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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**STRATEGY FOR THE IMPLEMENTATION OF THE
REFRIGERANT MANAGEMENT PLAN OF
VENEZUELA 2002-2007**

PROJECT DEVELOPED BY UNIVERSITY OF CARABOBO

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Project Team:

V. Guerra, A. Martinez, T. Garcia

Valencia-Venezuela

Contract 2001/026 Subject MP/VEN/00/125



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INTRODUCTION

The Refrigerant Management Plan of Venezuela studies the current situation dealing with CFC and equipment which contain CFCs with regard to: consumption, production, imports, exports, marketing and service, including the legislation related to these topics in the refrigeration sector of Venezuela. Particularly important in this study was a national survey conducted in refrigeration or air conditioning stores and in service workshops.

The analysis of this situation revealed how at present Venezuela is complying with the terms of the Montreal Protocol for the phase out of ODS and more important, it shows the difficulties and problems in this regard, in the refrigeration sector.

A strategy to deal with these difficulties and problems was designed and as a consequence, a plan of actions summarizes the future requirements and needed actions to correct the situation.

As a result, seven projects are proposed to accomplish activities that should be implemented to complete the phase out of ODS in the refrigeration sector and to assure that Venezuela will comply with the goals of the Montreal Protocol.

The projects are the following:

1. Replacement or Conversion of R12 and R11 Chillers.
2. Recovery, Recycling and Reclaiming of Refrigerants in the Service Sector and Training of Technicians.
3. Evaluation of the early closure of CFC production plant, Produven.
4. Final Conversion of Remaining Manufacturer's in the Refrigeration Sector.
5. Revision of Import Licenses and Decree 3220.
6. Training of Customs Officers.
7. Management, Monitoring and Control of the Implementation of RMP
8. Awareness and educational campaign.

STRATEGY FOR IMPLEMENTATION OF THE REFRIGERANT MANAGEMENT PLAN OF VENEZUELA 2002-2007

1. COUNTRY SITUATION

The Bolivarian Republic of Venezuela operates under Article 5, Paragraph 1 of the Montreal Protocol because its ODS consumption per inhabitant is less than 300 grams, measured by their ODP. Venezuela is committed to implement the regulations of the Montreal Protocol and to phase out ODS production and consumption according to the terms and conditions established in the Protocol, its Amendments and to the decisions of the Parties.

The present Plan is intended to be in effect between 2002-2007 and it reflects the commitment of the Government and the private sector to develop actions, with the technical and financial assistance of the MFMP and its implementing agencies, to accelerate the reduction of ODS consumption in the refrigeration sector, which is the most relevant ODS consumer in the country.

This Plan will guide Fondoin in the preparation and presentation of projects for this sector and in the periodic evaluation of the phase out progress. At the end of year 2007, this Plan should be updated.

1.1- COUNTRY SITUATION WITH RESPECT TO THE MONTREAL PROTOCOL

Venezuela ratified the Vienna Convention on the Protection of the Ozone Layer, in September 1988. The Montreal Protocol on the Substances that Depletes the Ozone Layer was ratified by the Congress of the Republic of Venezuela in August 1988 and published in the Official Gazette in January 1989. The London Amendment was approved by the Congress in August 1992 and published in the Official Gazette in May 1993. The Copenhagen Amendment was approved by the Congress in August 1997 and published in the Official Gazette in October 1997. The National Assembly approved the Montreal Amendment in February 2001 and it was published in the Official Gazette No 37217 from June 12, 2001. The Beijing Amendment will be ratified in the future.

1.2- SITUATION OF THE COUNTRY PROGRAM

The Country Program was submitted to the Fund Secretariat in June of 1995 and was approved by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on its Seventeenth Meeting in July 1995. The Country Program covered the period 95-98, after that date it has not been updated (See Appendix 2).

The main elements considered in the Country Program were: the imports of ODS, equipment using ODS, and their components and spare parts, the national ODS consumption which is highly concentrated in the refrigeration and air conditioning sectors, and the national production of ODS.

From these elements, three lines of action were inferred: the industrial conversion to prevent supply problems in the different sectors that use ODS; giving priority to the conversion in refrigeration and air conditioning; and to consider the production of ODS replacements.

The Government Action Plan was originally planned to be completed prior 1996; however, most of the items considered in this Action Plan have been continued or updated after 1998. The items are:

- Preparation of a national study on ODS production and consumption
- Creation of a national entity to coordinate and to facilitate the ODS phase out process.
- Establishment of a system to monitor ODS production, imports, exports and consumption.
- Adaptation of national laws to the terms and demands of the Montreal Protocol, the Amendments ratified by the Congress of the Republic and the decisions of the Parties.
- Adoption of strategic guidelines for technological and industrial conversion.
- Preparation of programs for priority sectors.
- Promotion of early conversion in priority sectors.

The following sectors with high ODS consumption and available substitutes had precedence in the Plan:

Air conditioning:

- Conversion or replacement of chillers working with R11 and R12.
- Conversion of manufacturing plants of mobile air conditioners and their components.
- Recovery and recycling of refrigerant during services of mobile air conditioners and chillers.

Fire protection:

- Recovery, recycling and banks of halon.

Commercial, Industrial and Domestic Refrigeration:

- Conversion of manufacturing plants.
- Recovery and recycling of refrigerant.

Foam:

- Conversion of plants manufacturing sheets and containers of polystyrene.
- Conversion of plants manufacturing other foams with R11.

An official list providing information about the projects approved, is presented in Appendix 2.

Information about new projects, ODS production, imports, exports and consumption are included in the Institutional Strengthening and Current Situation sections.

The Country Program forecasted an increase of production and consumption of at least, 2% annually.

The institutional framework is integrated by Fondoin, that is the National Ozone Unit; the Ministry of the Environment and Natural Resources in charge of enforcing the Montreal Protocol and the national regulations to control ODS; the Ministry of Production and Commerce dealing with the industrial and commercial issues, conversions and closure of production plant; the Ministry of External Relations, responsible for international conventions and their compliance. All of these institutions are part of the Board of Directors of Fondoin, in addition to two industrial organizations: ASOQUIM and VENACOR representing the chemical and refrigeration industries.

1.3- SITUATION OF THE INSTITUTIONAL STRENGTHENING PROJECT

The project for Renewal of the Institutional Strengthening was approved by the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol on its 31st Meeting, in July 2000. The renewal period is for two years and it will allow Fondoin to continue with the activities, to accomplish the country's program goals and to comply with the Montreal Protocol. During these last years, Fondoin has mainly worked towards the refrigeration, air conditioning, and foam sectors.

Since 1999 and after Fondoin's restructuring, their engineers have contacted new manufacturing firms that could be eligible for projects on ODS conversion. According to the report MP/VEN/00/129 from June 8, 2001 a list of 10 enterprises is presented with a total consumption of 43.7 tons, but only six of these enterprises are in the refrigeration sector: Deinbo, Deincopa, Frimetal, Mercantil Specca, Redupeca and Refrigeracion Flor de Caracas; three firms are in the Solvent Sector: Quimica Venoco, Industrias Combinadas and Quinduvensa; and one enterprise is in the aerosol sector Chem: Cress.

The Halon Bank has been functioning regularly since 1997.

The CFC12 recovery in automobile air conditioning repair shops has continued since 1994. In 1999, the Center for Refrigerant Reclaiming together with six Regional Centers for Recovering and Recycling have started their operations.

Fondoin has satisfactorily, verified that CFC 11 and 12 consumption during year 2000 has decreased. This result could be attributed to the culmination of a series of conversion projects initiated in previous years and to the application of the Decree which controls the use of ODS. Despite these positive results, there are strong suspicions of illegal imports; because of that, the Ministry of the Environment and the Customs Authorities are investigating the situation together. This situation should be improved after the customs officers training, planned for the end of this year and the strengthening of the License System, planned for this year too.

The List of approved projects presented in Appendix 2 includes those approved from 1999 to June 2001

There are other ODS applications that have not been explored in depth; among them are: process agents, sterilants; as well as applications of other ODS from Annex B of the Montreal Protocol. These issues should be considered in future projects.

1.4- CURRENT SITUATION

The current situation has been studied from information collected in a National Survey (see Appendix 1) conducted in 148 refrigeration stores, 381 refrigeration and AC service workshops and 527 vehicle air conditioning service shops; information provided by Fondoin and information obtained from meetings with Asofrio, Venacor, Seniat and representatives from industries. Table 1 shows the sales of different refrigeration or A.C. equipment reported during the last 3 years in the stores visited during the national survey. The data corresponding to 1998 and 1999 is not precise because most of the firms visited do not keep historical records of their operations, although it was reported as it was required by Fondoin

Table 1. Sales of Refrigeration or Air Conditioning Equipment According to the National Survey

Equipment	Refrigerant	1998	1999	2000	Total Amount
AC 10 to 100 ton	R22	108	136	980	1,224
AC 3 to 10 ton	R22	1,572	2,176	4,468	8,216
AC more of 100 ton	R22	0	0	204	204
Air Conditioning	R22	5,199	5,873	10,349	21,421
Compressors	R22	4,076	6,381	12,132	22,589
	R134A	975	1,500	4,492	6,967
	R11	30	630	122	782
	R12	21,416	21,804	37,168	80,388
Freezer	R11	0	30	0	30
	R12	2,665	3,295	2,671	8,631
	R134A	3	337	2,520	2,860
Ice Cream Mach	R12	0	50	140	190
	R22	0	0	17	17
Industrial Chiller	R12	0	0	20	20
	R22	0	0	3	3
Refrigerated Veh.	R12	30	20	20	70
Refrigerator	R22	0	0	144	144
	R12	32,946	30,314	28,800	92,060
	R134A	3,120	7,026	35,760	45,906
Show-Case Refrig.	R22	198	350	458	1,006
	R12	1,120	1,716	1,964	4,800
	R134A	0	232	792	1,024
Vehicle AC	R12	860	550	528	1,938
	R134A	100	100	300	500
Water Cooler	R12	2,248	2,664	4,554	9,466
	R134A	3,14	1,316	3,222	4,852

In the following analysis the consumption of ODS or equipment containing ODS during year 2000 will be studied in a sectorial breakdown:

1) Domestic Refrigeration and Air Conditioning

This sector includes the refrigerators, water coolers and freezers. The national manufacturers are: Coresmalt, Famusa, Frigilux, Madosa, Vikingo and Eterna, but the stagnation of the economy has caused a drastic reduction in sales and strong competition of low priced foreign products have caused the closure of the majority of them. Madosa one of the major manufacturers closed in August 1999 followed by Coresmalt and Famusa which stopped production. From the three active manufacturers: Frigilux, the largest one, is already converted while Eterna, Vikingo and Indartelca (producer of water coolers) are in the process of conversion.

The total sales of refrigerators during year 2000 were estimated in 250,000, from them approximately 90% were imported, with brands such as LG, Kelvinator, General Electric, Samsung, Whirlpool, Magic Queen, Kenmore, Black and Decker.

The majority of new equipment (including the imported ones) came with refrigerant R134A (the exception are some refrigerators manufactured by industries in the process of conversion), on the other hand all used refrigerators imported during year 2000 came with R12. The total sales of used R12 refrigerators reached 6,000 units (6% of total refrigerator sales). The following table presents the name of the stores selling used refrigerators.

Table 2. Sales of Used Refrigerators

City	Name	Phone	Used % on Total
Barcelona	Yolitoys	0281 2759546	100%
Bolívar	Re. Reca Bolívar	0285 449454	95%
Cabimas	Importadora Nueva Cabimas II	0264-712201	100%
Coro	Importadora Gran Oferta	014-9690196	100%
Maracaibo	El Neverazo C.A	0261-571922	100%
	Flash Motor ventás	971737	100%
	Importadora El Gran Re	0261-353302	50%
	Los Angeles Import C.A	0261-358201	100%
Maracay	Climaven Aragua	0243 3340032	5%
Pto. La Cruz	Muebles El Condor	0281 2685014	50%
Valencia	Galería Hogar Import C.A	0241 8483971	100%

Total Number of Stores: 149

Total Number of Stores selling Used Equipment : 11

It should be noticed that the import of used refrigerators working with R12 occurs in spite of the prohibition established in Article 25 of the Decree 3220 of 1999, of importing equipment containing R12.

The sales of refrigerators reported in the survey for the last three years are represented in Figure 1 for both R12 and R134A refrigerators. It is shown that while the sales of R134A refrigerators are growing, the sales of R12 units are declining.

The sales of R12 water coolers are larger than the sales of R134A water coolers, the main reason for this is that some of the national manufacturers have not yet finished the conversion (See Figure 2).

Similarly, the sales of freezers working with R12 are larger than the sales of R134A freezers but the trend is to decrease, while the sales of R134A freezers show an increase during this three-year period (See Figure 3)

Figure 1. Sales of Refrigerators

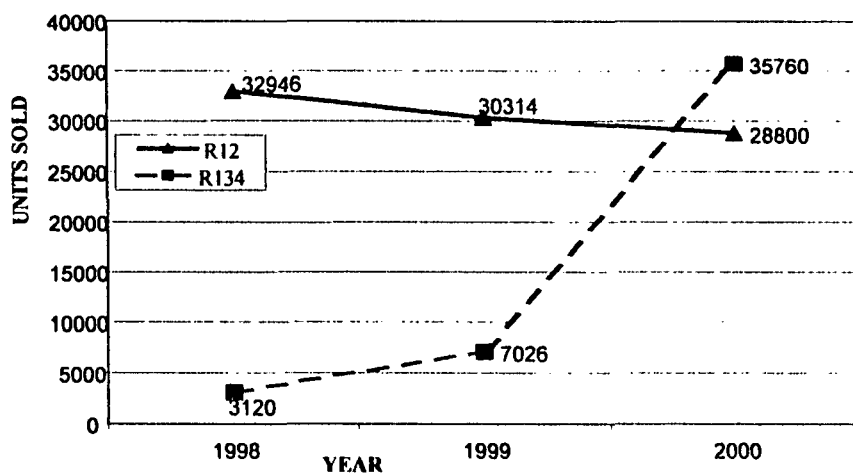


Figure 2. Sales of Water Coolers

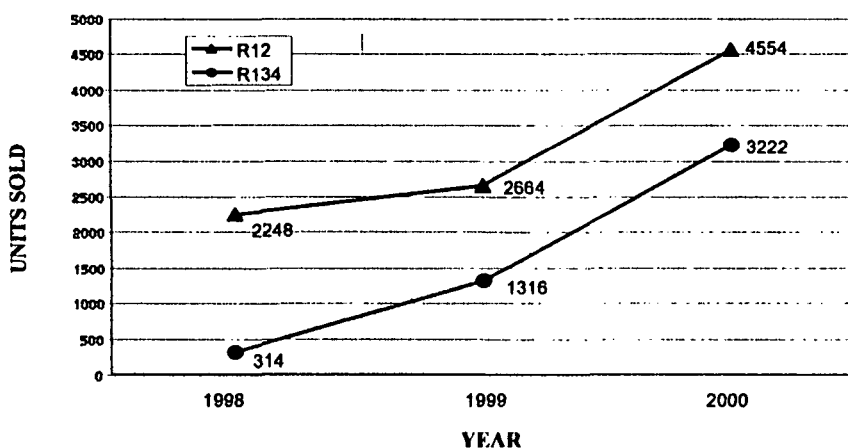
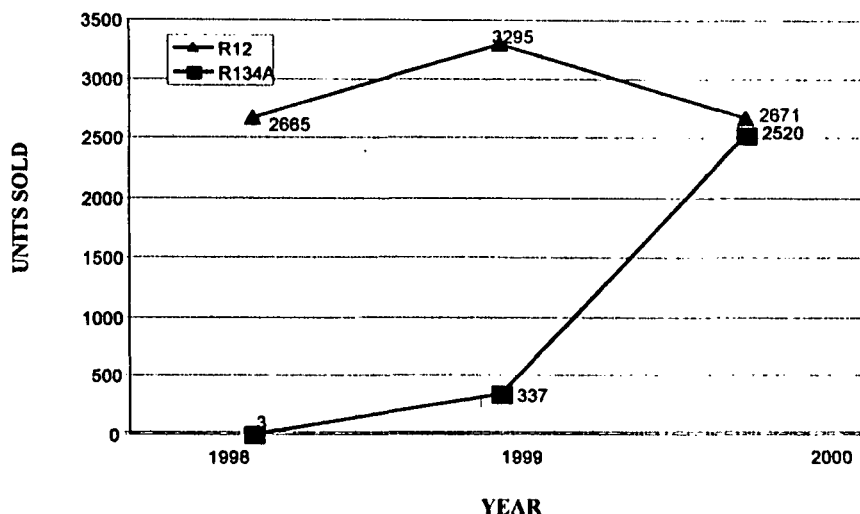


Figure 3. Freczer Sales



The survey in the case of domestic air conditioning shows that approximately 80% of the units in the market are imported, some of the brands are Shimazu, Coronet, LG, Frigilux, Cosmic, Samsung, General Electric, Vornado etc. (Vornado and Frigilux are national manufacturers) The estimated sales during year 2000 reached the 80.000 units and all these equipment work with R22.

Because of the strong impact of Domestic Refrigeration in ODS Consumption it is important to improve the service techniques. In addition, and because of the imports of used refrigerators it is recommended to introduce better control procedures to avoid this kind of illegal trade.

To estimate the future demand of R12 refrigerant required for servicing the refrigerators in use, the following aspects were taken into consideration:

- The prediction of annual future demand of R12, required for servicing refrigerators during the period of this study (2002-2007), considering that there are not incentives or facilities to substitute the refrigerators operating with R12 and purchased before 1997 and which are expected to continue to work until 2007, could be computed as follows:
- The variables used in the analysis were:
 - Venezuelan population.
 - Population income level.
 - Number of homes in the country with monthly income level higher than 150,000 Bs., (70% of total homes) where at least one refrigerator which operates with R12 was considered.
 - Population of cities included in the survey

- Number of homes in cities where the survey was applied with monthly income level higher than 150,000 Bolivares. It was considered they own one refrigerator that operates with R12 (see Table 3).
- Percentage of yearly repairs of domestic refrigerators, determined from the data collected during the survey as follows:

% Yearly repairs of domestic refrigerators =	Repairs of domestic refrigerators in area of study in the year 2000	/	Estimate of domestic refrigerators in the area of study in the year 2000
-----------------------------------------------------	----------------------------------------------------------------------------	----------	---------------------------------------------------------------------------------

According to the national survey the number of repairs of refrigerators in year 2000 totaled 456,960 in the workshops visited, this value was projected for the whole area of study as follows:

Repairs of domestic refrigerators in area of study in the year 2000 =	456,960 repairs * 639 workshops in the area of study	/	375 workshops contacted
------------------------------------------------------------------------------	-------------------------------------------------------------	----------	--------------------------------

Repairs of domestic Refrigerators in areas of study in the year 2000 =	778.660 repairs
-------------------------------------------------------------------------------	------------------------

% Year repairs of domestic refrigerators =	(778.660 / 2,167,213) * 100 = 36%
---------------------------------------------------	-------------------------------------------

This value could be considered high and it may be caused by damages of equipment generated by changes of voltage and electrical failures, which are common in Venezuela particularly in poor areas of the cities.

The future yearly demand of R12 for servicing domestic refrigerators during the period 2002-2007, can be estimated as follows:

Kg of R12 =	No. of homes with an R12 refrigerator	* Average charge of R12 (Kg/Unit)	* % yearly repairs of refrigerators
--------------------	----------------------------------------------	------------------------------------------	--------------------------------------------

Annual demand of R12 in KG =	2,167,213	* 0.516*0.36	= 402,581 Kg of R12
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Table 3. Number of homes estimated with a refrigerator in the states included in the National Survey

States	(1) Population (year 2000)	(2) N° of persons per home	(3) = (1) / (2) * 0,7 N° of homes with refrigerator
Zulia (Maracaibo, Cabimas, Ciudad Ojeda, etc.)	3,200,629	5	448,088
Falcón (Coro, Punto Fijo, etc.)	747,761	5	104,687
Carabobo (Valencia, Puerto Cabello, Guacara, etc.)	2,106,265	5	294,877
Aragua (Maracay, La Victoria, etc.)	1,481,453	5	207,403
Distrito Federal (Caracas)	2,284,921	5	319,889
Bolívar (Puerto Ordaz, Ciudad Bolívar, San Félix, etc.)	1,306,653	5	182,931
Anzoátegui (Barcelóna, Puerto La Cruz, etc.)	1,140,372	5	159,652
Monagas (Maturín, Caripe, P. de Mata)	599,763	5	83,967
Lara (Barquisimeto, Carora, Cubiro, etc.)	1,581,121	5	221,357
Táchira (San Cristóbal, Táriba, San Antonio, etc.)	1,031,156	5	144,362
TOTAL	15,480,094		2,167,213

Source: (1) Tables with Projections of the Population per Federal State. Venezuelan Estimates and Projections of Population 1950- 2035. OCEI, 2000.

(2) Table N° 31 Indicators of the Labor Force. OCEI First Semester 2000.

Note: The factor 0,7 in column 3 represents the proportion of homes with monthly income level of more than 150,000 Bolívares, according to OCEI.

II) Commercial Refrigeration

This sector includes the refrigerated showcases, bottle coolers, ice cream machines, ice machines and cold storage rooms. The national manufacturers supply almost 100% of the market, although most of the refrigeration units installed in their products are imported. They are the suppliers of bakeries, drugstores, supermarkets, restaurants, liquor stores and butcher shops.

