIGUEL CHAPULTPEC 07850 MEXICO, D.F.	5534983 2713443
DIRECTOR GENERAL DE POLITICA Y COORDINACION DE PROGRAMAS DE VIVIENDA	HOUSING PROGRAMS	DR. MANUEL DARIO LUGO GOYRIA AV. CONSTITUYENTES NO. 947 EDIFICIO A PLANTA ALTA COL. BELLEN DE LAS FLORES 01116 MEXICO, D.F.	2712523 2713000
DIRECTOR GENERAL DE PREVENCIÓN Y CONTROL DE LA CONTAMINACIÓN AMBIENTAL	PREVENTION AND CONTROL OF CONTAMINATION AND ENVIRONMENT	DR. RENE ALTAMIRANO PEREZ RIO ELBA NO. 20 PISO 1 COL. CUAUHTEMOC 06500 MEXICO, D.F.	5532987 5533431
JEFE DE LA UNIDAD DE ASUNTOS INTERNACIONALES	INTERNATIONAL ISSUES	LIC. DAVID CAMPOS RUIZ AV. CONSTITUYENTES NO. 947 EDIFICIO B PLANTA ALTA COL. BELLEN DE LAS FLORES 01116 MEXICO, D.F.	2712558 2713000

Y ECOLOGIA

MINISTRY OF URBAN DEVELOPMENT AND ECOLOGY

CARGO POSITION	TITULAR DOMICILIO ADDRESS	TELEFONO PHONE
SECRETARIO DE DESARROLLO URBANO Y ECOLOGIA (MINISTER)	LIC. PATRICIO CHIRINOS CALERO AV. CONSTITUYENTES NO. 947 EDIFICIO B PLANTA ALTA COL. BELEN DE LAS FLORES 01116 MEXICO, D.F.	2718481 2718521
SECRETARIO PARTICULAR DEL SECRETARIO DE DESARROLLO URBANO Y ECOLOGIA (PRIVATE SECRETARY TO MINISTER)	LIC. SALVADOR MIKEL RIVERA AV. CONSTITUYENTES NO. 947 EDIFICIO B PLANTA ALTA COL. BELEN DE LAS FLORES 01116 MEXICO, D.F.	2718561 2712650
SUBSECRETARIO DE DESARROLLO URBANO DEPUTY MINISTER FOR URBAN DEVELOPMENT	ARQ. FRANCISCO COVARRUBIAS GAYTAN AV. CONSTITUYENTES NO. 947 EDIFICIO C PLANTA ALTA COL. BELEN DE LAS FLORES 01116 MEXICO, D.F.	2711249 2715663
SUBSECRETARIO DE ECOLOGIA DEPUTY MINISTER OF ECOLOGY	FIS. SERGIO REYES LUJAN RIO ELBA NO. 20 PISO 16 COL. CUAUHEMOC 06500 MEXICO, D.F.	5539538 5539647
SUBSECRETARIO DE VIVIENDA DEPUTY MINISTER HOUSING	ARQ. HUMBERTO CHAVEZ MARTINEZ AV. CONSTITUYENTES NO. 947 EDIFICIO C COL. BELEN DE LAS FLORES 01116 MEXICO, D.F.	2711441 2712374
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DIRECTORA GENERAL DE CONSERVACION ECOLOGICA DE LOS RECURSOS NATURALES CONSERVATION	DRA. GRACIELA DE LA GARZA GARCIA RIO ELBA NO. 20 PISO 10 COL. CUAUHEMOC 06500 MEXICO, D.F.	2869276 2869278
DIRECTOR GENERAL DE PLANEACION PLANNING DIRECTOR	LIC. MARIO PESCADOR OSUNA VICENTE EGUIA NO. 46 PISO 7 COL. SAN MIGUEL CHAPULTEPEC 11850 MEXICO, D.F.	5154983 2717443
DIRECTOR GENERAL DE POLITICA Y COORDINACION DE PROGRAMAS DE VIVIENDA HOUSING PROGRAMS	DR. MANUEL DARIO LUGO GOYTIA AV. CONSTITUYENTES NO. 947 EDIFICIO A PLANTA ALTA COL. BELEN DE LAS FLORES 01116 MEXICO, D.F.	2712623 2713000
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GOVERNMENT AUTHORITIES FOR WASTE MANAGEMENT

1990
1990

Director General de Salud Ambiental
Secretaria de Salud
San Luis Potosi 192 4o. piso
Col. Roma
06700 Mexico D.F.
Phone: 584-6529
Fax: 584-5260
Director Lic. Cristina Cortinas de Nava

Ministry of Health
Petroleum Institute
(environmental
issues)

Director General de Prevencion y Control de
la Contaminación Ambiental
Secretaria de Ecologia
Secretaria de Desarrollo Urbano y Ecologia
Rio Elba 20 1er. piso
Col. Cuauthemoc
06500 Mexico D.F.
Phones: 553-2977/553-9481
Fax: 286-8559
Director Arq. Rene Altamirano Perez

Mexican Petroleum
state company
(SEDUE) environmental issues

Sr. Fernando Menendez
Departamento del Distrito Federal
Pino Suarez 15-3
Mexico D.F.
Phone: 518-1100

Association of
Adviser to the Mayor
of Mexico City for
environmental problems

Sr. Jorge Gamboa de Buen
Director General
Re-Organizacion de la Proteccion
Urbana y Ecologia
Departamento del Distrito Federal
Pino Suarez 15-3
Mexico D.F.
Phones: 510-1594 or 510-1692

Water commission
For Mexico City

GOVERNMENT AUTHORITIES FOR WASTE MANAGEMENT

1990

Ing. Victor Manuel Alcerreca Sanchez
Sub-director General de Transportacion
Industrial
Instituto Mexicano del Petroleo
Eje Lazaro Cardenas 152-9o.piso
Torre Administrativa
Col. San Bartolo Atepehuacan
Mexico D.F.
Phone: 567-8750 or 567-6600

Mexican
Petroleum Institute
(environmental
issues)

Lic. Antonio Brambila Meda
Coordinador Ejecutivo para el
Desarrollo de la zona Petrolera
Petroleos Mexicanos
Av. Marina Nacional 329
Col. Huasteca
Mexico D.F.
Phone: 254-4597 or 531-6248

Mexican Petroleum
state company
environmental issues

Sociedad Mexicana de Ingenieria
Sanitaria y Ambiental A.C.
Mexico 5682
16030 Mexico D.F.
Phone: 653-5082

Association of
Sanitary
and environmental
engineer.

Comision Nacional del Agua
Teotihuacan 18
Mexico D.F.
Phone: 574-5609
Fax: 574-4426
Attn: Ing. Jose Calderon

Water commission

- c) Copy of power of company's legal representatives in Canada notarized, and certified by Mexican Consul (documents mentioning full name of person or persons, legally authorized to sign documents on behalf of company showing his (their) signature.
- d) Copy of agency/representative contract in Mexico notarized and then certified by Mexican Consul.
- e) Copy of a document that proves and guarantees legal existence of company in Canada.
A certificate of incorporation from a Canadian

**WHEN SELLING TO THE MEXICAN GOVERNMENT AND ITS AGENCIES, IT IS
REQUIRED TO HAVE REGISTRY NUMBER AS FOREIGN SUPPLIER.
FOLLOWING IS RELATED INFORMATION.**

REGISTRATION WITH SECRETARIA DE PROGRAMACION Y PRESUPUESTO

(SPP)

Following is a summary of Registration Procedures for Canadian Companies wishing to sell to the Mexican Government and its decentralized agencies.

Note: Registration procedures now cannot be done by the foreign (Canadian) supplier, and must be done by the company's official local agent/representative in Mexico.

To obtain registry, the following documents should be submitted to the Registro de Proveedores Office of the Secretaría de Programación y Presupuesto (SPP) (Ministry of Planning and Budgeting) located at the following address:

Registro de Contratistas y
Proveedores de la Administración
Pública Federal S.P.P.
Av. San Antonio Abad No. 124 - Piso 1
Col. Tránsito
06380 México, D.F.

- a) Applications for registration of foreign supplier forms SPP in original and 3 copies, all signed separately.
- b) A copy of the company's balance sheet and profit and loss statement with data not older than two months with respect to the date of application entry into the Foreign suppliers registry, also translated into Spanish and legalized by the Mexican Consulate.
- c) Copy of power of company's legal representatives in Canada notarized, and certified by Mexican Consul (documents mentioning full name of person or persons, legally authorized to sign documents on behalf of company showing his (their) signature.
- d) Copy of agency/representative contract in Mexico notarized and then certified by Mexican Consul.
- e) Copy of a document that proves and guarantees legal existence of company in Canada.
A certificate of incorporation from a Canadian -

Chamber of Commerce or Industry Chamber. This letter must be presented in its original form and must state that interested company has been legally incorporated in accordance to the laws of the country and must include the date of incorporation. The letter cannot be more than six months old from the date it was issued. In addition it must be translated into Spanish and legalized by the Mexican Consulate.

- f) Limited power to local agent to act on behalf of foreign firm on disputes and collection matters.
 - g) A photocopy of sample past invoices for each product to be supplied duly translated and legalized by the Mexican Consulate with the date and the names of the buyer and the seller underlined and highlighted.
2. Once application forms and supporting documents are approved, registration number is issued in two to four weeks time. To claim registration number, foreign firm's representative will have to present original and copy of HD-1 form "Declaración General de Pago de Derechos" duly paid.
3. To obtain HD-1 forms.
As first step, payment of \$366,000 Mexican Pesos (as of April 1990 and rate subject to changes) should be made at any office of the Secretaría de Hacienda y Crédito Público (SHCP) in cash, or with Mex. Peso bank draft in favor of the "TESORERIA DE LA FEDRACION" payable through a Mexican bank located in Mexico City and should be accompanied by four (4) payment forms DH1. Each form should be signed separately. Forms can be obtained at any SHCP's offices.

IMPORTANT

TO AVOID REFUSAL OF APPLICATIONS

- I Copies of documents b, c, d, e, f, g, must be translated into Spanish by certified local translator if done in Mexico. However if documents b, c, d, e, f, g and respective translations are done into Spanish in Canada, these do not have to be done by certified translator, as above, but documents and translations must be duly notarized, and then certified by nearest Mexican Consul in your area.
- II Original and copies of application forms must be signed separately by company's legal representative.

POTENTIAL AGENTS/REPRESENTATIVES

III Corporate name should appear exactly the same in all documents: (i.e.: spelling, company names which have changed over the years).

Legal representative's signature should be signed separately on following documents:

- . DH-1 Payment forms
- . Registry application forms (both pages)
- . Power of legal representative of company in Canada.
- . Copy of agency/representative contract in Mexico.
- . Limited power to local agent.