The manufacturers identified include the following: Hielomatic, Pinova, Frigilux, Nutal, Neveindustrial, Tecoven which have already been converted. Additionally Invitrel, Amerio Industrial, Nordpol, Friocon, Couttenye, Europa, Unidas, Tecobar, JR Refrigeracion, Inelmen, ; which are in the process of conversion.

On the other hand there are some industries producing refrigeration equipment with non CFC refrigerants such as Unideco, Frio Andes, Refrigeracion Guanche and other factories that should be converted in an early future such as Frive, Frizer de Venezuela, Inreco and Refrigeracion 400.

Because some of the industries have not yet finished their conversion processes, most of the sales are of R12 equipment as it can be seen in Figure 4 (Showcase refrigerators) and Figure 5 (Ice cream machines). Efforts should be done to complete the conversion of them, to reduce the consumption of ODS in this sector.

Figure 4. Show-Case Refrigerators Sales

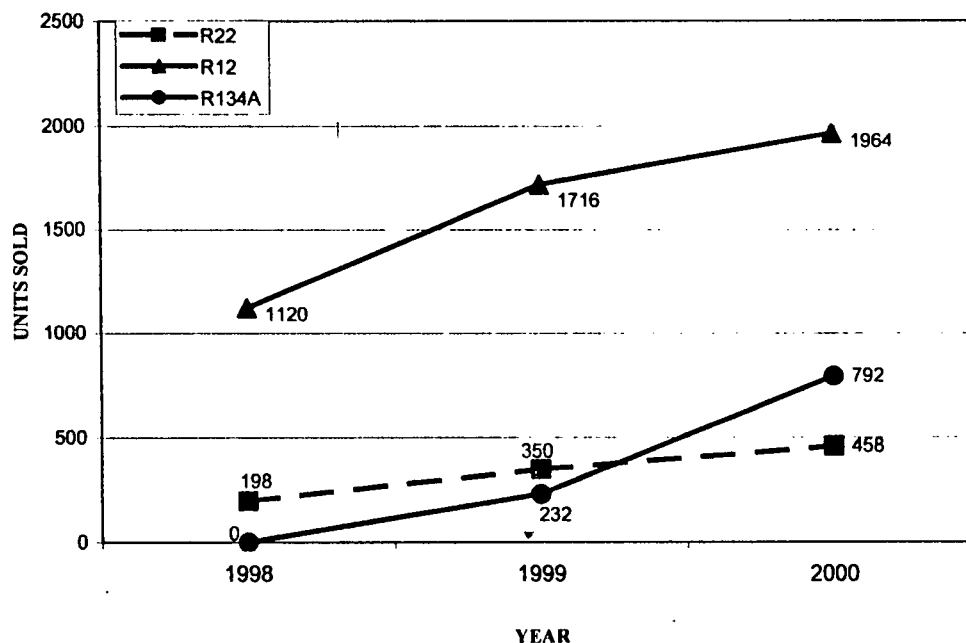
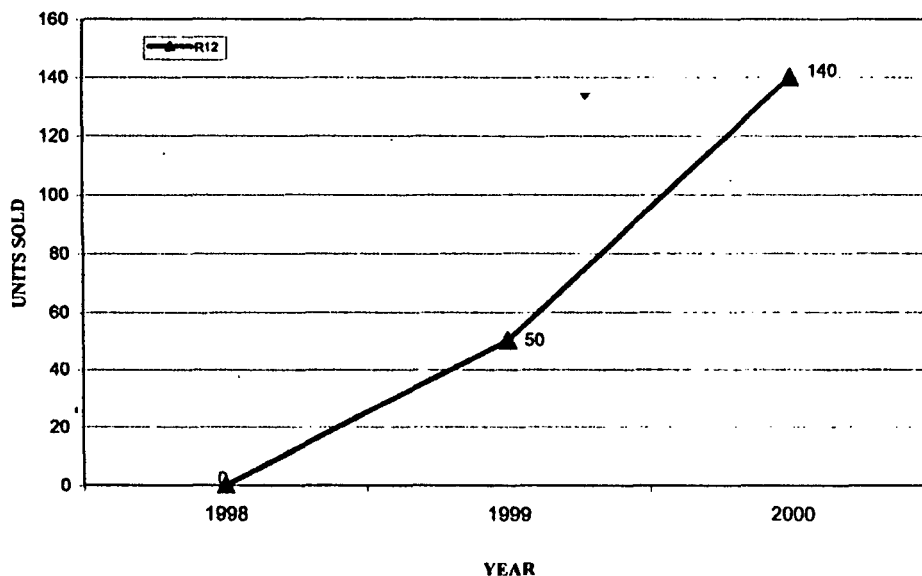


Figure 5. Ice Cream Machine Sales



III) Industrial Refrigeration and Air Conditioning

All refrigeration equipment for big industrial applications is imported and usually works with Ammonia or other non controlled refrigerant. Brands in the market are very different according to the kind of application.

A survey conducted showed the following list of brands with the Venezuelan representatives:

- Grupo AG, selling Fes equipment.
- Tecnonorte selling Grasso refrigeration systems.
- Venesabor, selling Vilter equipment.
- Mycom de Venezuela representing the Japanese company Mycom
- Ateproyeca representing Frick. manufacturing company
- York Venezuela selling York equipment.

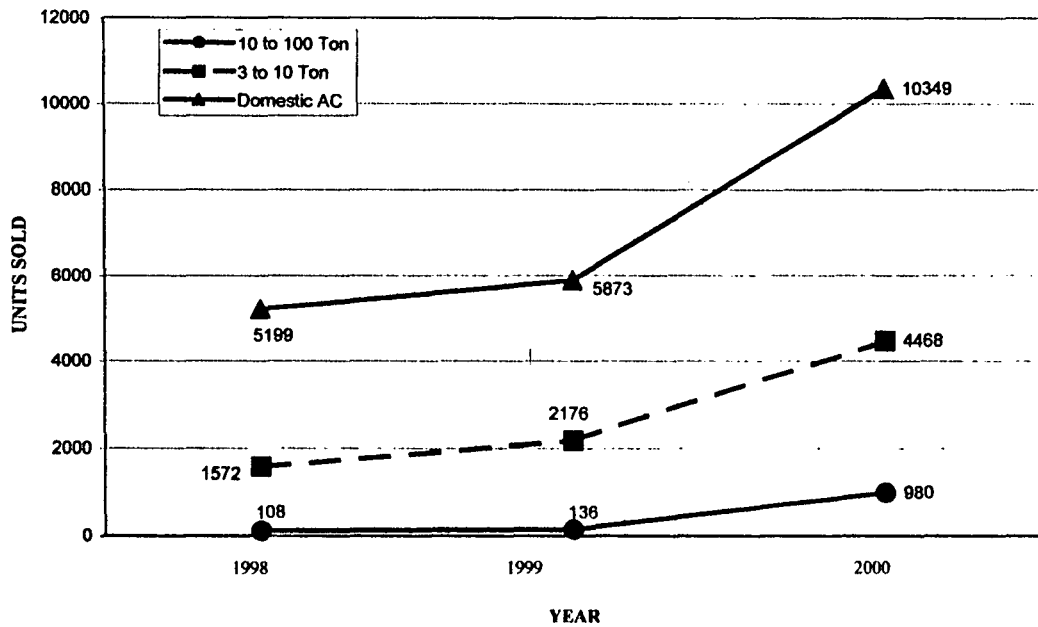
The commercial and industrial air conditioning equipment on the market is mostly imported, some of the brands include names such as Carrier, Trane, York, Mc Quay in the large capacity group; Tempco, Ruud, Rhem, Peake, Classic, Lennox, Airtemp in the

small or medium capacity group. As a whole the small and intermediate capacity group work with R22 and these units are sold pre-charged with refrigerant.

The list of national manufacturers include the following: Frio Control, Gas Air and Infrisa in the chiller sectors; additionally Climar, Ainca, Fecsa, Frio Productos, Friodan, Induclima, Friovent, Imperca, Inrefrisa, SuplyAir and Ternoval

The large capacity chillers work with non controlled refrigerant (currently none of them is manufactured with R12 or R11). The estimated sales of AC of this sector reached 20,000 units during year 2000. The trend in the sales of industrial and commercial AC is shown in Figure 6.

Figure 6. Air Conditioning Sales (Only R-22)



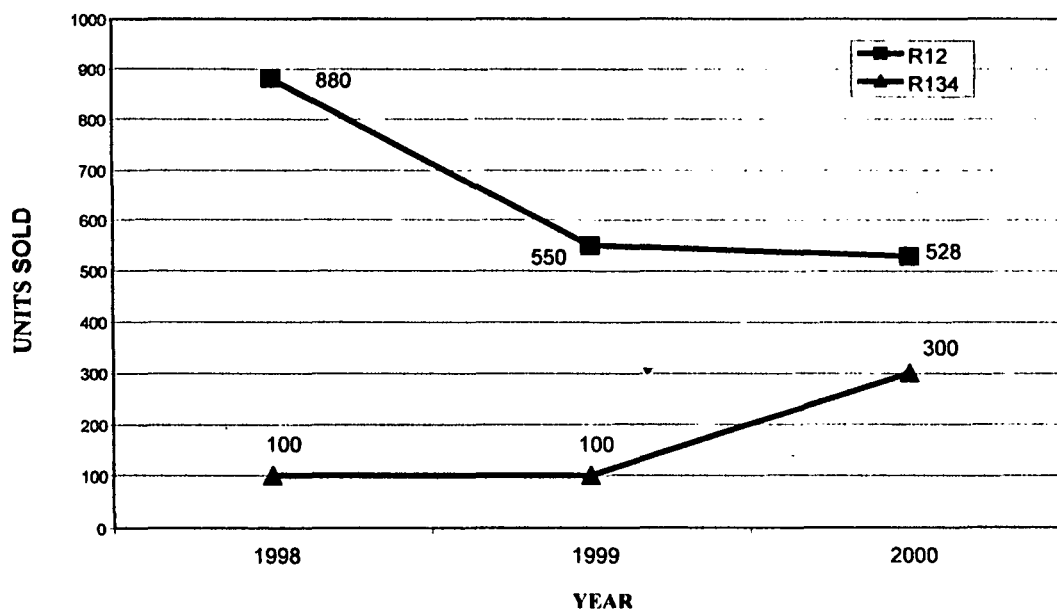
In conclusion this sector only uses ODS for the service of old chillers and this is the reason to begin a new program for the replacement or the conversion of those chillers.

IV) The Vehicle Air Conditioning Sector

As of beginning of 1996 all new cars sold in Venezuela came with air conditioning equipment working with R134A, but it is estimated that still now there are about 588.000 of used cars with air conditioning equipment working with R12 which create a demand for refrigerant and new compressors for replacements and this is one of the reasons for the high consumption of R12 in the service workshops.

In Figure 7 are shown the sales of Vehicle Air Conditioning equipment as replacement of damaged units. There are a decrease in the sales of R12 AC, while the sales of vehicle R134A AC show an increase, but still the number of R12 units sold are larger than the R134A value. This situation was caused by the high prices of R134A refrigerant compared to the price of R12 gas, which make costly to owners of damaged R12 AC units to change to R134A air conditioning equipment.

Figure 7. Vehicle A/C Sales



Because of the importance of this sector in future consumption of ODS it is necessary to improve the service techniques by training of technicians and to improve the recovery program. In addition, it was studied a model for predicting the demand of ODS for servicing the AC of passenger vehicles was prepared, in order to estimate the future demand of refrigerant R12. The following aspects were considered:

- The period for the estimation of future demand of R12 for servicing vehicle AC, will be until 2010, considering that the vehicles purchased until 1996 will be out of circulation for year 2010.
-
- The variables that will be taken into consideration for the analysis are the following:
 - Number of vehicles in Venezuela bought until year 1996, considering that at the beginning of that year the new vehicles were equipped with air-conditioning using refrigerant 134-A. According to government information,

for that year, a total of 1.499.228 vehicles were sold and 40 % of them had Air Conditioning.

- Total amount of R12 used by workshops in year 2000 according to results of the survey.
- The total of repairs of vehicles AC during year 2000, according to data collected in the survey was 370,249 vehicles. Yearly rate of vehicles out of circulation is equal to 5 %, according to government information.
- Percentage of vehicles in 1996 in the cities of the survey is approximately 70 % of total according to government statistics (Ministry of Transportation, OCEI Annual Report, 1997).

The yearly percentage of vehicles with service charge of R12 refrigerant was calculated as follows:

Yearly % of vehicles with R12 service charge	=	No. of services of refrigerant charge in area of study	/	No. of vehicles in area of study
-----------------------------------------------------	---	---------------------------------------------------------------	---	-----------------------------------------

Yearly % of vehicles with R12 charge	=	$(370,249 / (0.7 (587,787))) * 100 =$	90%
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The future demand for refrigerant R12 for air conditioning vehicles can be estimated as follows:

Kg R12 =	N° of AC vehicles purchased through 1996 using correction factor of 5% for vehicles out of circulation	*	Refrigerant charge (Kg / vehicle)	*	Yearly % of vehicle with R12 charge
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Table 4 illustrates the results of such estimates of the demand of R12 for this sector.

Table 4. Estimated demand of R12 in AC vehicles purchased through year 1996 in Venezuela (Kg)

Year	(1) N° of vehicles with R12 AC.	(2) Charge of refrigerant (Kg/ vehicle)	(3) = (1) * (2) * 0,9 Demand of R12 (Kg)
1996	599,691	1.136	613,124
1997	569,706	1.136	582,468
1998	541,221	1.136	553,344
1999	514,160	1.136	525,677
2000	488,452	1.136	499,393
2001	464,029	1.136	474,424
2002	440,828	1.136	450,703
2003	418,787	1.136	428,167
2004	397,847	1.136	406,759
2005	377,955	1.136	386,421
2006	359,057	1.136	367,100
2007	341,104	1.136	348,745
2008	324,049	1.136	331,308
2009	307,847	1.136	314,742
2010	292,454	1.136	299,005

Sources: (1) Statistics from Government multiply by 0.4
(2) Data collected in survey

V) Compressor And Condensing Units

The sale of refrigeration compressors is a good way to predict what is going to happen with the demand of CFC in future years, since most of refrigeration systems will require new compressors as the replacements of damaged compressors in the maintenance of refrigeration equipment. The brands on the market include Copeland, Embraco, Vecomesa (national factory already closed), La Unite Hermetique, Tecumseh.

The compressors for vehicle air conditioning in new vehicles are mostly supplied by two national companies FAACA and AAISA which at the present time are manufacturing only R-134A compressors.

It is interesting to note that almost 100% of the compressors for refrigeration units are imported and that the larger part of the sales are of R12 and R22 compressors and only small percentage are for R134A compressors.

The sales of compressors are headed by R12, in second place are the R22 compressors, third is R134A compressors and then R11 with a small number of units sold. It should be noted that during year 2000 the sales of R12 compressors represented a 69% of total

sales, followed by R22 compressors with a 23%, then R134A Compressors with 8% and finally R11 Compressors with less than 1% (See Figure 8 and 9).

As it may be expected these R12 compressors will be demanding R12 refrigerant during the following 10 to 15 years creating a problem in the fulfillment of the goals of the Montreal Protocol.

Because all these R12 compressors are imported, it should begin to apply some restrictions to the trade of R12 compressors at international level and to introduce imports restrictions of them according with the Decree No. 3220, to avoid that these units could be used for the assembly of new equipment

Figure 8. Compressor Sales

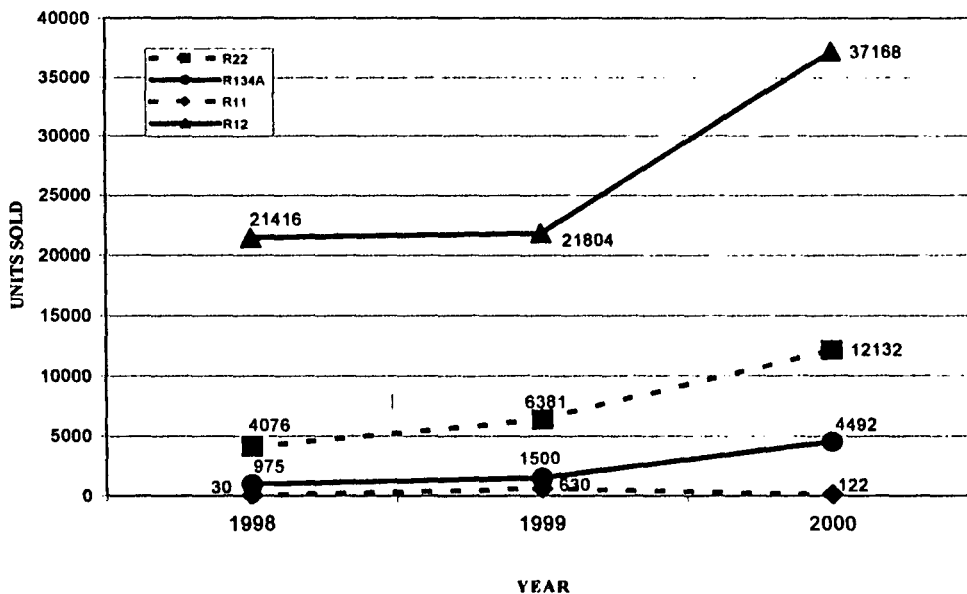
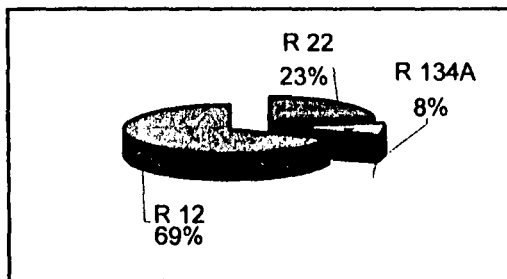


Figure 9. Proportion of Compressors Sold During Year 2000

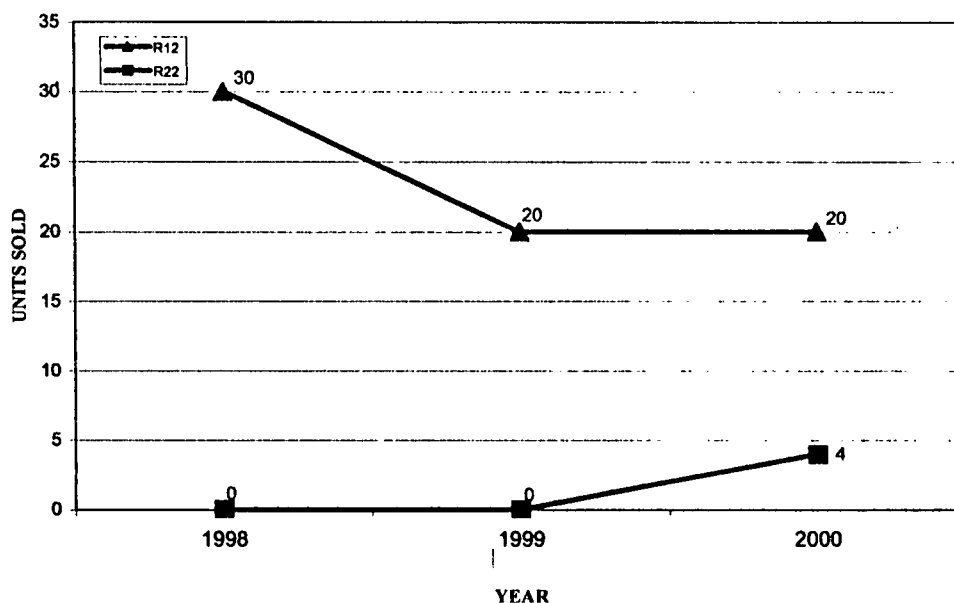


The sale of refrigeration units for refrigerated vehicles is shown in Figure 10. The small amount of the sales makes it difficult to conclude anything related to this point.

According to the information collected in interviews with owners, most of the sales of refrigerated units for transport vehicles are Thermo King and the majority of them are imported as used equipment and they work with R12 as refrigerant. The reason is the high prices of new equipment and the stagnation of the economy. New refrigerated units usually work with R-134A, R-404A and R-502.

Currently there are about 5,000 refrigerated transport units working in Venezuela, approximately a 90% of them use R-12.

Figure 10. Sales of Vehicle Refrigeration Units



1.4.1 NATIONAL REGULATIONS AND CUSTOM PROCEDURES

NATIONAL REGULATIONS REGARDING ODS

The preservation of the ozone layer of the atmosphere is based on the following regulations:

- The Vienna Convention from the 1st of September, 1988, which provides the general outlines for the protection of the ozone layer.
- The Montreal Protocol signed on the 16 of September of 1987, was approved by the National Congress of Venezuela on the 24 of August of 1988, and converted into

National Law after it was published in the "Gaceta Oficial de la República de Venezuela" Nr. 34134 on the 11 of January of 1989. This Protocol classifies the substances producing damages, and establishes a time table controlling their production, use and international trade.