While every effort has been made to provide the above information accurately, the Canadian Embassy cannot assume responsibility for errors, omissions or subsequent changes in procedure which may occur.

Information updated April/90 Canadian Embassy Mexico City

S.A. de C.V.
 Paseo de la Reforma 300
 Piso 18
 Col. Juarez
 06600 Mexico, D.F.
 Tels. 707 35 75
 Telex 1773469 (Provas)
 Attn: Julio Torti

Mrs. Representative for wide range of products and services connected with environmental/pollution J. problems.

Toxic wastes, waste management and disposal systems

S.A. de C.V.
 Mexico-Toluca 3495
 Deleg. Cuajimalpa
 0500 Mexico, D.F.
 Tels: 812 03 26 812 03 60
 812 09 33
 FAX 812 01 99
 Attn: Ing. Carlos Vilchis Medrano

Dust collectors, filters and Carr. similars.

Coimasa
 Paseo de la Reforma 234-700
 06600 Mexico, D.F.
 Tel 514 52 99
 Telex (383) 1774369
 Ing. Alberto Gutiérrez Robles

Data logger equipment measuring instrumentation

POTENTIAL AGENTS/REPRESENTATIVES

ENVIRONMENTAL SECTOR

OXO, S.A. Av. Madero No. 1-12vo Piso Col. Centro 06007 México, D.F. Tels: 510 00 70 510 10 68 Telex 1776450 (OXOME) Atn: Sr. José A. Remezc	Equipment, machinery, water treatment plants and mobile units.
Distribuidora Japay, S.A. Av. Revolución 1209-5to Piso Col. Alpes 01010 México, D.F. Tel: 651 98 99 Telex 1771300 Atn: Sr. Javier Payro	Equipment air purificators and and similar
Representaciones Mexicanas de Maquinaria y Equipo, S.A. de C.V. Racine 120-1102 Col. Los Morales 11510 México, D.F. Tels: 557 29 75 395 37 84 Telex 1770976 1773942 Atn: Juan Luis Steimle	Mfrs. Representative for wide range of products and services connected with environmental/pollution J. problems.
Protecol, S.A. de C.V. Paseo de la Reforma 300 Piso 18 Col. Juarez 06600 México, D.F. Tels. 207 35 75 Telex 1773468 (Provme) Atn: Julio Torti	Toxic wastes, waste management and disposal systems
Simsa, S.A. de C.V. México-Toluca 3495 Deleg. Cuajimalpa 0500 México, D.F. Tels: 812 03 26 812 03 60 812 09 33 FAX 812 01 99 Atn: Ing. Carlos Vilchis Medrano	Dust collectors, filters and Carr. similars.
Coimmsa Paseo de la Reforma 234-702 06600 México, D.F. Tel 514 52 99 Telex (383) 1774349 Ing. Alberto Gutiérrez Robles	Data logger equipment measuring intrumentation

Aralco, S.A. de C.V.
Panamericana 1087
P.O. Box 2-D
76190 Querétaro, Qro.
Tels (463) 61619 62959
65291
Telex 121665 Aralme
Fax (463) 6-9363
Atn: Ing. Alfredo Arévalo Morales

Gas imission analysers, air Carr.
monitoring, instrumentation
equipment

ABC Instrumentation
Analítica, S.A. de C.V.
Tepeji 86
Col. Roma
06760 México, D.F.
Tels: 564 15 52 564 21 06
264 02 67
Fax 264 02 74
Atn: Sr. Juan Ignacio Ustarán
Cervantes

Industrial gas environmental
control equipment
cleaning equipment
drainage

Latinoamericana de Estudios
Ambientales S.A. de C.V.
(LADESA)
Río Nilo 88, Office 703
Col. Cuauhtémoc
06500 México, D.F.
Tels: 528 76 87 525 80 52
Telex 1761346 (IISME)
Atn: Sr. Humberto Bravo

Air conditioning equipment

Melval Representaciones
Génova 20 PH
Col. Juarez
06600 México, D.F.
Tel 208 37 28
Fax 208 72 66
Sr. Guillermo Valadés Valdés

Seals, materials for the treatment
of water

Combustión Industrial y
Control, S.A. de C.V.
Rosas Moreno 60
Col. San Rafael
06470 México, D.F.
Tels: 566 33 65 592 88 37
Telex 1762498 (CICAME)
Fax 535 22 73
Sr. Joel Villalobos Mendoza

Valves and controls

KEMIE INTERNATIONAL DE MEXICO SA CV
Ignacio Esteva 26-BIS
Col. San Miguel Chapultepec
11850 Mexico, D.F. Tel 272 11 09 FAX 277 23 43

(Equipment representation)

Attn: Ing. Orlando Iturbe, Gen. Mgr

Maquinaria Intercontinental
S.A. de C.V.
Av. Fuerza Aérea Mexicana 310
15730 México, D.F.
Tels: 571 81 66 571 89 89
571 85 45 571 84 34
Telex 1773192
Fax 571 02 60 762 14 95
Atn: Rubén Martínez Guerra

G.H. Maquinaria y Equipo S.A.
Florida 51
03720 México, D.F.
Tels: 563 24 11 563 79 92
Telex 1764431 (GHMME)
Atn: Ing. Alfonso Galindo

Alejandro García Arteaga
Anti-Conta S.A. de C.V.
Miguel Laurent 17-5
México, D.F.
Tel 559 07 75
Fax 559 24 70

Ing. Carlos Vaugier F.
Industrias Mass, S.A. de C.V.
Recursos Petroleros 5 "La Loma"
Tlalnepantla, Edo. de Mex
Tels: 397 98 00 397 87 00
397 92 17

Accesolab
Accesorios para laboratorios,
S.A. de C.V.
Victor Hugo 74
Col. Anzures
11590 México, D.F.
Tels 533 10 95 525 05 96
Eugenia Fishibein Ordóñez
Tels 533 08 27 255 55 17

Ing. Juan Bueno Zirón
Dir. Gral.
Grupo Omni
Calle 6 Num 135
Col. Granjas Don Antonio
09070 México, D.F.
Tel 582 34 68 582 66 22

Municipal type garbage cleaning
equipment

Municipal heavy cleaning equipment
drainage

Anti pollution equipment/systems

Rep of Culligan interest only to all
related with water

Bio Medical and Environmental

Consultants Area of Pollution and
Environmental

**ENVIRONMENTAL CONTROL EQUIPMENT/
CONTAMINACION AMBIENTAL, EQUIPOS**

IEP HOJEL, S.A. DE C.V. Tel. 520-5852
Campos Eliseos 385, Torre B, 4o. Piso
Col. Polanco Reforma
Del. M. Hidalgo
11560 México, D.F.
Richard C. Hojel M., President; Ernesto Weber, General Director.
Manufacturers of industrial process equipment, engineering, combustion systems and controls, environmental control equipment.
Established 1975 • Personnel 75 • Telex 177-7222

WHEELABRATOR DE MEXICO, S.A. Tel. 560-5446
Ing. Eugenio Prado Lucero, General Manager; Ing. Jesús de la Garza, Sales Manager. Av. Jardines de San Mateo 139, Sta. Cruz Acatlán, Naucalpan, Méx., 53150 México. Manufacturing: Dust collectors, foundry, iron and steel industry machinery, ventilators. Established: 1963.

ENTERPRISE, S.A. DE C.V. Tel. 534-6020
Rodríguez Saro 424
Col. Del Valle
Del. B. Juárez
03100 México, D.F.
Ing. Jorge Alvarez L., General Director; Lic. Héctor Jakes G., Human Resources Director; Lic. Higinio Cárdenas, Import Manager; C.P. Agustín Zires C., Administrative Manager; Porfirio Meléndez, Director of Sales.
Industrial controls, automation and combustion systems.
Established 1961 • Personnel 211 • Telex 177-1184

WALLACE & TIERNAN DE MEXICO, S.A. DE C.V. Tel. 787-4499
Nicholas L. Gonzáles Insúa, General Manager; Juan Enrique González Martínez, Comptroller; Héctor Escudero, Purchasing Manager. Vía José López Portillo 321, Col. Sta. Ma. Cuauhtepc, Coacalco, Méx. 55700 México. Telex: 177-2116. Manufacturing: Water treatment equipment, control instruments, metering pumps, measuring instruments. Established: 1959, Personnel: 69, Sales: 180 million pesos.

SHARPLES STOKES, S.A. DE C.V. Tel. 398-8700
Ing. Adolfo Fritz Corona, President; Armando Chong Moreno, Comptroller; Ing. Enrique Campillo R., Sales Manager; Delfina Martínez C., Purchasing Manager. Recursos Petroleros No. 7, Fracc. Industrial La Loma, Tlalnepantla, Méx., 54060 México. Manufacturing: Pumps, pumps, metering; distillers; water treatment equipment, processing equipment, granulators, pharmaceutical industry machinery, gages, environmental control equipment, marine equipment and supplies, laboratory equipment, chemical plant equipment, measuring instrument, manometers, food processing machinery, paper industry machinery. Established: 1952, Personnel: 74, Sales: 153 million pesos.

**SCAN PANAMERICANA
(MEXICO), S.A.**

Tel. 545-9531
Carsten Hagen, Managing Director; Sigurd Henna, Administrative Director; Elvira Landiribar, Office Manager; Adriana Garci-Crespo, Project Manager. Darwin 109, Col. Anzures, Del. M. Hidalgo, 11590 México, D.F. Telex: 17-73-408. Distribution: Equipment service and international trade in the following lines; maritime and offshore, fisheries, electronics, processing, metals, foods, dental equipment, medical products, etc. Established: 1980, Personnel: 11.

PURIFICACION DE AIRE MEXICANA, S.A. DE C.V. Tel. 565-5200
1o. de Mayo No. 85
Col. San Andrés Atenco
54040 Tlalnepantla, Méx.
Apdo. Postal 292
54000 Tlalnepantla, Méx.
G. Zuccher, General Manager; A. Ramírez, Product Manager; B. Pineda, Finance Manager; L. Castellanos, Sales Manager; J. Flores Gil, Purchasing Manager.
Air pollution control products, air filtration products, acoustical systems and products.
Established 1963 • Personnel 100 • Telex 17-2650

LEEDS & NORTHRUP MEXICANA, S.A. Tel. 576-8033
James W. Meehan, General Manager; Ing. Víctor Monroy, Sales Manager. Blvd. M. A. Camacho 225, San Francisco Cuautlalpan, Naucalpan, Méx., 53560 México. Telex: 17-74-551. Sales and manufacture of electronic instruments to measure, record and control variables in the process industry. Established: 1964, Personnel: 33, Sales: 300 million pesos.