- The London Amendment of the Montreal Protocol was approved by the Venezuelan Congress on the 13th of August, 1992 officially taking effect on the 27th of October, 1993, which establishes a Multilateral Fund to help developing countries in activities related to conversion of industries or chillers from CFC to other refrigerants.
- The Copenhagen Amendment added new substances to the list of those controlled and proposes a new time table to finish their consumption. It was approved by the Congress in August 1997 and published in the Official Gazette in October 1997.
- The Montreal Amendment of year 2001 proposes new regulations for the international trade of controlled substances. It was approved by the National Assembly in February 2001 and it was published in the Official Gazette.37217, from 12-06-2001.
- The Beijing Amendment that it will be ratified in the next future.

Additionally, Venezuela has the following National regulations dealing with the protection of the Environment which are also related to the protection of the ozone layer:

- The Penal Law of the Environment published on January 3rd 1992, in its Art 47 considers criminal offences, different actions that may produce damages to the environment as well as violations of international agreements or national regulations protecting the ozone layer.
- The Customs Duty Code, Decree 989, published the 9th of February, 1996 that contains the classification of CFC as controlled substances (Note 10), requiring special permits for imports or exports.
- The Decree 3220 from January 13th, 1999 containing all the regulations regarding how to reduce the consumption of substances that produce damages to the ozone layer, which includes limits for the production and imports of ODS in Venezuela.
- The Customs Law from June 17th 1999, which describes the administrative procedures dealing with imports, including those related to CFC. The Art. 109 gives special consideration to the smuggling of controlled substances which includes the case of CFC.
- The new Constitution of Venezuela from March 24th of year 2000, in the Art. 127 establishes that the protection of the environment including the ozone layer is a fundamental obligation of the Government. .

REGULATIONS REGARDING THE IMPORTS OF CFC

In a review of the legislation were found the following aspects concerning CFC import procedures:

- The import and export of CFC are controlled through licenses of the Ministry of Environment, the customs procedures are very general and there is not a particular one applied specifically to CFC.
- The imports of equipment containing CFC are regulated under Article 25 of Decree 3220, which establishes a prohibition starting January 1st, 2000.
- The Customs Duty Code classifies the CFC according to Table 5.

Table 5. Customs Duty Code of CFC

TYPE of CFC	DUTY CODE NUMBER
R11	2903.4590 or 2903.4910
R12	2903.4200
R113	2903.4300
R114 and R115	2903.4400

According to this classification the CFC are considered pertaining to Rule 10 (Note 10), applied to substances requiring Import Permit from the Ministry of Environment and regulated under the Decree 3220 from 13-01-1999.

- The Decree 3220 establishes that, beginning on 01-01-1999 until 31-12-2004 the production, imports and exports of CFC should not exceed the values indicated in the following Table 6.

Table 6. Yearly quotas for Imports, Export and Consumption

CFC	Imports in Kg.	Production in Kg.	Consumption in Kg
R11	15,720	1,114,772	525,652
R12	119,275	3,672,122	2.667,253
R113	120,187	0	120,087
R114	27,955	0	27,956
R115	19,795	0	8,987

- Additionally this Decree establishes that these values of Table 6, should be reduced by 50% beginning on 01-01-2005, by 80% beginning on 01-01-2007 and finally reaching 100% at the beginning on 01-01-2010. (Zero Level).

The current Import Procedure of CFC, which is represented in Figure 11, was validated by The Chief of Duty Division of the National Custom Offices (see Appendix 3). The step by

step current procedure is described with details in Appendix 3. It is important to point out that the import should be carried out through two official channels:

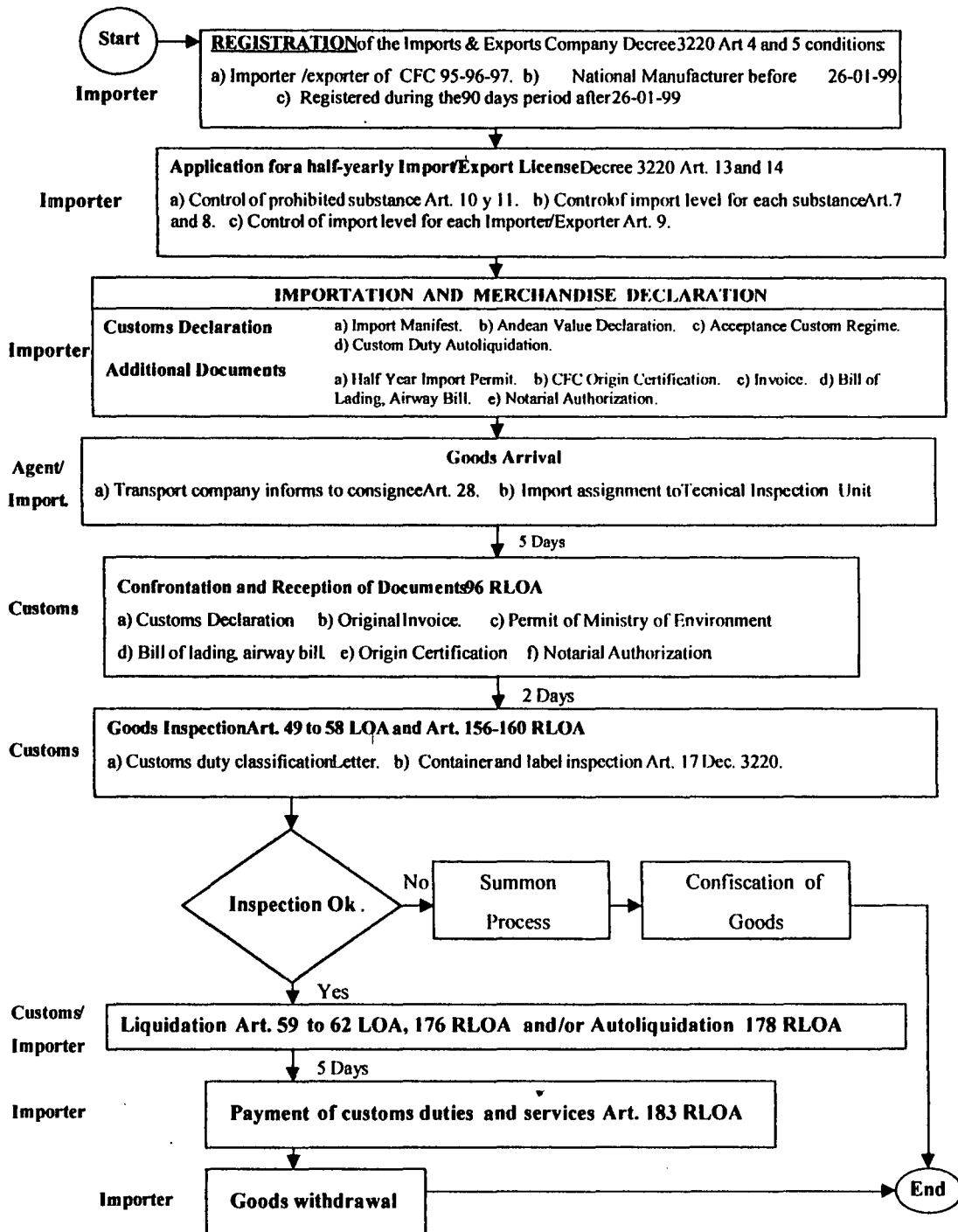
- The Ministry of the Environment for the Registration of the Import Company and for the Application of the Half-Yearly Import Permit. (License).
- The Customs Office at the entry point where the import is taking place.

RECOMMENDATIONS ABOUT LICENSES AND CONTROL OF IMPORTS

With the intention to facilitate import control of CFC and to reduce the risk of illicit import the following actions are recommended:

- To develop a National Standard in accordance with International Standards (ISO, ASA etc.) for the storage of refrigerant, specifying the kind of containers, their capacity in Kg, Type of valve that should use and required labels and color for identification.
- To amend the Decree 3220, Article 17, to incorporate the technical specifications of the National Standard for Refrigerant Storage as recommended before, in order to have a more strict control of the containers used for the imports and marketing of CFC.
- To change the optional character of the Customs Duty Classification Letter (Oficio de Clasificacion Arancelaria), to a compulsory one, for all the inspection procedures of CFC imports, in order to identify the kind of refrigerant within the containers and the correct application of standardized valves, color, labels and capacity for the CFC.
- To keep a precise accounting system of the imports of CFC through a database with national updated information from all entry ports of the country, using the information provided by the Customs Duty Liquidation Office of all the imports made during each semester by each importer in order to control the CFC import permits.
- To establish a coordinating link between the Ministry of Environment and the Seniat for a better control of the amounts of CFC included in the import licenses and the physical amount of the imports.
- To conduct a training of the customs officers about the import license system, the international regulations, CFC, identification, illegal CFC trade and the ozone problem.
- To strengthen the import license system to include not only the CFC, but all used or new equipment designed to work with CFC.

Figure 11. Procedure for Imports / Exports of CFC



1.4.2 THE REFRIGERATION AND AIR CONDITIONING SERVICE

This report is based on information collected in a national survey conducted through 908 service workshops in 25 cities of Venezuela during the first half of 2001.

The businesses visited were classified in two groups:

- a) Vehicle Air Conditioning Service Workshops (527).
- b) Refrigeration Service Workshop (381).

This number of 908 service workshops represents approximately 36% of the whole country. The other 64% includes service workshops of geographical areas not covered in the survey, or workshops in the areas covered but that were not visited during the survey or workshops which do not have any registration or formal organization.

Data collected includes name, technical qualifications and phone number of 558 empirical technicians and 1081 academic technicians for a total of 1639 technicians working in the workshops visited

a) *Characteristics of Service Workshops*

A typical service workshop is small, with 2 technicians, one of them with some kind of academic background (High School Degree, Vocational School Degree, College Graduate), usually with a minimum of service equipment: vacuum pump, manifold service valve with pressure gages, wattmeter/voltmeter and a set of general tools. Nationwide the number of vehicle air conditioning service workshops is the double of that the number of general refrigeration service workshops and this is perhaps due to a higher demand for repairs in the vehicle sector. Most of the businesses are managed by the owner who usually works as a technician as well.

The more organized and larger workshops are usually related to some other kind of businesses such as: dealers of refrigeration or air conditioning equipment, stores specialized in the sale of gases and refrigeration parts or in the case of Air Conditioning vehicle service, workshops providing a broader car repair service.

In relationship with the ODS problem, most of the service workshops are aware in a general sense that some refrigerants are damaging the ozone layer (87,94%), but they do not know which of them are more harmful and they do not know how to handle the problem at the level of their service practice.

Regarding the recovery of CFC, 115 service shops out of 908, this is 13%, reported that they have been recovering R12 and in some cases R134A as well, and 31 (3,4%) of them had participated in a FONDOIN Course related to ODS and refrigeration service practices.

b) *The Service Practices*

There are not standardized procedures available in handbooks or any written materials describing the service practices or proper methods of performing repairs and maintenance of equipment, at most of the workshops. Each service or repair is treated according to the experience of the technicians and available tools or materials at the time of repair.

Regarding the methods used to control the correct amount of refrigerant charged into a system during a service, the pressure measurements (Discharge and suction) was the most common one (95%), the electrical consumption of compressor measured with a Wattmeter was the second one (15%) and the use of weighing of refrigerant with a balance was applied in 8% of the cases, although in some service shops several methods were used.

In general, the refrigerant containers used at service workshops were not standardized in capacity, labeling or color with the exception of discardable R134A containers. Each business, according to their needs or economical possibilities, buys the refrigerant in a very broad type of containers, most of them adapted by themselves, which they take to recharge with refrigerant when it is necessary.

Some of the service shops used R11 as cleaning substance, but in general purging or flushing with the same refrigerant was the most frequently method used to eliminate air and humidity of the system.

c) *The Average Charge of Refrigerant per Equipment*

Data were collected about the amount of refrigerant required to charge completely an equipment. It was not possible to collect the data for specific services because of the lack of information and statistics at workshops. In the case of refrigerators the survey shows 0.52 Kg for vehicle Air Conditioning 1.14 Kg for freezers, this study shows 1.74 Kg. Average CFC consumption..

The possible reasons for these higher values is the general practice of venting the equipment before repairing them and using the same refrigerant for purging and flushing the system.

In order to test these charge values reported in the survey, the calculation of the refrigerant gas consumption in year 2000 was done by using the total repairs reported in the year 2000, the average charge per equipment and a factor of 0.125.

The factor 0.125 was determined considering that only 1 out of 4 services required refrigerant and that on the average the amount of refrigerant charged in the service requiring gas, was only 25% of the average service charge of the equipment.

Refrigerant Consumption = (0.125) * Total Repairs in 2000 * Average Charge.

Table 7, shows the average total charge from the national survey and the calculations of refrigerant consumption as explained before which totaled 1494 metric tons for year 2000.

Table 7. Refrigerant Consumption from Total Repairs Year 2000

A.C Equipment	Repairs 2000	Avg. Charge Kg.	Product	Consumption
AC 10-100 Ton	146,122	16.35	2,389,533	298,691
AC 3-10 Ton	320,536	4.40	1,411,640	176,455
AC more of 100 Ton	68,446	59.80	4,092,933	511,616
Domestic AC	237,871	1.44	341,582	42,697
Total A.C. Equipment Kg			8,235,688	1,029,459
Domestic Refrigeration	Repairs 2000	Avg. Charge Kg.	Product	Consumption
Freezer	155,173	1.74	269,380	33,672
Refrigerator	456,960	0.52	235,791	29,473
Water Cooler	283,660	0.45	127,930	15,991
Total Domestic Refrig. Kg.			633,101	79,136
Commercial/Ind. Refrigeration	Repairs 2000	Avg. Charge Kg.	Product	Consumption
Cold Room	133,238	7.67	1,021,269	127,658
Ice Cream Machines	46,108	1.98	91,155	11,394
Industrial Chiller	98,131	4.58	449,243	56,155
Show-Case Refrigerator	245,424	2.09	512,199	64,024
Total Comm./Ind. Refrig. Kg.			2,073,866	259,231
Vehicle Refrigeration	Repairs 2000	Avg. Charge Kg.	Product	Consumption
Bus AC	105,070	3.37	354,190	44,273
Refrigerated Vehicle	20,712	1.80	37,364	4,670
Truck AC	95,002	2.08	197,414	24,676
Vehicle AC	370,249	1.14	420,906	52,575
Total Vehicle Refrig. Kg.			1,009,570	126,194
Total Consumption Year 2000			11,952,225	1,494,020

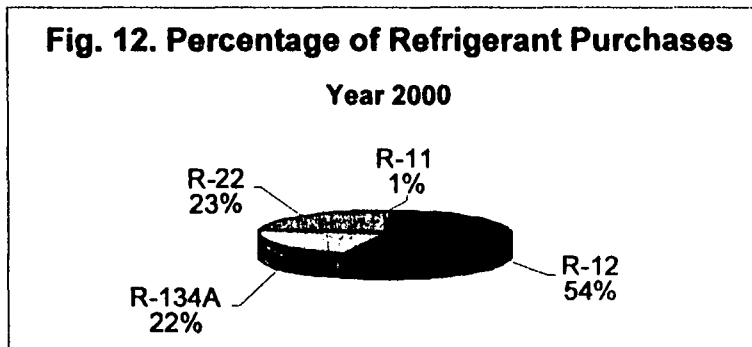
d) Study of Refrigerant Purchases

According to the data collected in the national survey, the total amount of refrigerant purchased during year 2000 reached a value of 1,109 metric tons as can be seen in Table 8. It is interesting to note that the value calculated for the consumption from the repairs and average charge in the national survey as reported in Table 7, was 1,494 metric tons. The difference between these two values could be due to the fact, that the refrigerant consumption was determined from two independent ways, based on different information from the survey.

The distribution of these purchases by refrigerant is shown in Figure 12, where R12 represented 54% of the total purchases, followed by R22 (23%), R134A (22%) and finally R11 with only 1% of the total purchases.

Table 8. Amount of Refrigerant Purchases Year 2000

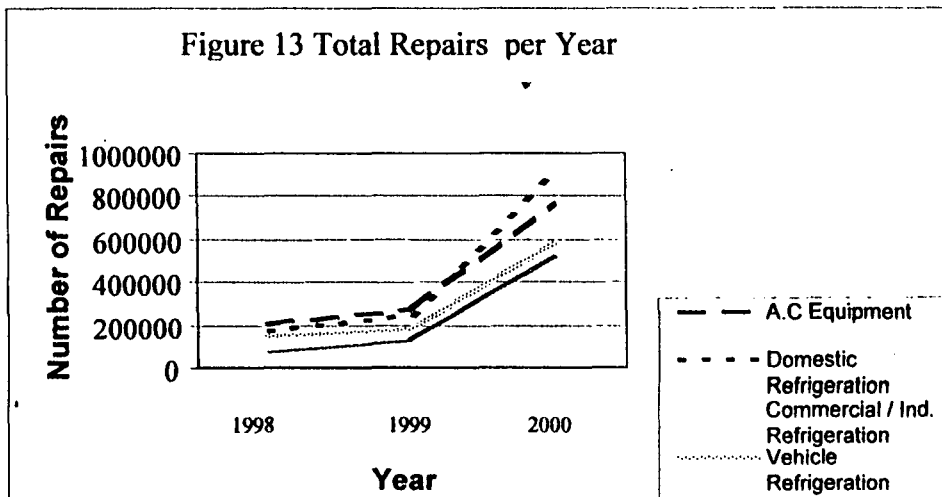
Refrigerant	Total Purchases Kg	Service Shop Average Kg
R-11	7,889	167.90
R-12	606,034	713.00
R-134A	241,351	391.90
R-22	254,098	754.00
National Total	1,109,372	



e) **Analysis of Repairs Data**

The total number of repairs performed during year 2000, according to the survey, is shown in Table 9, classified by sectors. The tendency in the repair from 1998 to 2000 is to grow up in all the sector as, in the case of domestic refrigerators, commercial/Industrial refrigeration, Air Conditioning and vehicle refrigeration. (see Figure 13). Again, the data collected for 1998 and 1999 is not precise because of the lack of historical records.

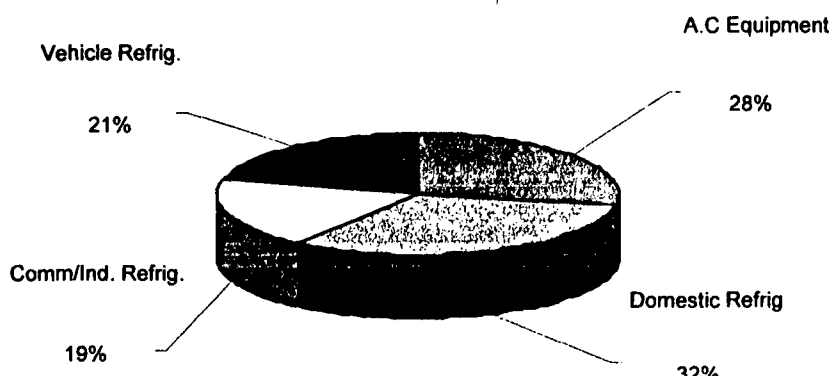
The distribution of repairs by sectors is shown in Figure 14. Domestic refrigeration (32%), and Air Conditioning repairs (28%) are the most demanding sectors followed by AC vehicles repairs (21%) and finally commercial/industrial refrigeration (19%).



**Table 9. Total Number of Repairs per Year
National Survey**

A.C Equipment	1998	1999	2000
AC 10-100 Ton	38,152	46,296	146,122
AC 3-10 Ton	91,460	125,768	320,536
AC more of 100 Ton	23,818	26,982	68,446
Domestic AC	54,353	74,260	237,871
Total A.C Repairs	207,783	273,306	772,975
Domestic Refrigeration			
	1998	1999	2000
Freezer	37,420	51,431	155,173
Refrigerator	88,402	129,196	456,960
Water Cooler	41,778	68,634	283,660
Total Domestic Refrig. Repairs	167,600	249,261	895,793
Commercial / Ind. Refrigeration			
	1998	1999	2000
Cold Room	33,309	48,223	133,238
Ice Cream Machines	2,408	3,351	46,108
Industrial Chiller	16,087	27,108	98,131
Show-Case Refrigerator	24,254	51,366	245,424
Total Commercial/Ind. Repairs	76,058	130,048	522,901
Vehicle Refrigeration			
	1998	1999	2000
Bus AC	30,508	39,016	105,070
Refrigerated Vehicle	7,567	6,668	20,712
Truck AC	33,176	42,700	95,002
Vehicle AC	73,794	87,787	370,249
Total A.C Vehicle Repairs	145,045	176,171	591,033

Fig. 14. Proportion of Repairs by Sector in Year 2000



f) Recommendation

To reduce the CFC discharges to the atmosphere during service, it is urgent to improve the working conditions of service workshops in Venezuela. It is very important to carry out technicians, preparation of a service handbook containing graphical information about good service techniques and improvement of facilities and equipment base needed for the services.

One way of reaching this goal is to begin immediately with a Certification Program not only for technicians but for the service workshops themselves.

In Appendix 4 presents all the data related to service, produced from the Database from the national survey, which include: Number of Technicians, Ecology Report, Instrument Used for Charge Control, Container Information, Total Number of Repairs and Average Charge of Refrigerant for different equipment.

It is necessary to formulate and issue government regulations to ban renting of refrigerants and flushing the systems with CFC-S.

1.4.3 PRODUCTION OF REFRIGERANTS IN VENEZUELA

Produven is the only company producing refrigerants in Venezuela, total production in the year 2000 reached 2850 metric tons, from them 1807 tons were sold in the national market. The distribution of this production in year 2000 was: 460 tons of R11, 1821 ton of R12 and 569 tons of R22.