NISSHO IWAI MEXICANA, S.A. DE C.V. Tel. 553-1066
Lic. Daniel Melgar Reguera, Managing Director; Yoshito Ohtake, General Manager; C.P. Ma. Concepción Moreno R., Administrative Manager. José Vasconcelos No. 208-701, Col. Condesa, Del. Cuauhtémoc, 06140 México, D.F. General trader "Sogoshosha", import and export of every kind of steel products, machinery, chemicals, ferrous materials, non-ferrous metal, textiles, foodstuffs, energy, lumber and general commodities.

INGENIERIA Y PROCESOS, S.A. DE C.V. Tel. 566-0122
Ing. Federico Talancón G., Managing Director; Ing. José Chew, Sales Manager; Ricardo Sánchez, Purchasing Manager. Av. Morelos 98-205, Col. Juárez, Del. Cuauhtémoc, 06600 Apartado Postal M-9321, México, D.F. Telex: 17-73-117. Manufacturing: Chemical plant equipment, environmental control equipment, mining equipment, dust collectors, processing equipment, materials handling equipment, structural shapes. Filters, heat exchangers, food processing machinery, cement industry machinery, petroleum equipment and supplies, conveyors. Established: 1953.

GAF CORPORATION
DE MEXICO, S.A. DE C.V. Tel. 521-2247
Sergio Rivero, General Manager; Juan de Dios Flores G., Sales Manager. López 15-403-404, Col. Centro, Del. Cuauhtémoc, 06050 México, D.F. Telex: 17-77-220. Distribution: Environmental control equipment, processing equipment, filters, copying machines, chemical and pharmaceutical industry raw materials. Established: 1972, Personnel: 15.

MILLIPORE, S.A. DE C.V. Tel. 576-9688
Ing. Alfonso Peña Montoy, General Manager; C.P. Cuauhtémoc Ramírez Aburto, Financial Director. Ingenieros Militares 85 P.B., Col. Argentina Pte., Del. M. Hidalgo, 11230 México, D.F. Telex: 17-77-442. Distribution: Chemical plant equipment, environmental control equipment, water treatment equipment. Established: 1972, Sales: 375 million pesos.

EXIM MEXICANA, S.A. Tel. 254-3612
J. R. Manuel Cano, President; Armando Reza, Purchasing Manager. Río San Joaquín 303, Col. Pensil Sur, Del. M. Hidalgo, 11490 México, D.F. Distribution: Electronic equipment, industrial sweepers, scales, coils, pumps, centrifugal pumps, concrete pumps, deep well pumps, calculators, gages, cement, magnetic tapes, international trade, electronic components, environmental control equipment, agricultural products, radio communication, representations, semiconductors, tachometers, telephone equipment, TV components, TV equipment. Established: 1973.

COYREMEX, S.A. Tel. 572-6688
Ing. Alberto Greaves, General Manager; Ing. Luis Castillo, Sales Manager; Vida A. Sotres, Purchasing Manager. Circ. Escultores 141, Satélite, 53100 México. Telex: 17-71-961. Distribution: Environmental control equipment, foundry, iron and steel industry machinery, refractories. Established: 1974, Personnel: 4.

EQUIPOS ELECTROMECHANICOS, S.A. DE C.V. Tel. 565-7400
Ing. Antonio Ruiz Maravilla, President; Ing. Fernando Ruiz A. de la C., Managing Director; Ing. Fernando Contreras, Plant Manager. Km. 20 Vía José López Portillo, Tultitlán, Méx., 54900 México. Telex: 017-2236. Manufacturing: Air washers, ventilators. Established: 1955, Personnel: 247.

CONTROL INDUSTRIAL, S.A. (CISA) Tel. 554-4611
Ing. Francisco de P. Mendoza R., Technical Director; Francisco Mendoza Hartmann, General Manager. Allende 110, Col. del Carmen, Del. Coyoacán, 04100 México, D.F. Telex: 17-71-300. Manufacturing: Bollers, colorimeters, flow meters, laboratory equipment, potentiometers, etc. Established: 1952.

CASA MARIO PADILLA, S.A. DE C.V. Tel. 250-5055
Lago Alberto 369
Apdo. Postal 24402
Col. Anáhuac
Del. M. Hidalgo
11320 México, D.F.
José C. Romay W., General Director; Dora María Cabrera M., Human Resources Manager; Marco A. Hernández, Rafael Cargano G. and José A. Quiñones, Directors.
Laboratory equipment and medical instruments.
Established 1950 • Personnel 200 • Telex 177-7605

BUFFALO FORGE, S.A. DE C.V. Tel. 565-9933
Ing. Peter H. Florance, Managing Director; Ing. Raúl Sepúlveda, Sales Manager; Ing. José Luis Domínguez, Plant Manager. Autopista México-Querétaro Km. 33, Tepalcapa, Méx., 54769 México. Apdo. Postal 34-032, 11619 México, D.F. Manufacturing: Environmental control equipment, ventilators. Established: 1972, Personnel: 114.

BICOR DISEÑO CIENTIFICO, S.A. DE C.V. Tel. 557-6444
Ing. Moisés Bicas, General Manager; Juan Morales, Accountant; Ing. Salvador Villalobos, Sales Manager. Presa Sanalona No. 12, Col. Irrigación, Del. M. Hidalgo, 11500 México, D.F. Telex: 17-73-929. Distribution: Machinery, centrifugal pumps, positive displacement pumps, vacuum pumps; process equipment, mixers, mills, dryers, material handling equipment. Established: 1966. Personnel: 20.