The refrigerant production tendencies, specifically of R11, R12, R22 are shown in the following tables and figures:

In Table 10, is shown the amount of refrigerant manufactured during the period 1995-2000.

The same information, is presented graphically in Figure 15 for R11, and in Figure 16 for R12, and is shown in Figure 17 and Figure 18 but in the form of bar diagrams.

Figure 19 shows the production percentage for different kind of refrigerants including R22 in the last six years.

Table 10. Production (metric tons). Period 1995-2000.

Substance/Year	1995	1996	1997	1998	1999	2000	Total
R11	849.00	987.00	1,508.00	682.00	660.50	460.00	5,146.50
R12	3,435.00	3,426.00	4,154.00	2,970.00	2,98.61	1,821.00	18,004.61
R22	1,585.00	1,561.10	1617.60	1,206.00	455.71	569.00	5,376.81
TOTAL	5,869.00	5,974.10	7,279.60	4,858.00	3,314.82	2,850.00	28,527.92

Source Fondoin

Figure 15. The Production of R11

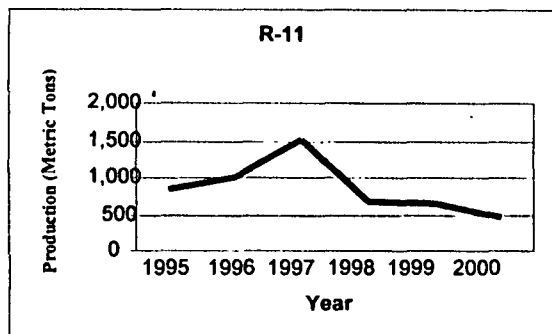
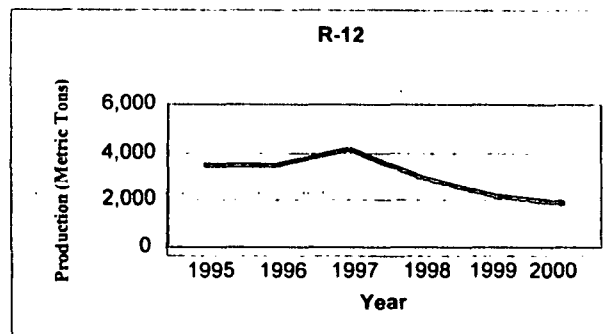


Figure 16. The Production of R12



From 1995 to 1997, the production of R11 grows exponentially with a positive slope reaching a maximum value in 1997 of 1508 metric tons. Afterwards, the production decreased by 55 %, then in 1998 and 1999 production decreases lightly from 682 to 660.5 tons. The tendency in year 2000 continues to be decreasing in a 30% in relationship with 1999.

Between the years 1995-1996, there are no significant changes in the production level of R12. However, starting from 1996 the production increased in 21%, reaching a maximum value in 1997 of 4,154 metric tons. For the next two years, the production level decreases almost linearly and this decreasing tendency continues until year 2000, when the production of R12 reached a value of 1,821 metric tons.

Figures 17 and 18 show more easily the changes in the production of R11 and R12. It is important to notice that the production levels of R11 during 1999 and 2000 are lower than 1,115 metric ton and the production levels of R12 of these years (1999 and 2000) are lower than 3,672 metric ton. Those values are the maximum production allowed for R12 and R11 according to Art. 7 of the Decree 3220, fulfilling the restrictions imposed by the Montreal Protocol

Figure 17. Bar Chart for R11

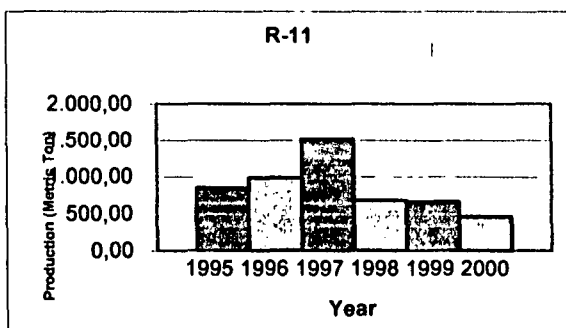
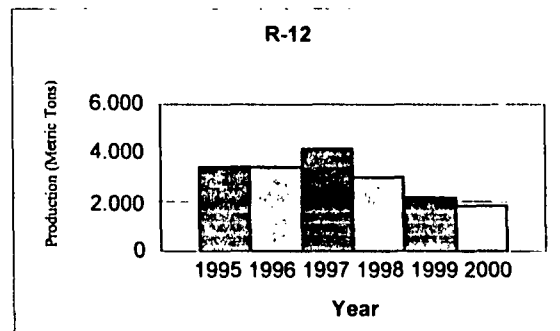


Figure 18. Bar Chart for R12



The production of R22 (See Figure 20) was almost constant between 1995 and 1997, then it start to decrease in the period 1998-2000. Although this refrigerant is not being phased out, now, the only reason for that decrease is the stagnation of the economy.

Figure 19. Production Proportion

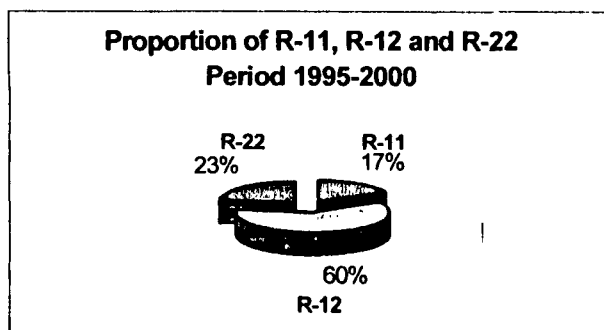


Figure 20. The Production of R22

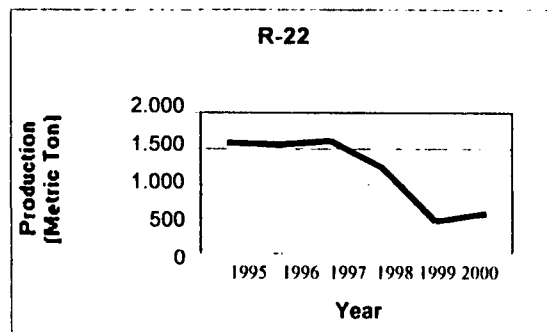


Figure 19, shows the proportion of the production of R-11, R-12 and R22 produced in Produven in the period 1995-2000, and it should be noticed that R12 represents 60% of the total production, while R11 is 17% and R22 represents 23%.

1.4.4 THE EXPORTS

The total of exports for year 2000 reached a value of 780,659 kg of R12, 134,990 kg of R11 and 127,324 kg of R22 with a total of 1,043 tons.

The countries importing R11 from Venezuela are Colombia Cuba, Panama and Peru but Colombia represents 89% of exports of R11.

On the other hand the countries importing R12 are Argentina, Brazil, Colombia, Cuba, Ecuador, Panama, Peru and the Dominican Republic with Argentina (27%), Dominican Republic (24%), Brazil (9%) and Colombia (7%) as the majors importers.

Colombia, Cuba, Curazao, Ecuador, Peru and the Dominican Republic were the importers of R22, with Colombia as the major importer with 36%.

Table 11 shows the amounts of exports of CFC during the last six years.

Figure 21, represents the exports of R11 for the period of study, showing a linear increase between 1995 and 1997 with an average of 55% of growth per year, then a large reduction to 169 metric ton in 1998, an increase of more than 100% to 439,4 in 1999 and finally another big reduction to 135 tons in year 2000.

On Figure 22, the tendency of the exports of R12 can be seen. Again, there is a steady increase in exports from 1995 to 1998, reaching a maximum value of 1,512 metric tons in 1997, a decline in the export during 1998 and 1999 but the exports increased by 21% in the year 2000 to a value of 780.66 metric tons.

The exports of R22 are presented in Figure 23, showing an increase from 170.52 in 1995 to 515.45 metric tons in 1996, then a reduction in the exports until 1999, but again an increase from 72.11 to 127.32 metric tons from 1999 to year 2000.

From the total of exports of the period of study, 1997 with 28% and 1996 with 23% are the years with larger values in the exports (Figure 24).

In relationship with the proportion of CFC to the exports of the period, it can be seen that R12 represents 59%, R11 is 27% and R22 is 14% of the total exports as it can be seen from Figure 25.

Table 11. Total exports (metric tons). Period 1995-2000

Substance / YEAR	1995	1996	1997	1998	1999	2000	Total
R 11	359.00	598.00	857.00	169.00	439.40	134.99	2,557.39
R 12	819.00	1,040.00	1,512.00	786.30	644.21	780.66	5,582.17
R 22	170.52	515.45	202.50	209.00	72.11	127.32	1,296.90
Total	1,348.52	2,153.45	2,571.50	1,164.30	1,155.72	1,042.97	9,436.46

Source Fondoin

Figure 21. Exports of R11

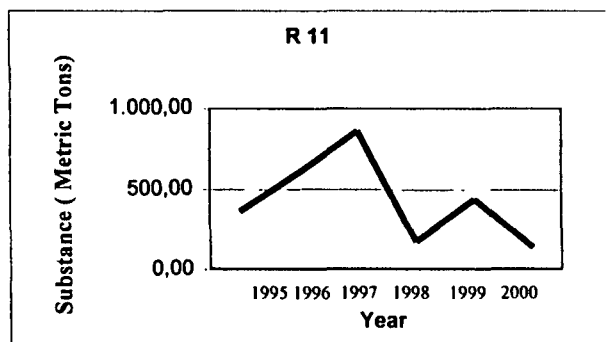


Figure 22. Exports of R12

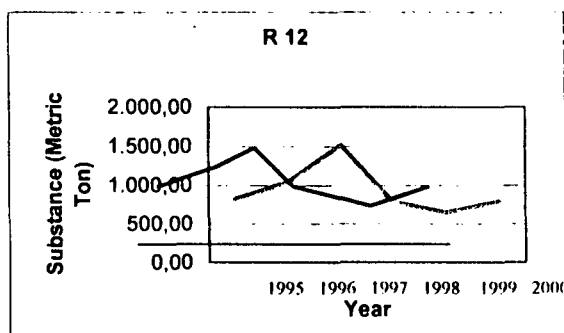


Figure 23. Exports of R22

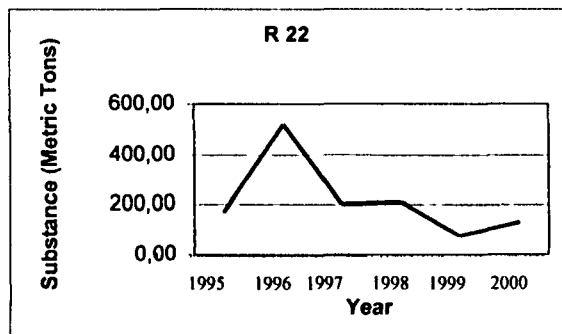


Figure 24. Yearly Distribution of Exports

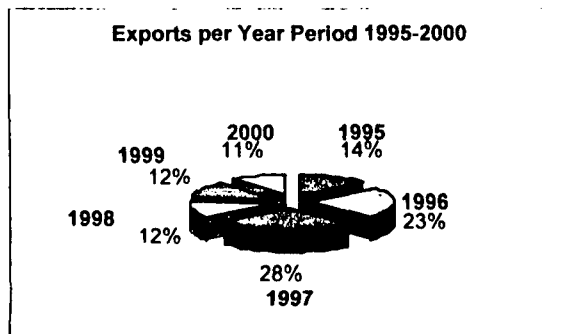
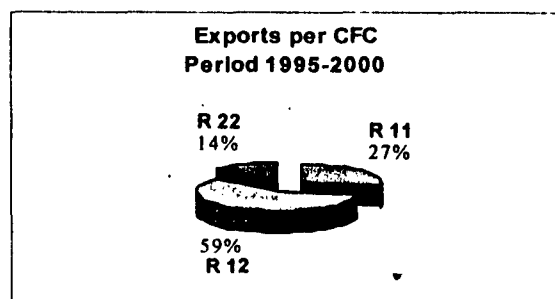


Figure 25. Distribution of CFC Exports



1.4.5 THE IMPORTS OF REFRIGERANTS

The Imports of CFC and R22 during the last six years are shown in Table 12.

Table 12. Official Imports of Refrigerants (metric tons)

Refrig. / Year	1995	1996	1997	1998	1999	2000
R-11	1	45	1	0.6	1.6	1.49
R-12	104	171	82	514	114.6	116
R-113	24	37	299	0.3	36.1	17.8
R-114	0.1	8.5	75	1.6	0	0
R-115	0	37	23	0	0	0.39
R-22	272.5	319.1	590.4	1,480	758.1	1,155.21

Source Fondoin

The list of import licenses for year 2000 include imports of R12 by Refriquim (69%), Corporación Saira and Interfrigo, imports of R11 by Corporación Saira (87%) and Refriquim, imports of R113 by Palma Products and Spray Quimica, imports of R22 by Refrimaster, Dupont, Refriquim, Interfrigo, Elga de Vzla, Corp. Saira, Pescaderia San Nicolas, ExpoAire, Refriemca and Falop. (See Fig. 26 and 27).

Figure 26. Import of R-11

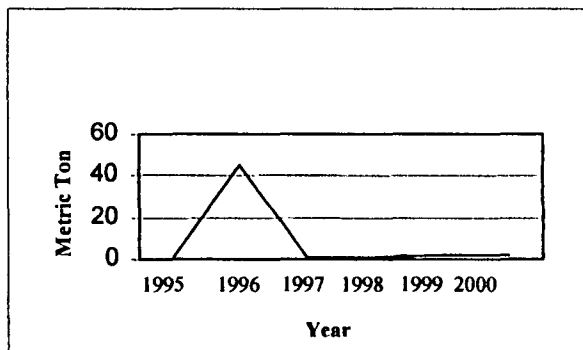
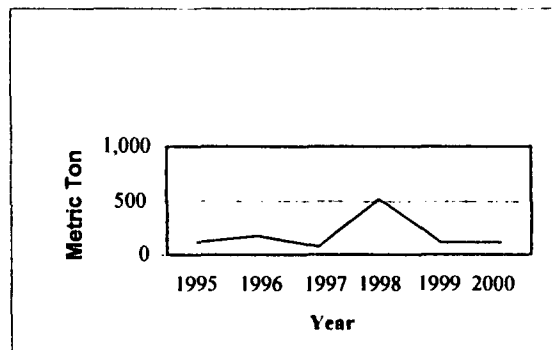


Figure 27. Import of R-12

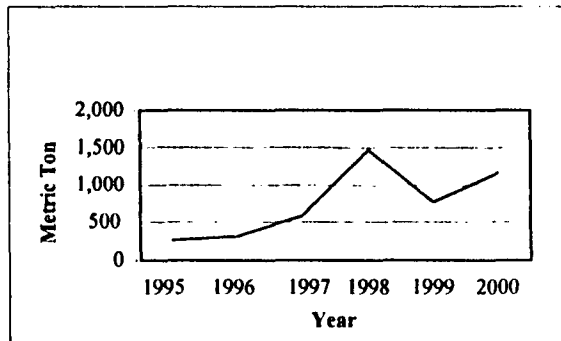


Most of the companies importing R12 and R11 are suppliers of the small firms selling refrigerants and refrigeration parts and it is possible to conclude that this refrigerant will be used mostly in the service sector, the R113 will be used in the chemical industrial

sector and the R22 will be used for both service and manufacturing companies of air conditioning equipment.

All the imports of CFC show a tendency to decrease in these six years, on the contrary R22 imports are growing up. (See Figure. 28).

Figure 28. Import of R-22



The imports of R113, R114 and R115 only have significant numbers from 1995 to 1997. The imports of R11 accounts for approximately 1 ton per year with the exception of 1996 when totaled 45 tons (See Figures. 29, 30 and 31).

Figure 29. Import of R-113

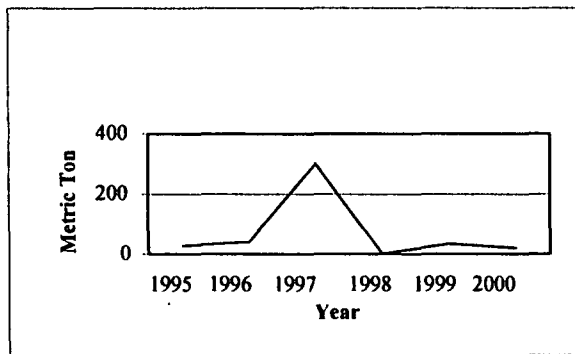


Figure 30. Import of R-114

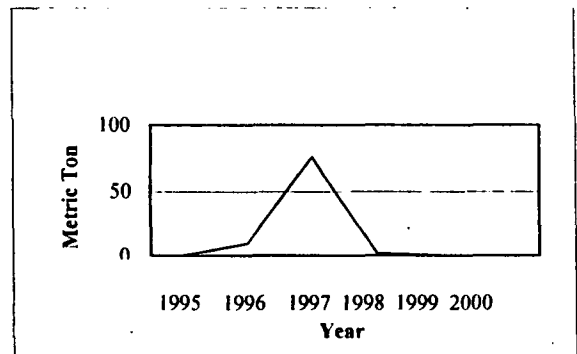
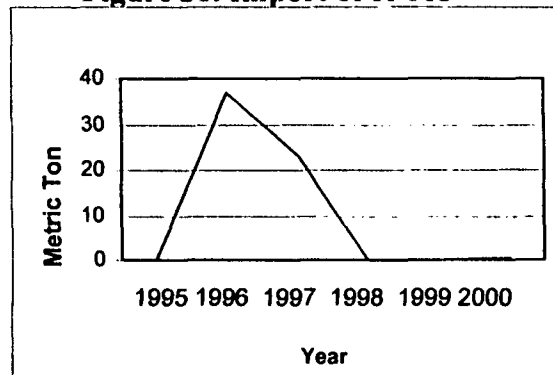


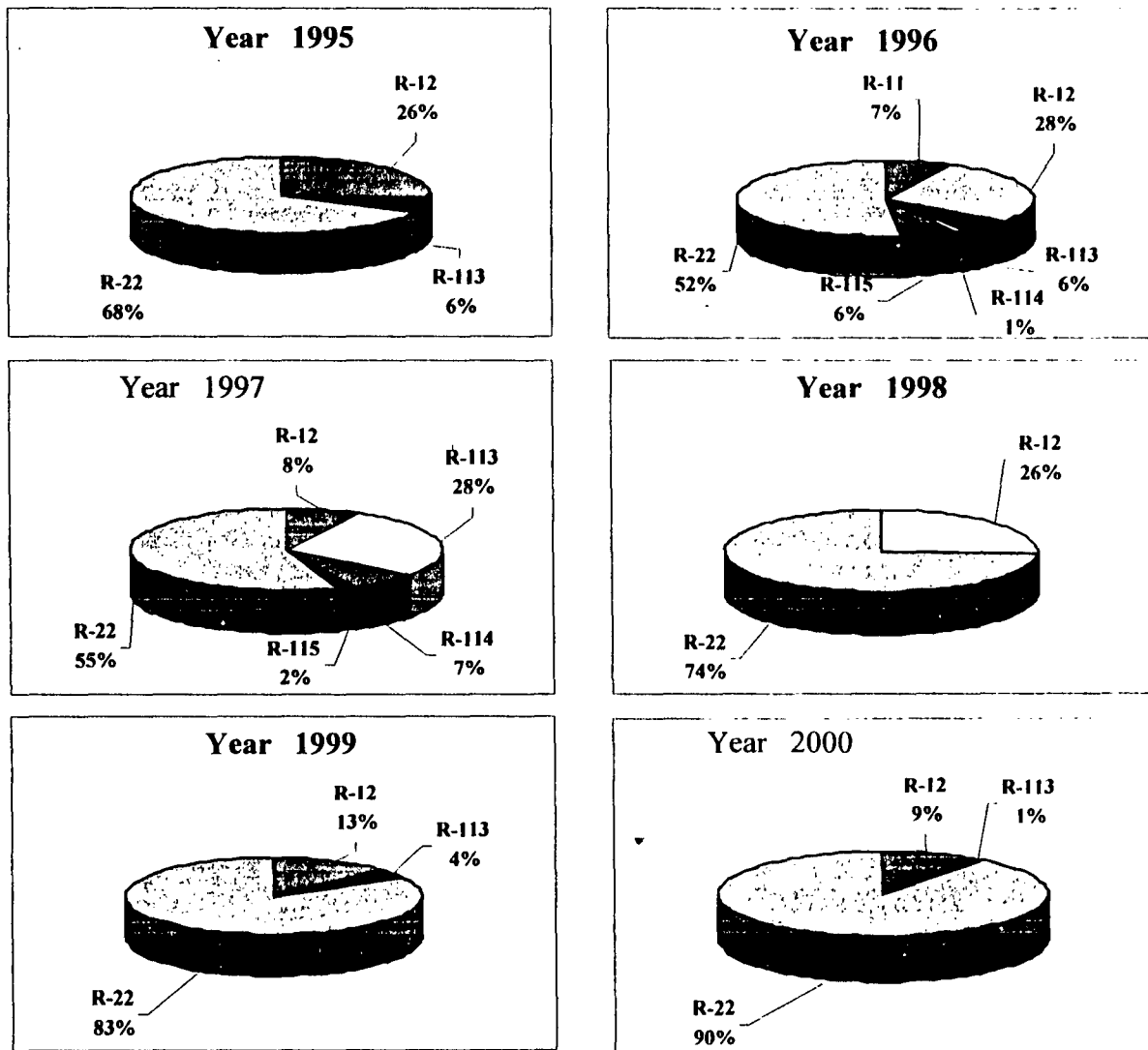
Figure 31. Import of R-115



The imports of R12 averaged 117 tons per year during the period with the exception of 1998 when they jumped to 514 tons. During year 2000 imports of R12 officially were 116 tons but there are strong indications of illegal imports of 1048 tons, according to confidential OCEI information provided by FONDOIN, which is currently under investigation. Illegal imports are growing up as a result of the restrictions of CFC import imposed by the Decree 3220, since 1999, but until now, there is not reports of confiscation of CFC imports.

The distribution of imports in the period of 6 years between all the refrigerants is shown in Figure 32. It can be seen that while the percentage of R12 was of 27% during the first four years, then decreased to 9% in 2000 while R22 increased from 68% to 90%.

Figure 32. Distribution of Imports



1.4.6 THE MARKETING OF CFC IN VENEZUELA

a) CHARACTERISTICS OF WHOLESALERS MARKET

The main supplier of CFC in Venezuela is Produven, who sells its products through two different channels: the refrigeration industrial sector, and the dealer sector which is the supplier of refrigerant to the retail stores that sell refrigerants to service workshops and to small manufacturing companies. The others big suppliers are the importers of CFC, but they usually sell refrigerants to the retail stores providers of the service sector.

In the last two years and because of the slow growth of the economy, the refrigeration industrial sector had a high decline in sales that have caused the closure of several industries in such a way that at present time there are only two industrial customers of Produven: Climar a manufacturer of air conditioning equipment and Grupo Inmensa, which during 2000 bought small amounts of R12.

At the moment, the dealers of Produven that are marketing R11, R12 and R114 are Comercial San Antonio, Indugas and Praxair. There are others as Refrimaster, buying mainly R22, although occasionally they also buys R12 or R11.

The importers of CFC are suppliers mostly for the refrigeration or air conditioning service sectors. At present time there are only three companies reporting officially imports: Interfrigo, Corporación Saira and Refriquim. Information of the quantities of CFC stock piled by importers or distributors were not reported because, it was considered confidential.

Studying the sales of Produven in year 2000 it can be seen that from the total of 1,268,130 Kg of R12 sold, 1,265,568 Kg (more than 99%), were directed to the dealers sector to be marketed or to small manufacturing companies of the refrigeration sector or through retailers to service workshops. Additionally, all the imports of R12, which is estimated to more than 1,100 metric tons during year 2000, were also sold through retailers to the service sector. From these 1,100 tons only 116 were imported legally, the rest is currently under investigation.

A similar situation occurs in the case of R11 where from the total of 91.28 metric tons sold by Produven in year 2000, 96% (87.76 Tons) was directed to the dealers, which, in addition to the estimated 1.5 ton imported, we marketed the CFC-11 through retailers to the service workshop sector or small manufacturing companies.

This means that at the present time, most of the R12 and R11 consumption in the refrigeration and air conditioning field, officially fixed in 1,281 metric tons for year 2000 (Illegal imports are estimated to 1,000 tons), have been used by the service sector and for that reason more attention should be given to the projects trying to improve and reduce the use of CFC at service workshops.

The general trends of the market at the level of wholesalers could be observed in the following Table 13 The evolution of the buyers in the refrigeration industrial sector is

shown in Figure 33. It can be seen that the amount of CFC bought by the different industries have large changes from one year to another, for instance Madosa bought 90.64 metric tons in 1997 and 32.4 Tons in 1999, but because of the closure, it did not buy CFC in year 2000.

Table 13. Sales of CFC from Produven

Refrigeration Industries	1997			1998			1999			2000		
	R11	R12	Total	R11	R12	Total	R11	R12	Total	R11	R12	Total
Cimmar	7.200	390	7.590	3.600	195	3.795	2.400	112	2.512	3.520	762	4.282
Inmensa	0	2.400	2.400	0	4.000	4.000	0	3.200	3.200	0	800	800
Ind Nutal	1.120	6.000	7.120	0	5.000	5.000	0	0	0	0	0	0
Madosa	73.640	17.000	90.640	45.820	18.000	63.820	22.400	10.000	32.400	0	0	0
Pequiven	1.120	10.855	11.975	2.240	5.655	7.895	0	0	0	0	0	0
Tec Ordaz	0	2.500	2.500	1.120	5.925	7.045	0	3.800	3.800	0	0	0
Ingarolca	0	0	0	0	0	0	0	0	0	0	1.000	1.000
Total Refrigeration Ind.	83.080	39.145	122.225	62.880	38.775	91.655	24.800	17.112	41.912	3.520	2.562	6.082

Dealer Sector	1997			1998			1999			2000		
	R11	R12	Total	R11	R12	Total	R11	R12	Total	R11	R12	Total
Aga Gases	0	3.400	3.400	0	1.700	1.700	0	0	0	0	0	0
BOC Gases	0	5.950	5.950	0	9.350	9.350	0	850	850	0	0	0
San Antonio	17.680	339.500	357.180	13.440	254.760	268.200	2.400	146.540	148.940	5.360	328.500	333.860
Comersa	16.240	240.100	256.340	7.120	196.380	203.500	2.680	18.160	19.040	0	30.860	30.860
Indugas	20.960	569.120	590.080	24.880	483.020	507.900	23.600	173.680	197.280	60.000	433.600	493.600
Praxair	73.200	1.054.020	1.127.220	66.640	822.600	889.240	24.480	303.560	328.040	22.400	472.608	495.008
Refrig Inter	10.640	304.240	314.880	15.080	359.600	374.680	0	0	0	0	0	0
Refrig Nec	2.400	43.800	46.200	0	0	0	0	0	0	0	0	0
Total Dealer Sector	141.120	2.660.130	2.701.250	127.160	2.127.410	2.254.670	63.360	640.790	694.150	87.760	1.268.130	1.353.328

Total Sales CFC	224.200	2.699.276	2.823.475	180.040	2.166.185	2.346.226	78.160	657.902	738.062	91.280	1.268.130	1.359.410
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Source FONDOIN

In Figure 34 is shown the evolution of sales in the dealer sector and it can be seen that the number of dealers decreased from 8 to 5 from 1997 to 2000.

The tendency of R12 sales from Produven from 1997 to year 2000 is shown in Figure 35 for both the refrigeration industrial sector and the dealer sector. It can be seen that the sales to dealers represents in the period studied, the major proportion of the sales. A similar situation occurs in the case of R11 sales as shown in Figure 36, but more dramatically could be observed for the total of sales of both R11 and R12 in Figure 37.

It is interesting to point out that the sales of R11 and R12 by Produven to the dealer sector during year 2000 shows a growth of almost 95 % of R12 and 65 % of 1999. The proportion of CFC sold in the last five years (1996-2000) by Produven is as follows: 59% of R12, 27% of R22, 12% of R11 and 2% of others CFC.

Figure 33. Produven CFC Sales for Refrigeration Industrial Sector

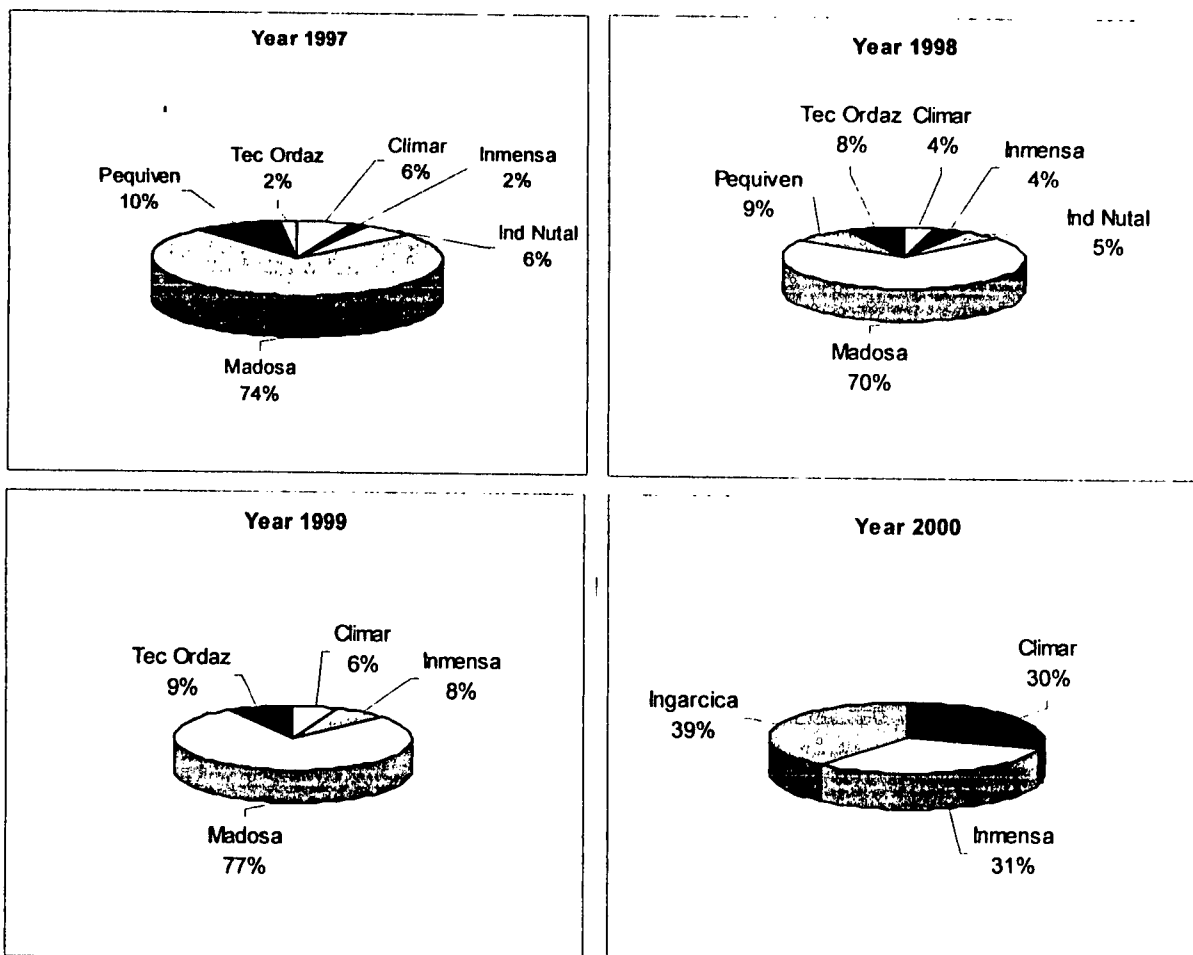


Figure 34. Produven CFC Sales to Dealers

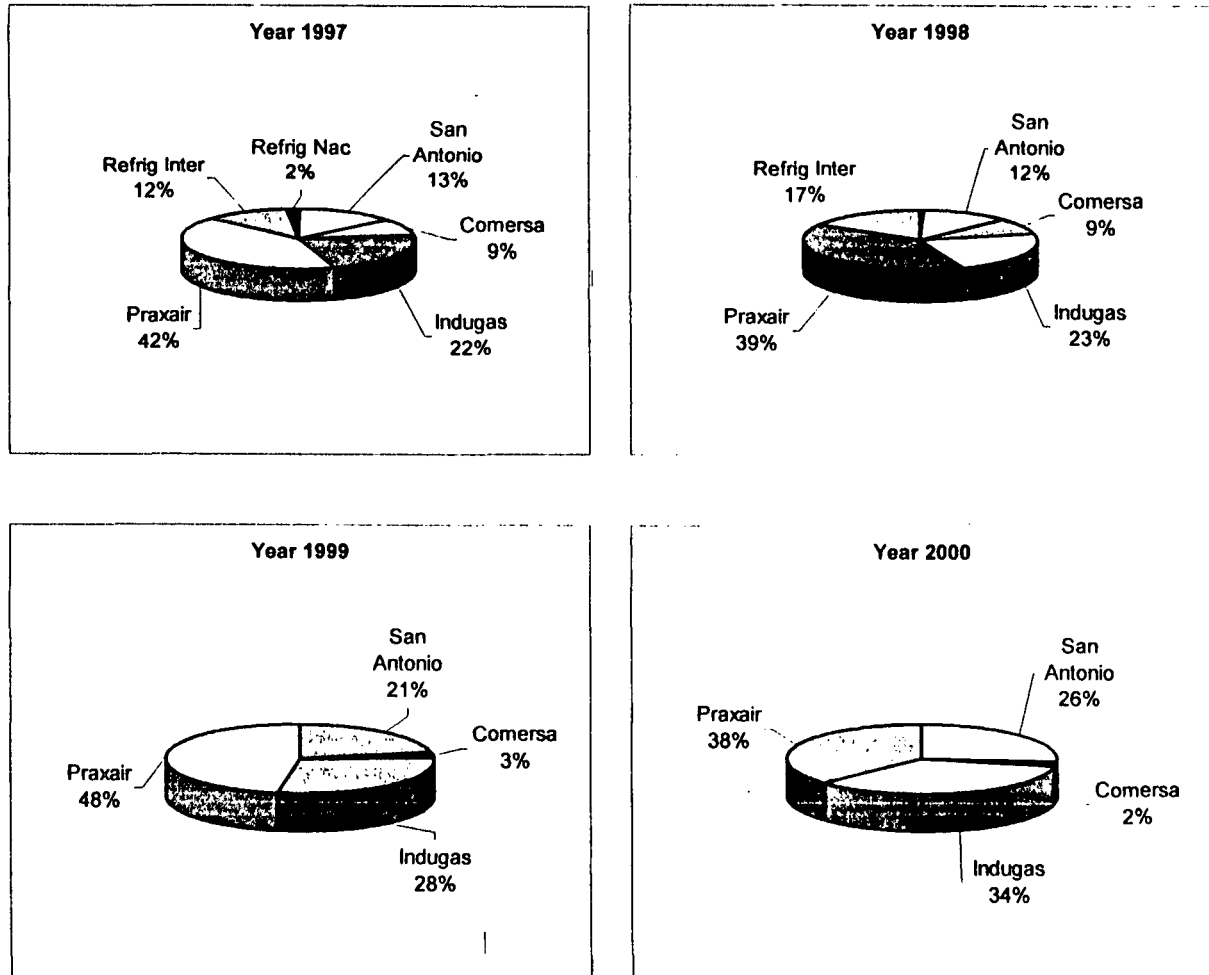


Figure 35. Produven R-12 Sales

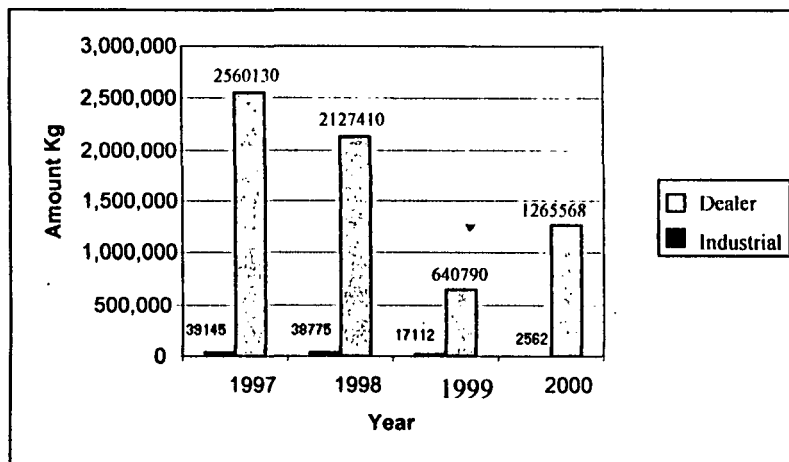


Fig 36. Produven R-11 Sales

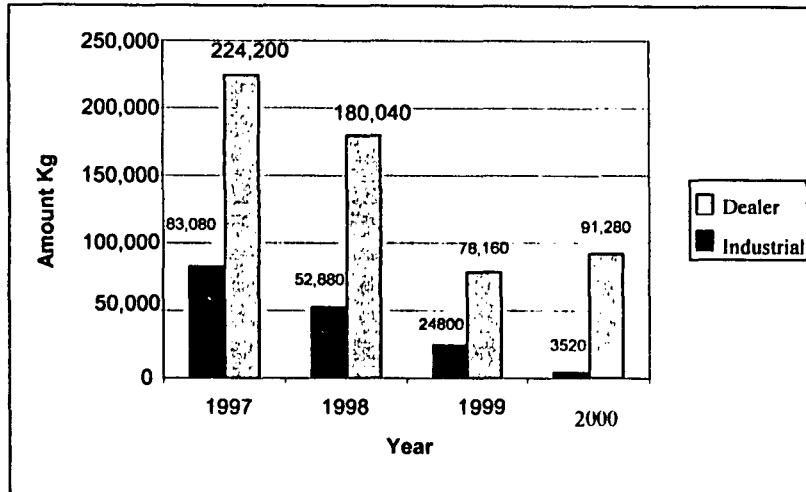
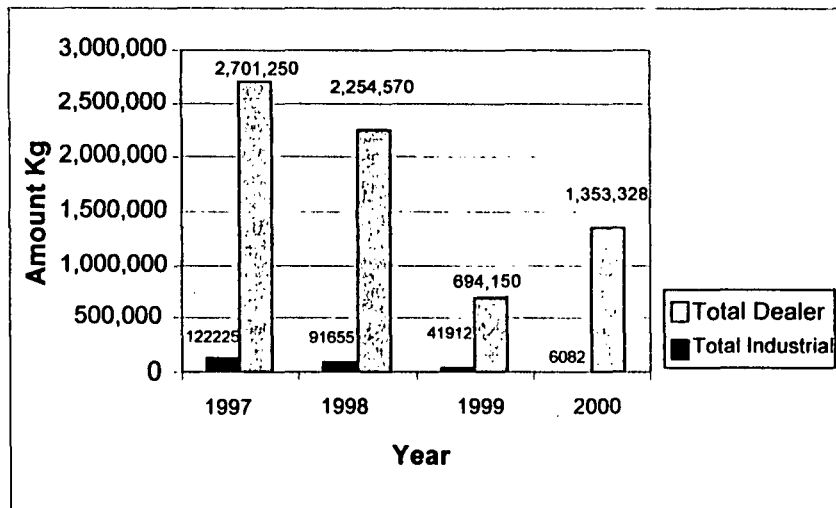


Fig 37. Total CFC Sales of Produven



It should be noticed that the amounts of sales of Produven not always correspond with the production of the same year, because sometimes amounts produced in one year are sold locally or exported during next year. This fact and the situation of illegal imports, could lead to some inconsistencies in the consumption analysis, when it is done on an annual basis.

b) THE RETAIL CFC MARKET

The sales of CFC at the retail level in Venezuela were studied using the data collected from the refrigeration stores during the national survey. They have the following characteristics: the standardized CFC containers are only used in the case of throw away container as reported by the sampling study. In 63% of the cases, CFC stores used non-standardized size containers and 65% used non standardized color containers. On the other hand 68% of the CFC stores recharge the containers. For more information about retailers of CFC, see Appendix 5.

The results of the data collected regarding refrigerant sales in the 148 small retail stores visited in the survey are shown in Table 14 and graphically in Figure 38. These stores represent a 20% of the total estimated for the country.

It can be seen that refrigerant sales of R12 shows an increase, although the data for 1998 and 1999 is not precise as it was noted before. The proportion of sales shown in Figures 39, 40 and 41 indicate that R12 represents approximately 60% of total sales during the last three years, while R134A represents a 6%, R22 is a 35% and R11 only a 2% of total sales. There are no indications that R12 consumption will decrease in the near future.

Table 14. Refrigerant Sales in Firms Visited according Survey

Refrigerant	1998	1999	2000	Total Kg	Average Kg
R-11	5,140	3,088	26,740	34,968	999.1
R-12	152,480	160,383	594,981	907,844	6,484.6
R-134A	11,800	20,950	64,776	97,526	1,598.8
R-22	84,934	104,773	357,856	547,563	4933
Total	254,354	289,194	1044353		

Figure 38. Sales of Refrigerant

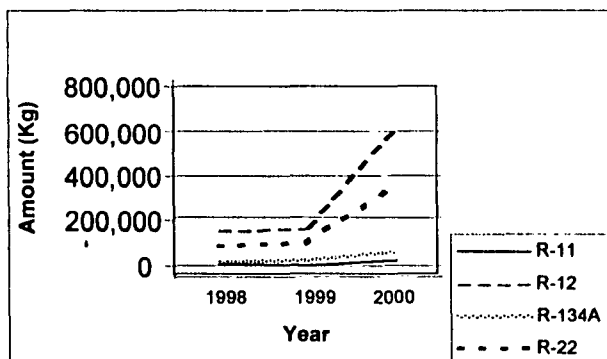


Figure 39. Sales Proportion 1998

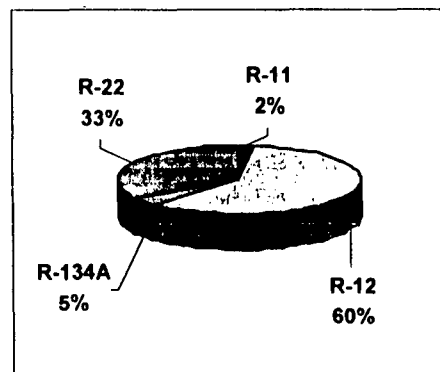


Figure 40. Proportion Sales 1999

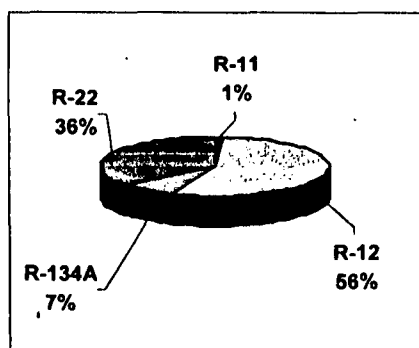
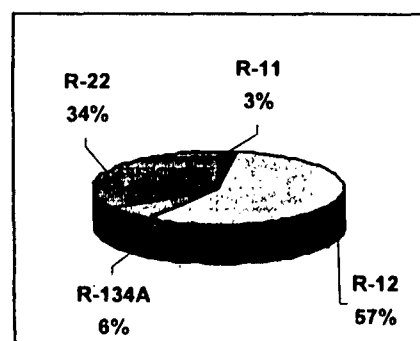


Figure 41. Proportion Sales 2000



The retail prices of refrigerants sold in small amounts, are as follows: R11 is sold at about US \$5 Dollars, R12 is sold at US\$7 Dollars and R134A is sold approximately at US\$ 13 Dollars.