ATMOS, S.A. Tel. 524-7703
Salvador Alvarado, President; Ing. Juan Manuel del Río Ramírez, General Manager; Ing. Carlos Rodríguez Sánchez, Sales Manager; Marcela Alvarado Méndez, Purchasing Manager. Oso 127-205, Col. Del Valle, Del. B. Juárez, 03100 México, D.F. Manufacturing: Environmental control equipment, vacuum pumps, industrial screens, sound equipment, materials handling equipment, chemical plant equipment, filters, hoists, packaging machinery, sugar industry machinery, cement industry machinery. Established: 1970.

GRUPO TLILLI TIALPILLI, S.A. (General environmental)
Tesoro 62
Col. Estrella
07810 México, D.F.
Tel 537 05 43
Fax 537 05 43
Attn: Ing. Tomás S. de la Concha

AQUA MEX, S.A. DE C.V. 33-3023
 Lerdo de Tejada 803 Oriente
 66350 Santa Catarina, N.L.
 Apdo. Postal 2581
 66000 Monterrey, N.L.
 Ing. Enrique González Guzmán, President and General Manager
 Manufacturers of water and sewage treatment equipment and
 chemicals.
 Established 1962 • Personnel 91

CONTROL INDUSTRIAL, S.A. 554-4611
 Allende 110
 Col. del Carmen
 Del. Coyoacán
 04100 México, D.F.
 Lic. Fernando Mendoza, General Manager; Lic. Lourdes Mendoza,
 Assistant Manager; Elisa Islas Hernández, Purchasing Manager.
 Manufacturers of industrial water treatment equipment and chem-
 icals, fuel oil additives, laboratory and field analysis instruments,
 automatic and manual flow meters, samplers for natural and waste
 water, filters and sterilizers.
 Established 1952 • Personnel 22 • Telex 1771300

OLIN QUIMICA, S.A. DE C.V. 570-7520
 Campos Eliseos 385, Torre A, 9o. Piso
 Col. Polanco
 Del. M. Hidalgo
 11560 México, D.F.
 Ing. Alfredo J. Ríos S., General Manager; Ing. Peter M. Barnard,
 Area Director for Latin America; C.P.T. Nemesio Ostolaza, Manager;
 Ing. Ernesto Pérez S., Marketing Manager.
 Chemical products, metal and brass products, electronic chem-
 icals, sporting goods, swimming pool chemicals, water quality
 management, aerospace technologies, small and medium caliber
 ammunition.
 Established 1972 • Telex 174578

PROQUIMICA, S.A. DE C.V. 51-8741
 José Mariano Salas 137 Oriente
 Col. Regina
 64290 Monterrey, N.L.
 Apdo. Postal 484
 64000 Monterrey, N.L.
 Ing. Horacio Cortés Segura, President; Ing. Adrián Madero
 Madero, Vice-President; Enrique Herrera Martínez, Assistant Vice-
 President.
 Specialty coatings, water treatment chemicals.
 Established 1986 • Personnel 60

**PROVEEDORA DE PRODUCTOS
 QUIMICOS, S.A.** 46-1787
 Gral. Pablo González 249 Poniente
 Col. Mitras Sur
 64020 Monterrey, N.L.
 Apdo. Postal 59
 64000 Monterrey, N.L.
 Lic. Lorenzo Aguilar, General Manager.
 Distributors of chemicals and raw materials.
 Established 1947 • Personnel 25

WESCO MEX, S.A. DE C.V. 531-0585
 Presidente Masaryk 17, Mezzanine
 Col. Chapultepec Morales
 Del. M. Hidalgo
 11570 México, D.F.
 Carlos E. Lugo, Director; Ing. Carlos Vaugier Franco, Sales Mana-
 ger; Arq. Pedro Martínez N., Purchasing Manager.
 Water treatment engineering, design, manufacture and service.
 Established 1959 • Personnel 35 • Telex 1171300

PROVEEDORES TECNICOS, S.A. DE C.V. 286-5022
 Durango 332, 1er. Piso
 Apdo. Postal 40-149
 Col. Roma Sur
 Del. Cuauhtémoc
 06700 México, D.F.
 Ing. Guillermo Almazán, General Manager; Ing. Francisco H.
 Brizzio, Sales Manager; Ing. Luis Miranda, Materials Manager.
 Manufacturers of water treatment chemicals.
 Established 1950 • Personnel 83 • Telex 1777254

DORR-OLIVER DE MEXICO, S.A. DE C.V. 688-5877
 Av. Cuauhtémoc 1338, Desp. 302-304
 Col. Santa Cruz Atoyac
 Del. B. Juárez
 03310 México, D.F.
 Miguel Angel Olvera L., General Manager; Francisco Javier
 Saavedra, Comptroller; Cuauhtémoc Robledo E., Sales Manager;
 Fernando de la Paz, Operations Manager.
 Manufacturers of chemical plant equipment, filters, water treatment
 equipment, food processing machinery, pumps, sugar industry
 machinery.
 Established 1958 • Personnel 16 • Telex 1776201

ECOLAB, S.A. DE C.V. 358-9722
 Av. Norte Sur 8
 Fracc. Industrial Alce Blanco
 53370 Naucalpan, Méx.
 Ing. Gustavo de la Macorra, General Manager; Roberto Molina,
 Purchasing Manager; Braulio Zapata, Finance Director.
 Manufacturers of acids, metering pumps, water treatment equip-
 ment, cleaning equipment, lubricants, cleaning products, chem-
 icals, anticorrosion coatings, technical assistance, cleaning and
 sanitation.
 Established 1957 • Personnel 105