In the Appendix 1, Annex E, of this report, a list of the retail stores of refrigerants and refrigeration parts is presented classified by cities of Venezuela in accordance with the data collected from service workshops.

1.4.7 CONSUMPTION OF CFC IN REFRIGERATION SECTOR

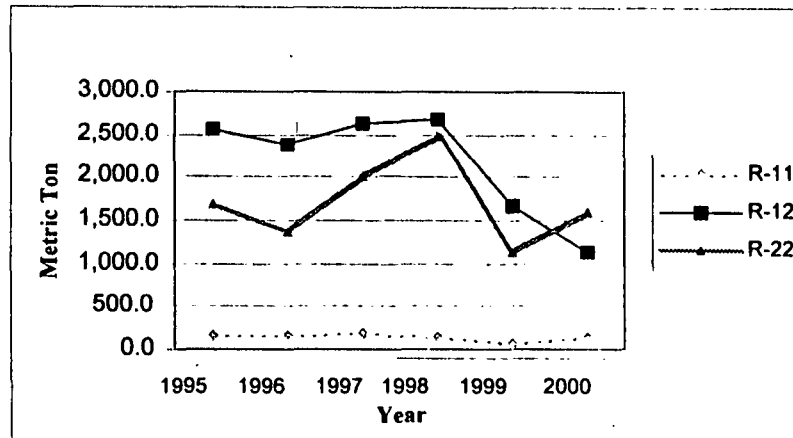
The consumption of CFC and R22 in the refrigeration and air conditioning sector during the last six years is shown in Table 15. The values reported do not include the foam, storilant, chemical, fire fighting, etc. Sectors. As it can be seen there is not consumption of R113 in this period, additionally for R114 and R115 the consumption was marginal with the exception of 1996 and 1997. In Figure 42 the consumption of R11, R12 and R22 is represented.

Table 15. CFC Consumption Refrigeration Sector

Subs./ Year	1995			1996			1997			1998			1999			2000		
	Total	Serv.	Ind.	Total	Serv.	Ind.	Total	Serv.	Ind.	Total	Serv.	Ind.	Total	Serv.	Ind.	Total	Serv.	Ind.
R-11	160.0	153.0	7.0	156.0	149.0	7.0	189.0	177.0	12.0	134.0	127.0	7.0	71.7	68.9	2.8	144.2	140.7	3.5
R-12	2,561.0	2,475.0	86.0	2,370.0	2,312.0	58.0	2,626.0	2,575.0	51.0	2,680.0	2,630.0	50.0	1,655.6	1,632.8	22.8	1,136.4	1,133.6	2.8
R-113	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R-114	0.1	0.1	0.0	8.5	8.5	0.0	75.0	75.0	0.0	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R-115	0.0	0.0	0.0	12.0	12.0	0.0	21.0	21.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0
CFCToL	2,721.1	2,628.1	93.0	2,548.5	2,481.5	165.0	2,911.0	2,848.0	63.0	2,815.6	2,758.6	57.0	1,727.3	1,701.7	25.6	1,281.0	1,274.7	6.3
R-22	1,687.0			1,365.8			2,005.5			2,477.0			1,140.1			1,596.8		
Total	4,408.1			3,912.3			4,916.5			5,292.6			2,867.4			2,877.8		

Source FODOIN and calculations based in official imports.

Figure 42. Consumption of R11, R12 and R22

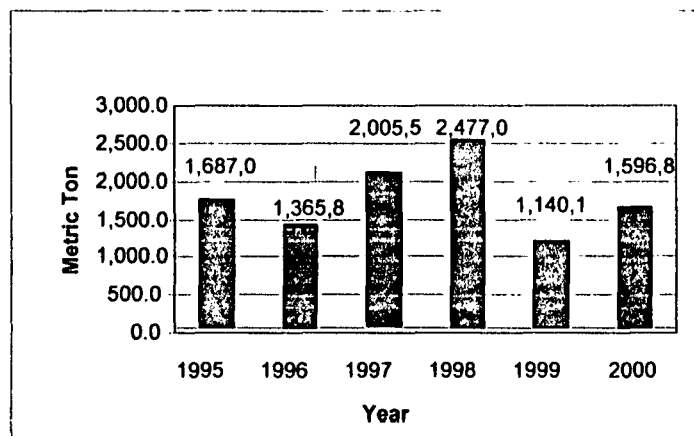


The consumption of R11 in the refrigeration sector had an average of 142.5 tons per year during the period 1995-2000, with 95.4% used for service sector, and 4.6% for manufacturing, with a maximum of 189 tons in 1997 and a minimum of 71.7 tons in 1999. Compared with R22 and R12, the consumption was very low.

The consumption of R12 in the refrigeration sector, was the largest as compared with other refrigerants during the period with a maximum of 2680 tons in 1998 and a minimum value of 1136,4 tons in year 2000 (It is not included in that value, the estimated 1048 tons of illegal imports in that year). The average for the six years was 2171,5 tons per year, with 98% used for service and 2% for manufacturing. Taking into consideration the illegal imports of year 2000, the consumption was almost constant during the period.

The consumption of R22 was second as compared with other refrigerants, with a maximum value of 2477 tons in 1998 and a minimum value 1140,1 tons in 1999 (See Figure 43), but in 2000 the consumption start to increase again.

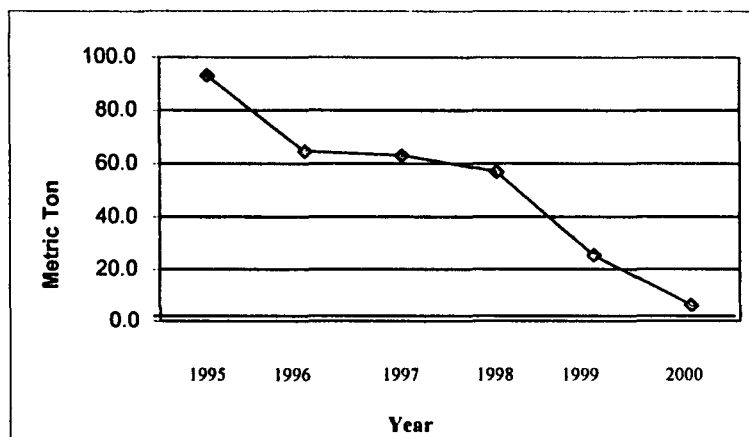
Figure 43. Bar Chart of R22 Consumption



In general the consumption of CFC in both the service and the industrial sectors have been decreasing in fulfillment of the Montreal Protocol as it can be seen in Figures 44 and 45, especially in the industrial sector which shows the effect of conversion to other refrigerants.

It should be pointed out that the consumption points for year 2000 in Figures 42, 44 and 45 are the official values as reported by May 2000, which do not take into consideration the 1048 tons of estimated illegal imports. The consumption of CFC in the industrial sector shown in Figure 44 is for the large manufacturing companies, already converted, and it does not include small industrial companies which buy refrigerant in the retail market. This fact may lead to mix the information of consumption of the small industrial enterprises with service sector.

Figure 44. CFC Consumption in Major Companies of Refrigeration Industrial Sector



For the period under consideration the consumption of R22 was 56% of total, the R12 was second with 39% and R11 was third with 5% (See Figure 46). The consumption of R12 continues to be important and because the majority of it goes to service workshops. The service techniques should be improved as soon as possible by training technicians and the recovery and recycling of CFC should be increased to reduce this consumption.

Figure 45. Consumption of CFC in Refrigeration Service Sector

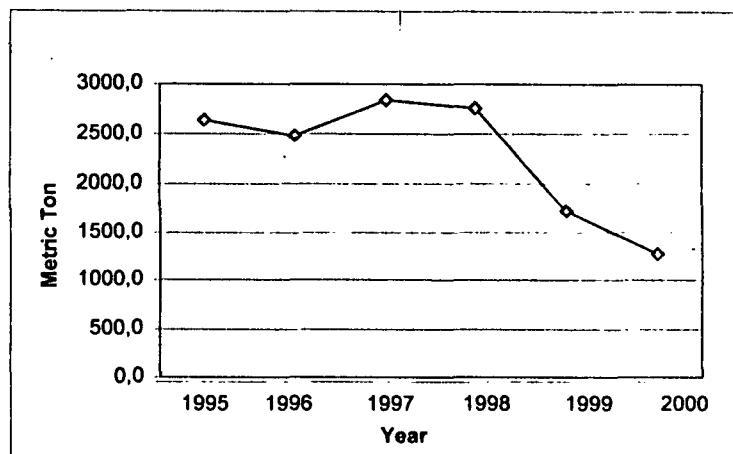
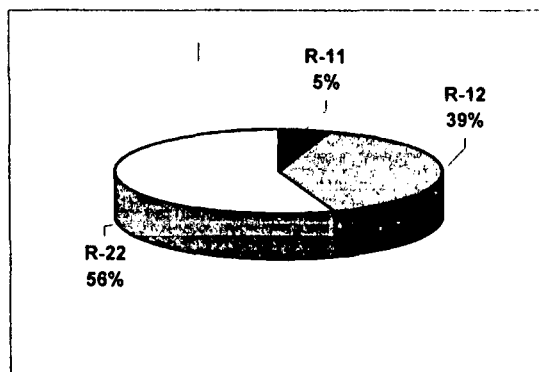


Figure 46. Proportion of Refrigerant Consumption



2. JUSTIFICATION OF THE RMP

The task of phasing out CFC consumption in Venezuela, according to Montreal Protocol Schedule should continue, but from the analysis of the current situation several conclusions could be grasped which lead to identify needs to be taken into consideration:

- a) Current legislation and customs procedures should be revised to avoid illegal imports of equipment containing CFC (used refrigerators, new compressors or condensing units), to have a better control of the amounts of imported CFC, and to facilitate the application of international regulations and standards for the trade of ODS.
- b) It is necessary to train the customs officers in the correct application of the new regulations for controlling illegal traffic of ODS, pointing out the importance of identifying CFC at entry points and better ways to keep accounts of the amounts imported, to prevent illicit trade.

- c) The major consumption of CFC in Venezuela is occurring in service workshops and because currently, new equipment containing R12 is being sold. This situation is going to be extended beyond year 2010. Additionally current service techniques are very poor and wasteful of CFC. Because of those reasons it is important to carry out training of technicians, improvement of working conditions at service shops through a certification program and to strengthen and to extend the recovery and recycling program of CFC as the only source of CFC after year 2010.
- d) There are still manufacturing companies producing R12 refrigeration equipment in Venezuela, to fulfill the Montreal Protocol conditions it is important to complete the phase out of ODS in the industrial sector.
- e) There are about 500 large chillers working with R11 or R12 and some of them in very good operating conditions. Again, it is necessary the phase out of ODS of those chillers by implementing a program with attractive financing ways for users willing to replace or to convert the chillers to acceptable refrigerants.
- f) An early closure of Produven, the only CFC production plant of Venezuela, will accelerate the phase out of ODS. It is necessary to evaluate this possibility through a technical and economical audit.
- g) It is required to reinforce the policy of informing the general public about the ozone problem, the need of phasing out ODS, the regulations about controlled substances and how to help in the fulfillment of those regulations. Particularly it is important to incorporate the formal educational system within this plan.
- h) It is necessary to introduce legal framework for the ban of release of CFC during manufacturing, maintenance, handling, service, etc.

Additionally the fulfillment of the ODS phase out for Article 5 countries under Montreal Protocol should be completed on the dates established, moreover when the new Constitution of Venezuela in its Article 127 establishes this fulfillment as a State Obligation.

All these aspects lead Fondoin to the decision to prepare a new RMP with the assistance of UNIDO as the Implementing Agency of the Multilateral Fund as the executing Agency and following the recommendations of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol.

3. ASSISTANCE AND COOPERATION FOR THE RMP

The Multilateral Fund for the Implementation of the Montreal Protocol through UNIDO, provided the funds for the preparation of this RMP. UNIDO helped in the coordination of the work and provided information and technical advise for the job.

The World Bank provided information about concessional lending and early closure of ODS production plans, which helped in the preparation of the corresponding projects.

The UNEP provided information about customs officers training and import licenses of ODS which were useful in the preparation of the two projects related to those topics.

The Venezuelan Society for the Chemical and Petrochemical Industries (Asoquim), the Venezuelan Chamber for Ventilation, Air conditioning and Refrigeration (VENACOR) and the National Society of Refrigeration and Air Conditioning (ASOFRIO) were represented in some of the meetings and helped in looking for information through their affiliated members.

Produven was represented in some of the meetings and provided information about production, marketing and final users of refrigerants.

PDVSA (The National Oil Company), SIDOR (The Steel and Iron National Company) and the CVG (Corporación Venezolana de Guayana) helped in providing information on the chillers they own.

Some companies such as Distribuidora Century, York, Carrier and Trane helped in providing information about chillers.

The National Government participated through the Ministry of Production and Commerce with their General Directors of Industry, Commerce, Agricultural and Foods, the Tourism Corporation and SENCAMER and they provided useful information for the project. The Ministry of the Environment through the General Director of Environmental Quality provided information about the System of Licenses and about the imports of ODS. The SENIAT (Servicio Nacional Integrado de Administración Tributaria) through the Customs Superintendent participated and provided information related to Customs Offices, Customs Procedures and about training of personnel. The Ministry Of Foreign Affaires also participated.

4. STRATEGY FOR A PROGRESSIVE PHASE OUT OF ODS

The progressive phase out of ODS in the refrigeration sector is based on the following strategy:

- a) TO REDUCE DEMAND of ODS.** For the achievement of this purpose it is necessary to implement the following policies:
 - a.1) To complete the industrial conversion from ODS to other substances using the financial support of the Multilateral Fund.
 - a.2) To replace with new equipment the old refrigeration systems working with ODS, financing the owners with an attractive system
 - a.3) To reduce consumption in service and maintenance of equipment, improving the working conditions of service shops with a certification system and by training technicians.
 - a.4) To promote the offer of refrigeration equipment working with new technologies by controlling the imports and manufacturing of old technology CFC equipment.
 - a.5) To produce a change in the attitude of users, importers, service providers, manufacturers, technicians, government officials and in general of the whole population regarding the ozone problem and strengthening the awareness of the need of phasing out ODS.

- b) TO REDUCE THE OFFER of ODS implementing the following policies:**
 - b.1) To increase the amounts of ODS recovered in service shops, recycling and reclaiming of ODS refrigerants by introducing incentives to this activity and expanding the current program.
 - b.2) To reduce production of virgin ODS and to study the feasibility of an early phase out of production.
 - b.3) To reduce and to control the imports of ODS.

- c) TO COMPLEMENT THESE POLICIES with the following obligatory actions:**
 - c.1) To improve the legal framework of the license system.
 - c.2) To establish quality standards for services, for equipment and for storage and packaging of ODS.

- c.3) To establish a financial system for financing replacement of chillers and other activities related to ODS phase out.
- c.4) To establish a system for the control and supervision of imports of all products related to ODS through well trained customs officers equipped with appropriate CFC detection instrument.
- c.5) To establish a system of certification. The program is intended to improve service and to increase the recovery and recycling and it should include the following points:
 - Certification of technicians through the attendance to courses and a testing procedure under the supervision of the government and educational institutions.
 - Certification of workshops by establishing the requirements of the level of technicians, facilities, equipment, the obligation to participate in the recovery and recycling program and written service procedure to assure the quality of the services.
- c.6) To develop a campaign to achieve awareness of people about the ODS problem.
- c.7) To introduce legal ban on release of ODS refrigerants to the atmosphere.

5. ACTION PLAN

The action plan, to implement the strategies is summarized in Table 16.

Table 16. Action Plan

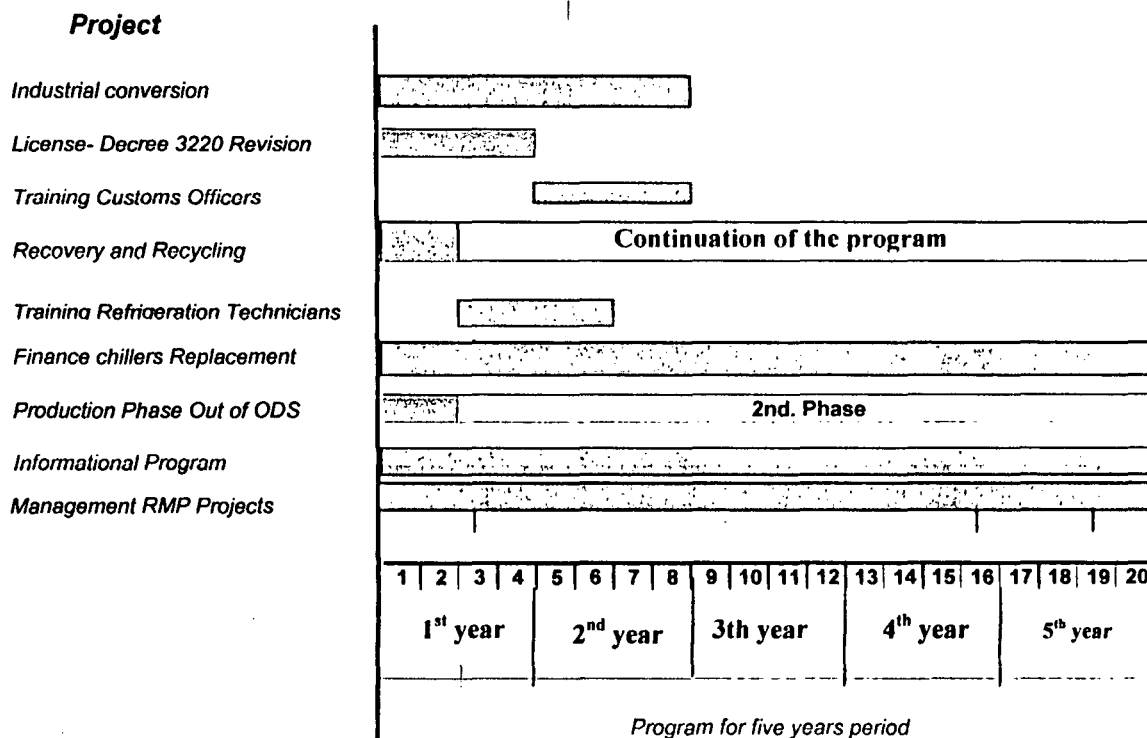
Project	Objective	Action	Execution Time	Impact	Cost
To formulate a project for the final conversion of manufacturing companies in the Refrigeration Sector	To phase out the use of CFC in manufacturing of refrigeration appliances.	To prepare and implement the projects for conversion of Remaining Industries. To complete phase out of ODS in Industrial Sector	1 st . Phase: Project to complete industrial conversion; 24 months.	41.6 Metric Tons	US\$ 50,000
			2 nd . Phase: Conversion 24 months		

Project	Objective	Action	Execution Time	Impact	Cost
Revision of Import License and Decree 3220	To have an effective legal system controlling trade and consumption of ODS.	To revise current regulations to improve custom procedures and to incorporate changes into legislation	12 months	N.A	US\$ 80,000
Training of Customs Officers	To prevent and detect illegal trade of ODS.	To have customs officers capable of applying ODS Regulations	12 months after approval of new license system	N.A	US\$ 120,000
Recovery, Recycling, Reclaiming of Refrigerant and training Refrigeration Technicians First Phase Reclaiming	To improve and to extend to new service shops the current program for recycling and reclaiming.	To incorporate recycled and reclaimed CFC as a safe source for replacement of production and imports	Project: 6 months	N.A	US\$ 50,000
			New Program for Extension of recycling: 6 months	212 Metric Tons	US\$ 42,000
Recovery, Recycling, Reclaiming of Refrigerant and training of Technicians Second Phase Training	To improve performance in service techniques to reduce CFC release and to promote refrigerant Recovery	To implement certification of technicians and service shops and to reduce CFC consumption in service sector.	12 months	N.A	US\$ 360,000
To convert or replace chillers through attractive lending	To convert or replace R11 and R12 chillers for the elimination of 63 Ton of ODS	To pay the replacement/ conversion costs with the savings in energy consumption. To complete phase out of ODS in chillers	60 Months	Total phase out of 63 Metric Tons	US\$ 3,000,000
Phase Out Production of ODS	1 st . Phase: Evaluation and audit of Produven	To evaluate the economical, social, ecological and industrial impact of closure.	6 months	2281 Metric Tons	US\$ 100,000
	2 nd . Phase: Closure of Produven	To complete an early closure	Proposed for 2005		N.A

Project	Objective	Action	Execution Time	Impact	Cost
Management, monitoring of projects for RMP Venezuela	To have better control of the execution of projects	To assure that all projects are completed according specifications	First Phase 30 months	N.A	US\$ 60,000
To make known the ozone problem and to increase awareness of the need of phasing out ODS	To achieve consciousness of the population about the need of protecting the ozone layer and to make known regulations and ways to fulfill them.	To implement a program to provide information within the educational system and the general public.	Permanent program with emphasis in September and in the Ozone Day.		N.A

The timetable to execute the action plan is presented in Figure 47.

Figure 47. Action Plan Schedule



The total cost of all project has not been determined yet, because, the cost of completing industrial conversion and the cost of the early phase out of production (Produven) are not available at the moment.

6. INSTITUTIONAL FRAMEWORK

Fondoin is an institution created by the Venezuelan Government according to the Decree 2590 from 10-10-1992, published in the Official Gazette 35073 from 20-10-1992 to execute all the actions required to phase out production and consumption of ODS in Venezuela in coordination with MFMP. It is an Office of the Ministry of Production and Commerce. The Board of Directors of Fondoin include representatives of the Ministry of Foreign Affairs, Ministry of Production and Commerce, Ministry of Environment and members of Asoquim and Venacor and the President of Fondoin.

The Ministry of External Affairs is the responsible for all the negotiations with the Montreal Protocol bodies, although in some cases it may delegate in Fondoin its representation.

The Ministry of Environment is the responsible for all regulations related to the environment and the ways of controlling their fulfillment, but in ODS matters usually acts under the request of Fondoin. The Import License System works under its administration, additionally it controls the production and imports of ODS.

The relationships with the Ozone Secretariat correspond to the Ministry of Environment and to the Ministry of Foreign Affairs.

The Ministry of Finances through the Customs Offices and the SENIAT has the responsibility of controlling the imports and exports of ODS according the licenses from the Ministry of Environment.

The implementation of the present RMP will be a responsibility of Fondoin.

Fondoin is also responsible for providing information related to ODS and assisting companies or persons in the conversion process or in the application of ODS regulations.

7. IMPACT OF THE RMP

With the applications of the this RMP it is expected to have the following results:

- a) A Strong License System with customs officers capable of applying it.
- b) A Service sector working with sound techniques, recovering and recycling refrigerants and with a personnel oriented to avoid release of refrigerants to the atmosphere.
- c) The final conversion of the remaining industries has an impact of 41.6 tons of ODS.

- d) The early closure of Produven, proposed for year 2005, will have an impact of 2281 tons per year.
- e) The replacement of 287 chillers will have an impact of 63 tons
- f) The recovery and recycling program is expected to have an impact of 212 tons of ODS per year.

The seven projects for implementing the Action Plan are presented immediately.

***THE MANAGEMENT, MONITORING AND
CONTROL OF THE PROJECTS OF THE
RMP***

THE MANAGEMENT AND MONITORING OF THE PROJECTS FOR THE PHASE OUT OF ODS IN THE REFRIGERATION SECTOR OF VENEZUELA

COUNTRY	Venezuela
TITLE OF THE PROJECT	The Management of the Projects for the Phase Out of ODS in the Refrigeration Sector of Venezuela
SECTOR	Refrigeration
DURATION	30 Months It could be extended to 72 month.
IMPACT	Non Applicable
COST Of The PROJECT	US \$ 60,000
EXECUTING AGENCY	UNIDO
NATIONAL COORDINATING AGENCY	Fondoin/ Ministry of Production and Commerce

PROJECT DESCRIPTION

To develop a Plan for the management, monitoring and control of the execution of all the approved projects related to the phase out of ODS in the refrigeration sector of Venezuela.

1. BACKGROUND

During the period 2002-2007, several projects dealing with the phase out of ODS should be implemented in Venezuela in order to assure the fulfillment of the Montreal Protocol

During the execution of all these projects it is required to keep a close monitoring of their development to have a better control of the time schedule, the costs and the achievement of the goals proposed.

2. OBJECTIVES

To control the costs and time of execution of the approved projects of the refrigeration sector designed to reduce and to control the ODS consumption in Venezuela which includes the following:

- The Recovery, Recycling and Reclaiming of Refrigerants in the Service Sector and the Training of Technicians.
- The Replacement or Conversion of R12 and R11 Chillers.
- The Phase Out of Production of ODS. Evaluation and Audit of the Early Closure of Produven.
- The Final Conversion of the Remaining Enterprises of the Refrigeration Manufacturing Sector.
- Review of the Import License System and the Decree No. 3220
- Training of Customs Officers

3. EXPECTED RESULTS

- 3.1 To verify that all approved projects are being developed according to their specifications and that they fulfill their objectives.
- 3.2 To control that all projects were executed according to their objectives, time schedule and the costs approved for each one of them.

4. APPROACH

The project should include the following steps:

- A) To provide all the administrative provisions and facilities required for the control and monitoring of all the projects
- B) To assess the actual technical status of the personnel, equipment and facilities of the institutions participating in the execution of the projects.
- C) To assess the technologies of the equipment which are going to be used in the projects.
- D) To collect additional information necessary for the full-scale project document formulation.
- E) To collect relevant national or international background information that could be used in the projects.
- F) To organize meetings with national or international consultants required for the projects.
- G) To carry out all the necessary monitoring and fact finding periodic meetings with the participants of the projects in order to control the development of the projects
- H) To prepare periodical technical reports with the findings and recommendations regarding the follow up of the projects.
- I) To design a procedure appropriate for the regular monitoring of the recovery, recycling and reclaiming of CFC in the service sector and the control of the amounts recovered, their sales, reuse, etc. in cooperation with the Ministry of the Environment.

5. TIME OF EXECUTION

The time for this project is estimated in 30 months. This period does not cover the total time planned for the execution of the whole RMP of Venezuela which is of six years. The extension of the project to 72 months, will require further financial support.

6. COST OF THE PROJECT

The cost of the project was determined under the consideration of US \$ 2000 Dollars monthly or US \$ 12000 Dollars per semester. For the time planned for the project of 30 months the cost of the project will be US \$ 60000

Project preparation and implementation.....US \$ 60,000

7. ADMINISTRATION OF THE PROJECT

The execution of this project should be carried out by Fondoin, the National Agency that will be responsible for the support and follow up of all the required activities, including the coordination of the whole RMP Program. Additionally Fondoin will keep information about the advance of all the projects.

*REPLACEMENT OF R11 AND R12
CHILLERS*

REPLACEMENT OF 287 R11 AND R12 CHILLERS

PROJECT TITLE: Replacement of 287 R11 and R12 Chillers
COUNTRY: Venezuela
IMPACT: Phase out of 63 Metric tons of ODS
TOTAL PROJECT COST: US \$ 3,000,000
PROJECT DURATION: 60 months
NATIONAL COORDINATING AGENCY: Fondoin - Ministry of Production and Commerce

PROJECT DESCRIPTION

The Replacement of 287 Chillers in a sixty (60) months period.

REPLACING R11 and R12 CHILLERS

1. GENERAL INFORMATION

The primary objective of this project is to reduce the number of final users of CFC by replacing R11 or R12 chillers with energy-efficient, CFC free refrigeration equipment

A database with information of used chillers provided basically from maintenance companies and from some of the owners is available (See Appendix 7 Used Chillers Report).

The data base at the moment includes 287 chillers, 280 working with R12 and the other 7 working with R11, with a total of 63 metric tons of ODS (Average charge is 220 Kg per chiller). The information includes the name of the owner, manufacturer, location, cooling capacity in refrigeration tons, years that has been in use and charge of refrigerant in Kg.

Some of the chillers do not have information about the period of time in years, they have been used but it is estimated they have at least ten years of use.

The R12 group includes 280 chillers with a total cooling capacity of 51,377 tons and requiring a total amount of 56,166 Kg of R12 for their operation.

The R11 group includes 7 large chillers with a total cooling capacity of 6,076 refrigeration tons and requiring a total charge of 6,842 Kg of R11.

It is estimated that the data base includes about the 60% of a total of 500 existing CFC chillers in Venezuela, working with an estimated of 110 metric tons of ODS, although this numbers should be confirmed.

2. DESCRIPTION OF THE REQUIRED SERVICES

The project aims to implement of a National Program to replace existing R11 or R12 chillers with energy-efficient CFC systems. This project should include the following activities:

2.1 EVALUATION OF THE INFORMATION OF THE CHILLERS IN THE DATA BASE

The information of the chillers in the database should be reviewed in order to prove that each chiller is still in operation and that they are located in the same place, or in order to include other units that do not appear in the data base.

Additionally the technical characteristics of each unit should be verified or completed, which includes the manufacturer name, Serial Number, Model, type of equipment, cooling capacity in tons, type of refrigerant and charge of refrigerant in Kg.

2.2 ASSESSMENT OF ECONOMICAL CONDITIONS OF OWNERS

A group of owners of CFC chillers, from the Commercial, Industrial or Official sectors should be identified in order to begin the replacement program.

If a loan mechanism would be selected, this group of owners should have favorable conditions in terms of acceptability of the replacement of the CFC chillers and payment terms for the sustainability of a revolving fund that should be created for the project. This will help to have a quick capital return of the initial investment assuring the success of the program. One company that should be evaluated for this purpose is SIDOR, because it has 30 chillers working with R12 and R11 in operation and because all the technical information of these chillers is available. This group represents a total of 14.86 metric tons of ODS with a yearly consumption of 5.72 metric tons of ODS for servicing.

2.3 SELECTION OF THE FINANCIAL INSTITUTION

If loans were provided for the replacing of equipment, they should be managed through the banking system of Venezuela. One of the banks covering most of the locations and providing the best condition for the program should be selected. Additionally, an institution should be selected that will be responsible for collecting the monthly payments of the new chiller and the electricity corporations should be taken into consideration for this purpose.

2.4 SELECTION OF THE TECHNICAL COMPANIES

Those companies should be selected invited to participate in the implementation of the replacement and conversion of the CFC chillers which they have been registered at the Office responsible for the Administration of the Plan using a company resume with the following information:

- a) Legal Documentation: Registration, Tax Identification (RIF, NIT), Financial Balance, Commercial, Industrial and financial references, Tax Revenue Report, etc.
- b) The technical staff list indicating their Academic Background and professional experience appropriate for the work.
- c) Practical Experience in the area of refrigeration and a reference list of project executed in the last three years.
- d) Description of the facilities, vehicles, tools and equipment.

2.5. TECHNICAL ASSESMENT OF OPERATING CONDITIONS OF THE CHILLERS

The operating conditions of each one of the chillers should be assessed regarding the accessibility of the equipment, time that it has been used, expected life span in years, operating parameters such as, evaporation and condensation temperatures, suction and discharge pressure, Total Energy consumption in a certain period of time i.e., kWh per year, Consumption of kW per Ton, leakage rates of CFC and comments about the general conditions or appearance of the unit according its maintenance records.

From the evaluation of these conditions as compared with those specified for a new equipment in a technical catalog it could be concluded if this unit should be either replaced or converted.

Any chiller to be converted should have available at least 50% of its expected life span in addition to particular considerations such as difficult accessibility that could make very costly the replacement.

2.6. THE REPLACEMENT OF A CHILLER

In the process of replacing a particular chiller, it is necessary to estimate the cost and time required for the replacement, to evaluate the economical feasibility of the replacement by computing the savings that could be generated because of the reduction of the electricity bill due to a better efficiency of the new chiller (Consumption of electricity of new chillers should be less than 0.6 KW. per ton of refrigeration) as compared with the efficiency of the old one.

Additionally it is required to write the technical specifications of the new equipment, and to recommend any conditions or provisions that should be included in the contract of the loan.

2.7. THE CONVERSION OF A CHILLER

In the case that, the cost of replacement of a CFC chiller becomes very high, which may occur in relatively not very old systems with high costs of installation, the conversion of the unit could be possible. The process of converting a chiller from R12 to R134A or from R11 to R123 or any other acceptable refrigerant in accordance with the terms of the Montreal Protocol requires to write the technical specifications of the conversion, to estimate the cost and time required for it, and to recommend any condition that should be noticed by the owner of the unit or that should be included in the contract of the loan if this applies. The contractor of the conversion should compute the change of cooling capacity and the change in the electricity consumption caused by the conversion. The technical and economical reasons of the conversion of the system, should be justified very clearly.

2.8. FINANCIAL ANALYSIS OF THE REPLACEMENT

Various financing options including grants, loans, donations, etc should be assessed which could be acceptable to chiller owners, while maintaining the value of the revolving fund created for replacement, without the erosion of inflation, losses and other causes.

2.9. IMPACT OF THE PROJECT

According to the number of CFC Chillers to be replaced during the execution of this project, the impact of it on the ODS consumption and as a result on the obligations of the country regarding the Montreal Protocol should be computed. For the 287 chillers that would be converted the total phase out is 63 metric tons of ODS.

3. COST OF THE TOTAL PROGRAM

The cost of replacement of each one of the chillers of this Program should be computed with certain degree of precision, according to the group of chillers selected, in order to evaluate the total cost of the project with the purpose of estimating the required investment for the revolving fund.

The description of these costs in US. Dollars should be presented in a suitable way to request the economical assistance from the Multilateral Fund or any other National or International Agency providing financial assistance for this purpose.

4. TIME OF EXECUTION OF THE PROJECT

The time required for the implementation of the project should be fixed by the executing agency but this time should be no more than 60 months. The project should be developed in 6 months.

5. ADMINISTRATION OF THE PROJECT

The administrative provisions required to develop the whole program should be supported by FONDOIN as Head Office for the management of the plan. It is suggested that the project should be headed by a Mechanical Engineer, with enough experience and knowledge in this field, and that a Web location should be developed to inform companies and the public about the project.

Some recommendations for the administration of the program are the following:

- a) All companies working with refrigeration and air conditioning should be invited to register for the plan.
- b) All brand of equipment could be selected for the replacing of equipment.
- c) Information about the replacement or conversion of chillers should be made known to the public through Internet and/or newspapers.

THE EARLY CLOSURE OF PRODUVEN
First Phase

THE EARLY CLOSURE OF PRODUVEN

FIRST PHASE

PROJECT TITLE: THE PHASE OUT OF PRODUCTION OF CFC. Evaluation and Audit of the Early Closure of Produven

COUNTRY: Venezuela

IMPLEMENTATION AGENCY: Not Available

IMPACT: First Phase: Not Applicable
Second Phase: 2,281 ODS Tons at closure

PROJECT COST: First Phase US \$ 100,000

PROJECT DURATION: 6 months

NATIONAL COORDINATING AGENCY: Fondoin - Ministry of Production and Commerce

PROJECT DESCRIPTION

The Evaluation and technical audit of the Closure of Produven, a manufacturing company with capacity of producing 10000 Tons and currently producing 2281 Tons of ODS.

THE EARLY CLOSURE OF PRODUVEN

1. GENERAL INFORMATION

PRODUVEN, the only ODS producer in Venezuela, is a joint-venture owned in 50% by the Venezuelan Government through Pequiven and the other 50% by Atofina. It is located in Moron, near the Petrochemical Complex of Pequiven and to the port of Puerto Cabello.

It began operations in 1976 with a capacity of producing 10,000 metric tons of R11 and R12, 5000 tons of R22 and 20,000 tons of chloride acid as a byproduct of the plant mainly directed to national consumption 63% in year 2000 or for exports to MP Article 5 neighboring countries, 37% in year 2000.

Total production in year 2000 reached 2850 tons, divided in 1821 tons of R12 (64%), 569 tons of R22 (20%) and 460 tons of R11 (16%). The exports in year 2000 were 781 tons of R12 (75%), 135 tons of R11 (13%) and 127 tons of R22 (12%).

The company has 60 direct jobs and is related to approximately 300 indirect jobs. Total income in year 2000 reached 9.788.000 US\$ Dollars distributed in 7.620.000 of national sales and 2,168,000 from exports.

The Commercial Name is: Productos Halogenados de Venezuela.

Address: Carretera Nacional Moron Coro, Complejo Pequiven, Sector Empresas Mixtas, Apartado Postal (P.O. Box) 2045-A, Moron, Estado Carabobo

Phone: 58-242-3608122; Fax: 58-242-360-8123

Website:

2. THE IMPORTANCE OF AN EARLY CLOSURE

At present, the ODS production of Produven is being influenced by three different reasons:

- a) The need to fulfill the restrictions imposed on consumption by the Montreal Protocol with the application of different programs, which has reduced internal demand of R12 and R11.
- b) The economical growth of the country, which is very slow at the present time.
- c) The demand of ODS of neighboring countries currently importing from Venezuela.

In the period 1995-2000 the production was growing slowly until 1997 when it reached 5,662 tons of R12 and R11, then it began to decrease mainly because of the stagnation of the economy

of the last two years, which resulted in a large reduction of sales of products and demand of services.

Currently most of the national sales of R12 of Produven are directed to the refrigeration and vehicle air conditioning service sector, and because there are still sales of used equipment using R12 and new compressors or condensing units working with R12, it is expected that internal demand of ODS in this sector could continue in the following decade, particularly as the aging of those units will increase the need of repairing them in an economy with high prices of new equipment.

One way of satisfying future demand of ODS for servicing and recharging old equipment with several years of remaining useful life, beyond year 2010, is through the use of recovered and recycled ODS. But on the other hand, the programs of recycling and reclaiming ODS in Venezuela have not been successful so far, because of low prices of imported R12 and R11 and illegal trade, makes unattractive the recycling schema.

An early closure of Produven and a more strict control of imports will increase the demand for recovered and recycled ODS as the only source of them and it will accelerate the phase out of ODS in Venezuela.

3. DESCRIPTION OF THE REQUIRED SERVICES

The project aims to study the economical, social, environmental and technological implications of an early closure of Produven and to propose a Plan for the Closure itself. This project should include the following activities:

3.1 EVALUATION OF THE IMPACT OF AN EARLY CLOSURE

The closure of Produven should be studied in order to determine the following aspects:

- a) Changes in the prices and the availability of ODS in Venezuela in the following five years.
- b) The social effects of the closure regarding the direct and indirect jobs.
- c) The effects on national industries requiring ODS.
- d) The effect on the cost of services and repairs of equipment containing ODS which are expected to continue operation in the following ten years
- e) The closure should be gradual matching the production with the demand of CFC (Virgin or reclaimed)

3.2 THE COST OF THE CLOSURE

The actual cost of the closure and the time required for it, should be computed through a Technical and Financial Audit according to the terms of the MI'MP.

4. IMPACT ON ODS CONSUMPTION

Considering the Produven ODS production of year 2000 of 2,281 tons as reference level and supposing that in addition to the closure the imports will be strictly supervised and controlled according the levels imposed by the Decree 3220, the phase out of production will have an impact of 2,281 metric tons.

5. COST OF THE TOTAL PROGRAM

The Study of the closure has an estimated cost of US \$ 100,000. The total cost of the closure itself, should be computed as a result of the audit

6. TIME OF EXECUTION OF THE PROJECT

The time estimated for the development of the project and the corresponding study is 6 months. The total time aimed for the closure should take place, not later than the 31 of December of year 2005.

7. ADMINISTRATION OF THE PROJECT

The administrative provisions required to develop this project should be supported by FONDOIN as Head Office. The project should include the discussion with the owners about the proposed closure. The presentation of the project is as follows:

- a) It should be written in English with a copy in Microsoft Word.
- b) Copy of the Data Base related to the project should be on a CD written in Microsoft Access.
- c) Copy of the Closure Plan should be presented in Microsoft Project.

*THE CONVERSION OF REMAINING
INDUSTRIES OF REFRIGERATION
SECTOR*

THE FINAL CONVERSION OF REMAINING INDUSTRIES OF REFRIGERATION SECTOR

COUNTRY:	Venezuela
TITLE OF THE PROJECT:	Final Conversion of Remaining Industries of Refrigeration Sector
SECTOR:	Refrigeration
DURATION:	24 months
IMPACT:	Reduction of 41.6 MT of ODS in the Refrigeration Manufacturing Sector
COST OF THE PROJECT:	US\$ 50,000
INCREMENTAL COST:	Not Applicable
EXECUTING AGENCY:	UNIDO
NATIONAL COORDINATING AGENCY:	Fondoin / Ministry of Production and Commerce

PROJECT DESCRIPTION

To develop a plan to complete the final conversion of the remaining Refrigeration Plants currently working with ODS.

1. BACKGROUND

During the last ten years, several projects have been implemented for the conversion of industries working with CFC. The number of remaining manufacturing plants currently working with ODS, has been reduced, but they should be identified in order to complete this process.