INTENSA, S.A. 533-6435
 Río Pánuco 82
 Col. Cuauhtémoc
 Del. Cuauhtémoc
 06500 México, D.F.
 Ing. Rodolfo Kilian, General Director; E. Montañó C., Administrative
 Manager; Ing. Jorge Meléndez, Engineering Director.
 Engineering services for the petrochemical and cornstarch indus-
 tries, manufacture and installation of water treatment systems, dis-
 tributors of progressive cavity pumps, filters, meters, evaporation
 systems, flash dryer systems, activated carbon.
 Established 1968 • Personnel 30 • Telex 1776263

TIEX, S.A. DE C.V. 398-7069
 Blvd. Manuel Avila Camacho 1994-305
 Col. Verónica Anzures
 Del. M. Hidalgo
 11300 México, D.F.
 Roger A. Kenyon, General Manager; Ing. Javier Cárdenas, Sales
 Manager.
 Metallic minerals (steel, aluminum, nickel), transport and main-
 tenance equipment, agricultural machinery, metallic component
 forging, crane maintenance systems, water treatment, abrasion re-
 sistant plates, steel tubing, aluminum wire and cable.
 Established 1979 • Personnel 10 • Telex 172668

WALLACE AND TIERNAN DE MEXICO, S.A. DE C.V. 787-4499
Vía José López Portillo 321
54900 Santa María Cuauhtepac, Méx.
Juan Enrique González M., General Manager; Héctor Martínez, Purchasing Manager.
Water and waste process instruments.
Established 1959 • Personnel 80 • Telex 177211

BABCOCK MEXICO, S.A. Tel. 395-2044
Blas Pascal 111
Col. Chapultepec Morales
Del. M. Hidalgo
11510 México, D.F.
Ing. E. Moya, General Director; Lic. Ana L. Obeso, Human Resources Manager; Ing. J.L. Llano, Finance Director; Ing. F.J. Benito, Sales Director; Ing. J. Aguilar, Purchasing Manager.
Water treatment equipment.
Established 1936 • Personnel 773 • Telex 177-6261

EQUIPOS DE PROCESO, S.A. Tel. 531-3275
Ejército Nacional 752
Col. Polanco
Del. M. Hidalgo
11550 México, D.F.
Octavio Carreto, General Director; Humberto García, Industrial Relations Manager; J. Ramón Correa, Export Manager; Guillermo Carreto, Financial Director; Julio Senderos, Sales Manager; Arturo O. de Ora, Purchasing Manager.
Evaporators, crystallizers, grinding ball mills, hammer mill pulverizers, rotary dryers, fluid bed dryers, dust bag collectors, scrubbers, distillation towers, tower trays and internals, compressed air dryers, inert gas generators, nitrogen generators, reactors, ribbon mixers, heat exchangers.
Established 1959 • Personnel 410 • Telex 177-2501

EQUIPOS Y ACCESORIOS HIDRAULICOS, S.A. Tel. 575-9519
Av. Universidad 654
Col. Vértiz Narvarte
Del. B. Juárez
03600 México, D.F.
Francisco J. Jimeno, General Director; Jorge García Gómez, Technical Director.
Distributors of mechanical irrigation systems, turf maintenance machinery and tools, water heating equipment for commercial and industrial uses.
Established 1952 • Personnel 45 • Telex 177-5687

EQUIPOS LARWER, S.A. Tel. 534-1090
Insurgentes Sur 1764
Col. Florida
Del. A. Obregón
01030 México, D.F.
Ing. Guillermo F. Laris, General Manager; Lic. Eric Rojo, International Trade Manager; Lic. José Rodríguez, Finance Manager; Arq. Virginia Laris, Sales Manager; José Luis Juárez, Purchasing Manager.
Swimming pool accessories, construction and installation.
Established 1952 • Personnel 66

REPOSICION TECNICOS EUROPEOS, S.A. Tel. 548-9506
Av. Revolución 1369
Apdo. Postal 20-482
Col. San Angel Inn
Del. A. Obregón
01040 México, D.F.
José Castillo y de C., General Manager; Federico Castillo Schmitz, Sales Manager; J. Miguel Castillo Schmitz, Purchasing Manager.
Milking machines, vacuum pumps, instruments for food quality control, silthermometry.
Established 1971 • Personnel 15 • Telex 177-1465

MILLIPORE, S.A. DE C.V. Tel. 576-9688
Ingenieros Militares 85, PB
Apdo. Postal 17672
Col. Argentina Poniente
Del. M. Hidalgo
11230 México, D.F.
Ing. Alfonso Peña M., General Manager; C.P. Cuauhtémoc Ramirez, Finance Director; Ing. Héctor Flores, Sales Manager; Norberto Anaya, Import Manager.
Distributors of filters, membranes, chromatographers, water treatment equipment, syringes, cartridges, analytic columns and purification systems.
Established 1972 • Personnel 40 • Telex 177-7442

NISSHO IWAI MEXICANA, S.A. DE C.V. Tel. 553-1066
José Vasconcelos 208-701
Col. Condesa
Del. Cuauhtémoc
06140 México, D.F.
Lic. Daniel Melgar Reguera, General Director; Keiji Kikuchi, General Manager; C.P. María Concepción Moreno, Administrative Manager.
Import/export of steel products, machinery, chemicals, ferrous materials, non-ferrous metal, textiles, foodstuffs, energy, lumber, general commodities.
Established 1961 • Personnel 30 • Telex 177-4573

SOILAX DE MEXICO, S.A. DE C.V. Tel. 358-9722
Av. Norte Sur 8
Frac. Industrial Alce Blanco
53370 Naucalpan, Méx.
Ing. Gustavo de la Mora, General Manager; Braulio Zapata, Finance Director; Roberto Molina, Purchasing Manager.
Manufacturers of acids, metering pumps, water treatment equipment, cleaning equipment, lubricants, cleaning products, chemicals, anticorrosion coatings, technical assistance, cleaning and sanitation.
Established 1957 • Personnel 105

BENEFICIADORA E INDUSTRIALIZADORA, S.A. DE C.V. Tel. 755-0544
Antigua Carr. México-Pachuca Km. 17.5
55500 Cerro Gordo, Méx.
Apdo. Postal 39
55540 Cerro Gordo, Méx.
Ing. Miguel Escobar, General Director; Lic. Guillermo Ruiz, Personnel Manager; Pedro Posada, International Trade Manager; C.P. Fernando Mariné, Finance Manager.
Chemical and pharmaceutical industry raw materials.
Established 1952 • Personnel 153 • Telex 177-2251

SELMEQ EQUIPOS INDUSTRIALES,

Tel. 566-3600

S.A. DE C.V.**Manual María Contreras 25****Col. San Rafael****Del. Cuauhtémoc****06470 México, D.F.**

Lic. Alejandro Rangel, General Director; Ing. Armando Ponce, Sales Director; Lic. María Eugenia Rodríguez, Personnel Manager; Jorge Gómez, Purchasing Manager; Ing. Luis Palacios, Finance Director.

Distributors of boilers, electric controls and equipment, water treatment and diesel fuel injection equipment, electrical installations, measuring instruments, gasoline and diesel engines, transformers, electric motors, engineering.
Established 1979 • Personnel 406

DEGREMONT DE MEXICO, S.A. DE C.V.**Mariano Escobedo 456, 5o. Piso****Col. Anzures****Del. M. Hidalgo****11590 México, D.F.**

Ing. Roxane Douglas, Executive President; Jesús Valles, Human Resources Manager; Ignacio Vázquez, Finance Manager; Michel Vergnet, Technical Manager; Ing. Fidel Hernández, Purchasing Manager.

Water treatment.

Established 1979 • Personnel 90 • Telex 177-7695

CONSTRUCCIONES BRAKOSA, S.A.

Tel. 534-4508

Insurgentes Sur 1700, 9o. Piso**Col. Florida****Del. A. Obregón****01030 México, D.F.**

Frank Kohlmann Luthe, General Manager; Lic. Rafael Márquez Z., Finance Manager; Frank Kohlmann Hackl, International Trade Manager; Eréndira Barrantas, Purchasing Manager.
Industrial projects, plant design, engineering, electrical and hydraulic projects, construction supervision; industrial, home, office and hospital construction.

Established 1957 • Personnel 1,300 • Telex 177-3289

INGENIERIA TERMO INDUSTRIAL, S.A.

Tel. 534-6578

Iztaccihuatl 63**Col. Florida****Del. A. Obregón****01030 México, D.F.****Apdo. Postal 20-360****01000 México, D.F.**

Ing. Alex Araujo, President; Josefina M. de Araujo, Finance Manager; Concepción Araujo M., Sales Manager; Yoy H. de Araujo, Purchasing Manager.

Manufacturers of water columns, burners, filters (duplex or simplex) heat exchangers, air dryers, level instruments, control panels, non-contact thermometers, pumps, analyzers, boroscopes, pressure/temperature switches.

Established 1959 • Personnel 15 • Telex 177-3197

QUIMICAR, S.A. DE C.V.

Tel. 250-7444

Lago Ginebra 96**Apdo. Postal 17693****Col. Pensil****Del. M. Hidalgo****11490 México, D.F.**

Lic. Miguel Zohn T., Managing Director; Arturo Tornell M., Sales Manager; Ing. Pedro J. Galindo O., Purchasing Manager.
Chemicals, rust-proofing, industrial maintenance.

Established 1966 • Personnel 14

QUIMOSINTESIS, S.A.

Tel. 845-1040

Luis G. Urbina 63**Col. Nopalera****Del. Tláhuac****13220 México, D.F.**

Ing. Miguel Angel Marín Montemayor, General Director; Ing. Braulio López Torres, Sales Manager; Norberto Barrera, Purchasing Manager.

Chemical products.

Established 1977 • Personnel 18

ROHM AND HAAS MEXICO, S.A. DE C.V.

Tel. 523-6040

Insurgentes Sur 670, 2o. Piso**Apdo. Postal 12-1129****Col. Del Valle****Del. B. Juárez****03100 México, D.F.**

Paul J. Baduini, General Manager; Fernando Herrera, Human Resources Manager; Juan F. Gregg, Purchasing Manager; Alexander J. Furth, Finance Manager; Juan E. de León, Sales Manager.

Manufacturers of herbicides, pesticides, resins and plastics.

Established 1961 • Personnel 381 • Telex 177-2683

QUIMICA SUMEX, S.A. DE C.V.

Tel. 548-6720

Insurgentes Sur 1971, Torre Sur, 5o. Piso**Col. Guadalupe Inn****Del. A. Obregón****01020 México, D.F.****Apdo. Postal 19-201****03910 México, D.F.**

Walter F. Reinking, Administrative and Operations Director; Gerardo Feldhaus, Commercial Director.

Activated bleaching clay, fire extinguishing powder, paper clay.

Telex 177-1020

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Market study on pollution and
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