2. OBJECTIVES

- 2.1 To identify all remaining manufacturing industries of refrigeration working with CFC, to guarantee the elimination of 41.6 MT of ODS consumption in this sector. This consumption was reported for the manufacturing refrigeration sector in year 2000 by FONDOIN.
- 2.2 To formulate the projects required for the phase out of ODS in the remaining industries. It should include 6 enterprises which have already been identified: Deinbo, Deincopa, Frimetal, Mercantil Specca, Redupeca and Refrigeracion Flor de Caracas; with a consumption of 5.9 MT of ODS.

3. EXPECTED RESULTS

- 3.1 To identify the remaining industries to be converted.
- 3.2 To prepare the investment projects required for the conversion.
- 3.3 The elimination of ODS consumption of this sector upon completion of projects identified.

4. APPROACH

The project should include the following steps:

- a) To identify and formulate the investment projects for the companies currently working with ODS.
- b) To assess the actual technical status of equipment, utilities, availability and sources of raw materials.
- c) To assess the technologies and formulations which are used by the factories.
- d) To collect additional information necessary for the full-scale project document formulation.
- e) To collect relevant local background information prior to the arrival of international consultants (ODS consumption, production, etc).

- f) To organize various meetings with national staff and international consultants.
- g) To prepare a typewritten technical report with the finding, recommendations, and the informs of the completion of the conversion projects

5. TIME OF EXECUTION

The time for this project is estimated in 24 months.

6. COST OF THE PROJECT

Project Preparation..... US\$ 50,000

TOTAL: US\$ 50,000

*REVIEW OF ODS LICENSE SYSTEM AND
DECREE 3220*

REVIEW OF ODS LICENSE SYSTEM AND DECREE 3220 RELATED TO THE CONTROL OF THESE SUBSTANCES

COUNTRY:	Venezuela
TITLE OF THE PROJECT:	Review of ODS license system and decree 3220 related to the control of these substances
ODS SECTOR CONSUMPTION:	Not Applicable
DURATION:	24 months
IMPACT:	Strengthening of the license system and corresponding regulations for a better control of incoming and outgoing ODS in Venezuela as well as the aspects related to the applications and consumption of these substances
COST OF THE PROJECT:	US \$ 80,000
INCREMENTAL COST:	Not Applicable
EXECUTING AGENCY:	UNEP
NATIONAL COORDINATING AGENCY:	FONDOIN

INTRODUCTION

Although there are two projects: the first one is about the revision of the license system and the Decree 3220; the second one is about the training of customs officers; both projects are closely connected, in fact the revision of the license system is a condition for the beginning of the second project.

PROJECT DESCRIPTION

1. BACKGROUND

In April 1992, the Decree 2215, complementary to the Environment Penal Act and containing the regulations for the control of the use of ozone depleting substances, was enacted. Through this Decree the Registry for ODS Importers and Exporters was created and the authorization for importing and exporting ODS was set up. Nevertheless, until 1994 the imports were mainly of products manufactured outside Venezuela and were not very frequent. Since 1997 the situation changed, and a great interest on the import of R11, R12 y R22 arose. By that time the consumption of these substances had not been frozen, therefore there was not any pressure to obtain quotas and illegal traffic was at a minimum.

In January 1999 the Decree 3220, which revoked the previous decree, is enacted. This new Decree is adapted to the Copenhagen Amendment with a broader list of substances and a calendar for eliminating setting up levels of ODS freezing, thus enabling the use of import quotas. The Registry for importers as well as the authorization system are still being used, the latter with some improvements.

After the Decree was enacted some complaints about smuggling and sales of non-rechargeable CFC prohibited by the Decree were received and the discrepancies on the data provided by the Ministry of Environment and the National Statistics Institute (OCEI) were first observed.

This year FONDOIN requested the Ministry of Environment to open an investigation in order to identify the facts and the people responsible for the violations.

This situation has shown the weakness of the authorization system, the lack of control mechanisms, and the little connection with the existing customs procedures, which are supported by the Customs Act, enacted in 1999, its regulations and the Decree on Customs Tariff.

FONDOIN, has since the middle of 1999 requested to the Ministry of Environment the revision of the Decree 3220. Though some other priorities have delayed this decision, it is the intention that this project together with the training of customs officers will accelerate the process. The execution of both projects will bring great improvements in the detection of illegal imports, its prevention and control necessary for the reduction of refrigerant offers and its consumption.

2. OBJECTIVES

- 2.1 To review and to strengthen the authorization and license system including the concept of previously founded consent as an instrument of control. In addition, the quotas and the possibility of negotiating them will be considered as a measure that will contribute to the reduction of illegal traffic.

- 2.2 Improve the existing database, so that it could be shared with SENIAT in order to have a better knowledge of the registry of importers, the licenses issued, the quotas and details on the merchandise, place of origin, presentation, route, manufacturer and all the necessary details to comply with the provisions of the Montreal Protocol.
- 2.3 Include the improved license system with the complementary instruments to the Decree 3220, once reviewed and amended.

3. EXPECTED RESULTS AND SUCCESS CRITERIA

3.1 , Expected results

To have an efficient license system, harmonized with the customs procedures with a legal framework and data base that ensure the reduction and reliable control of illegal imports.

To have a new Decree adjusted to the Montreal Amendment, which includes the license system agreed.

3.2 Success criteria

To have a license system and a Decree approved by consensus, of a plurality of participants that guarantees that the license system and the amendments to the Decree be carried out with impartiality, objectivity and representation of the sectors public and private, industrial and commercial and environmental and economic.

To spread the license system, ODS import procedures and the new Decree to officers, importers and public with step by step explanations, the framework and the agencies in charge of permissions, by means of brochures, courses conferences and seminars.

4. OBJECTIVE AUDIENCE

This project is addressed to officers that must enforce the regulations for the protection of the ozone layer, who should be informed about the improvement of administrative procedures and other aspects related to this matter. It will also be oriented to people subjected to such provisions and regulations.

5. APPROACH

The complete program will be implemented in two phases:

- 5.1 Review of the license system, adaptation of customs procedures, preparation and improvement of the current database, and elaboration and editing of a brochure that include all aspects mentioned before. This phase should be completed in three months. The work will be shown in the brochure together with the license system.
- 5.2 Adjustment and amendment of the Decree 3220 in order to substitute the license system and review some concepts and provisions for the regulation of ODS imports and production of equipment containing these substances. This process will take nine months and will end with the revision of the new Decree and the informative campaign.

Among the aspects included in the license system and the Decree we can mention a glossary of terms, conditions and requirements for licenses, validity and other.

6. TIME FRAMEWORK

The first phase of the project for the revision of the license system should be completed in three months or less so that the training of customs officers could follow immediately after. The second phase until the enactment of the new Decree should take nine months, taking into consideration the period for consultation and the legal paper work that precede its approval, which sometimes are difficult to estimate.

7. COOPERATION

Both on the revision of the license system and the Decree, the Ministry of Environment will have a leading role as this is the agency in charge of handling the regulations for the protection of the ozone layer and the import authorizations. The Ministry also heads the National Commission for Technical Regulations, which is in charge of elaborating environmental regulations. The Ministries of Production and Commerce, Finance, External Relations, SENIAT, and SENCAMER, who are members of the National Commission, and ASOQUIM and VENACOR, who represent the chemical and refrigerant industries, will also participate. It is expected that all these institutions will send legal and technical experts, who will contribute with their knowledge and experience on the subject. Some of these experts will participate at the end of the information program and it is possible that some talks will be given in these institutions open to the public.

8. SUPPORT AND FOLLOW-UP

FONDOIN and the Ministry of Environment will be responsible for the coordination, implementation and follow-up of the project. A schedule with the corresponding calendar will be prepared to control the execution and avoid delays. As soon as the revision is finished, a series of information talks will be given throughout different cities of the country. For these, it will be necessary to design and to publish near 3,000 brochures with information of the license system and the Decree.

9. DETAILED BUDGET

VENEZUELA: REVIEW OF ODS LICENSE SYSTEM AND DECREE 3220 RELATED TO THE CONTROL OF THESE SUBSTANCES

PREPARATION	COST
Translation of contractual agreements (UNEP)	500
Shipment of training and display documents (UNEP)	500
Sub-Total	1,000
International legislative expert (UNEP)	13,000
Revision and improvement by Local legislative experts (country)	12,500
Elaboration and edition of 1500 issues of informative brochure on the license system (country)	5,000
Sub-Total	30,500
REVISION AND AMENDMENT OF DECREE 3220	
Review and amendment the Decree by local experts (country)	15,000
Informative program about new Decree (20 meetings with stakeholders) Local organization including rental, logistics, register of participants, invitation etc 1000 US\$ per meeting (country):	20,000
Sub-Total	35,000
MONITORING	
Monitoring of project implementation (country)	5,000
Monitoring, Evaluation and reporting including preparation and dissemination as per ExCom requirements and training guidelines(UNEP)	5,000
Sub-Total	10,000
CONTINGENCIES 5%	3,500
TOTAL PROJECT COST	80,000

(country) = to be included in contractual arrangement with country
(UNEP) = to be administered by UNEP.

TRAINING OF CUSTOMS OFFICIALS

TRAINING OF CUSTOMS OFFICIALS

COUNTRY:	Venezuela
TITLE OF THE PROJECT:	Training of Customs Officers
SECTOR:	All
CONSUMPTION OF ODS IN THE SECTOR:	Not Applicable
DURATION:	24 months
IMPACT:	Reduction and Prevention of Illegal Imports
COST OF THE PROJECT:	US\$ 120,000
INCREMENTAL COST:	Not Applicable
EXECUTING AGENCY:	UNEP
NATIONAL COORDINATING AGENCY:	FONDOIN / Ministry of Production and Commerce

PROJECT DESCRIPTION

1. BACKGROUND

Although, the ODS authorization system has been valid since 1992 (applied by the Ministry of Environment and Natural Resources), from 1999 upon the entrance into effect of the freezing levels applied to production, import and consumption of ODS, some statistical discrepancies have been found between the data provided by the Ministry of Environment, based on the permits issued and the data provided by the National Statistics Institute (OCEI in Spanish), whose information comes from the System of Customs and Tax Administration (SENIAT in Spanish), that is from customs offices themselves. In addition, we have received some complaints about unregulated ODS offers. This situation has led us to the conclusion that this system of authorization together with the merchandise controls is weak. Therefore, it is necessary to improve the system and customs procedures in handling these substances and the equipment that contains them.

FONDOIN has already began to take some steps in order to improve this situation based on The Montreal Amendment, which has been ratified by the National Assembly; however, further steps are still needed to secure the document in the United Nations.

We need more than improving the license system and customs procedures in order to stop illegal imports. It is necessary to motivate and provide training to customs officers, supply them with equipment for refrigerant identification and detectors that will make the process of checking merchandise, labels, packages and import documents more efficient, all under the existing regulations.

2. OBJECTIVES

- 2.1 Train the teaching staff of the Center for Fiscal Studies of SENIAT and the National School of Administration and Treasury, which are the national centers for the training of customs officials. This staff together with FONDOIN would give the courses to the rest of the sector, namely customs agents, Ministry of Environment officials, importers, and warehouse owners, among others.
- 2.2 The training includes the following topics:
 - *Destruction of the ozone layer its effects and consequences.*
 - *International agreements for the protection of the ozone layer (from the Vienna Convention to the Montreal Protocol) plus the national laws related to the matter.*
 - *Correct classification and identification of ODS and the products that carry them through the Harmonized System and the Chemical Abstracts*

Services' nomenclature used for other regulations on toxic and hazardous substances.

- ☛ *Use of ODS identifiers and detectors for the detection of illegal substances that involve ODS and the equipment that carry them.*
- ☛ *Importers registration, authorization system and licenses and customs procedures.*

2.3 Provide customs offices and the Ministry of Environment with the necessary equipment.

3. EXPECTED RESULTS AND SUCCESS RATING

3.1 Expected results

- To have approximately 100 to 150 officers between customs and other personnel, better trained and more involved with the protection of the ozone layer, the control of ODS and the national laws and regulations.
- To identify properly and to detect imported ODS substances and different irregularities from importers, agents, and middlemen.
- To implement proper actions and to comply with the existing regulations
- To stop fraudulent imports

3.2 Success rating criteria:

- Percentage of correlation of import statistics provided by the Ministry of Environment and the OCEI and reasons for any discrepancies.
- Percentage of application of random check-ups with detectors by trained customs officers (more than 100) as well as percentage of infractions or presumed violations and the procedures followed for these cases.
- Percentage of correlation of nationalized and imported merchandise certified by the Ministry of Environment. Discrepancies, their reasons and investigations performed.

4. OBJECTIVE AUDIENCE

The project is oriented in the first place to officers of SENIAT and Ministry of Environment with more than three years service, who are in charge of the reception, classification and identification of imported merchandise and imports authorizations. They should come from central offices and main customs offices in the country.

It is the intention that staff outside customs, such as registered importers, agents and warehouse owners participate actively in the project.

5. APPROACH

We anticipate the program will be implemented in 15 months through the following steps:

- 5.1 Preparation of the program, hiring of international and national instructors, material, purchasing and delivery of detecting equipment and coordination between participating institutions which are National Integrated Service of Custom and Tax Administration (SENIAT), Ministry of Environment and Renewable Natural Resources (MARN), Ministry of External Relations (MRE), National Guard, Ministry of Production and Commerce (MPC), National Service of Quality and Metrology (SENCAMER), SENIAT Training Centers and FONDOIN.
- 5.2 Training of instructors (10 from SENIAT and 10 from other agencies) who will then teach the rest of the courses. This step will be implemented on the condition that the existing import authorization system and customs procedure be reviewed and improved. The anticipated time of implementation is one month, without taking into consideration the time to prepare the material for the courses for the officials that will continue with the training.
- 5.3 The national territory is divided in 9 regions in which there is at least one main customs office and other branches; however, the trade of chemical substances occurs mainly by sea and river ports, except San Antonio del Táchira which is at the border with Colombia and located in the Venezuelan Andean region. The regional customs offices that will participate in the training program are the following: Zulia region: Maracaibo and El Tablazo; Andean region: San Antonio del Táchira; Central-western region: Las Piedras en Paraguaná; Central region: Puerto Cabello; Capital: La Guaira; Guayana Region: Puerto Ordaz; North-eastern region: Guanta Puerto La Cruz and finally the Islands: El Guamache Porlamar.
- 5.4 Beginning of customs officials training courses. It is anticipated that 10 courses of five days each, will be given to groups of 10 to 15 people per customs office during 5 months with an average of two courses per month for a total coverage of 100-150 people. The courses will be given in Caracas, La Guaira; Puerto

Cabello; San Cristóbal; Maracaibo (2); Porlamar; Puerto La Cruz; Puerto Ordaz and Coro.

5.5 Programs of one-day-seminars oriented to people who work with ODS imports and equipment carrying these substances. Seminar will also be given to people related with regional trade agreements. It is estimated that 8 seminars will be given in 2 months in the following cities: Caracas, Maracaibo, Valencia, Puerto Cabello, Cabimas, Barquisimeto, Puerto Ordaz and Puerto La Cruz.

5.6 Project evaluation. Such evaluation will begin 2 or 3 months after the end of the second phase and will last 2 months.

5.7 Some of the topics taught during the training program are:

- *Causes and effects of the destruction of the ozone layer.*
- *International agreements signed by Venezuela.*
- *National laws related to the ozone layer and controlled substances.*
- *National program for the elimination of ODS and the scope of the Refrigerant Management Program.*
- *Customs Law, its regulations and the Decree of Customs Tariffs.*
- *Harmonized System, Chemical Abstracts Service and identification of ODS.*
- *Techniques for ODS identification, classification and commercial brand names.*
- *Package and label presentation.*
- *Methods for detecting these substances and the products that carry them.*
- *Cases of fraudulent imports and how to recognize them.*
- *Customs classification.*
- *Pre and post control systems*
- *ODS Identifiers and sensors, principle, operation and application.*
- *Practice with sensors and random sampling.*
- *Procedures, forms, etc.*

- *Documentation control.*
- *Confiscation, merchandise returns and re-exporting.*
- *Violations, environment and customs related crimes.*
- *Data Base for the registration of importers, licenses, traffic and equipment.*

6. TIME FRAME

The training of the teaching staff and the material preparation for the second phase can only be completed once the review and improvement of the authorization and license system, the organization of the data base, the hiring of instructors, and receipt of ODS identifiers and detectors are completed. It is estimated that this process will take 5 months from the date of the project approval. Therefore, the training of the staff is likely to begin at the end of the year or January 2002 with the final evaluation at the beginning of the following year for a total of 24 months.

7. COOPERATION

The training program will be given with the participation of the SENIAT, Ministry of Environment (MARN) and the Division of Foreign Trade of the Ministry of Production and Commerce. These agencies will mainly provide officers who will be trained and also some instructors and experts for the training of instructors, always under the supervision and coordination of FONDOIN.

7.1 SUPPORT AND FOLLOW-UP

The improvement of the license system, the database and the adaptation of customs procedures are essential aspects to consider when starting the project for the training of customs officers.

The follow-up and evaluation of the program will be done through the information exchange from FONDOIN, SENIAT, OCEI and the Ministry of Environment. At the same time a survey will be given to the participants before, after training and it will be repeated 2 or 3 months later. The success criteria included in number 3 above will be included. FONDOIN together with the training staff will prepare the final report.

8. DETAILED BUDGET

CUSTOMS TRAINING VENEZUELA

PREPARATION	COST
Translation of contractual agreements (UNEP)	500
Shipment of training and display documents (UNEP)	1,500
Bidding, Purchase and shipment (15%) of training equipment (country or UNEP)	20,700
Customs clearance and local transport of equipment (country)	500
Sub-Total	23,200
PHASE I	
International training experts (UNEP)	13,000
Local experts to prepare "Country Handbook" and to act as local resource persons (country)	5,000
International expert to assist in the preparation and review "Country Handbook" (UNEP)	3,000
Local organization including rental, logistics, register of participants, invitation etc (country)	8,000
Local travel and accommodation 100US\$ per trip and 50US\$ per person per day accommodation: 10 persons 1 trip each 3 nights each for customs(country)	2,500
Sub-Total	31,500
PHASE II	
Local experts to deliver training 200US\$ per training day : 10 training of 2 days for customs(country)	4,000
Reproduction of training materials 20US\$ per trainee for 100 trainees in customs (country)	2,000
Local organization (10 workshops for customs officers) including rental, logistics, register of participants, invitation etc 2000 US\$ per workshop (country)	20,000
Local organization (8 seminars for importers and traders) including rental, logistics, register of participants, invitation etc 1000 US\$ per workshop(country)	8,000
Local travel and accommodation 100US\$ per trip and 50US\$ per person per day accommodation: 50 persons 1 trip each 3 nights each for customs(country)	12,500
Sub-Total	46,500
PHASE III	
Monitoring of project implementation during Phase I and II (country)	8,000
Monitoring, Evaluation and reporting including preparation and dissemination as per ExCom requirements and training guidelines(UNEP)	5,000
Sub-Total	13,000
CONTINGENCIES 5%	6,000
TOTAL PROJECT COST	120,000

*THE RECOVERY, RECYCLING, RECLAIMING
OF REFRIGERANTS AND THE TRAINING OF
SERVICE TECHNICIANS*

Recovery, Recycling and Reclaiming of Refrigerants and Training of Technicians

PROJECT TITLE:	Recovery, Recycling and Reclaiming of Refrigerants and the Training of Technicians
COUNTRY:	Venezuela
IMPLEMENTATION AGENCY:	Not Available
IMPACT :	212 ODS Tons per year General Improvement of Service Techniques for reduction of ODS release in Workshops
TOTAL PROJECT COST:	US \$ 452,000
PROJECT DURATION:	18 months
NATIONAL COORDINATING AGENCY:	Fondoin Ministry of Production and Commerce

PROJECT DESCRIPTION

The implementation of a national program aimed at the improvement of the refrigeration service techniques for reducing the release of ODS by training at least 1,500 technicians and promotion of the recovery of ODS at service workshops by expanding nationwide the number of ODS Consolidation Centers and by establishing more attractive incentives for the recovery, recycling and reclaiming program.

1. BACKGROUND

Venezuela with the support of the MF through the United Nations Development Program, started in 1997 a comprehensive national program for the recovery, recycling and reclaiming of refrigerant in the refrigeration and air conditioning sector. This project provided funds for the acquisition of 471 recovery machines, the equipment for 8 Consolidation Centers for the storage of refrigerants and one reclaiming Center. This program has been in operation but the amounts of ODS processed are very low.

For this reason it is necessary to evaluate the causes of this situation in order to introduce corrective measures, to expand the program to other areas of the country not covered so far and to develop a national training program of technicians with the goals of improving service techniques and promoting the recovery of ODS in-service workshops.

Additionally for the country is very urgent to put this program of recycling and reclaiming in full operation, because once the closure of production of R12 and R11 in Produven takes place, the reclaimed gases will be the only national alternative for ODS users.

2. OBJECTIVES

The objectives of the whole program are the following:

- To evaluate the recovery, recycling and reclaiming program and to introduce corrective measures.
- To promote recovery in service workshops through different incentives and through a certification program.
- To expand nationwide the recycling and reclaiming with eight new Consolidation Centers for collecting locally ODS.
- To establish a system for the monitoring of the functions of the recovery, recycling and reclaiming program.
- The training of 1500 service technicians.

3. PROJECT ORGANIZATION.

The project will be conducted in two phases:

- 3.1 FIRST PHASE: The recovery, recycling and reclaiming Program.
- 3.2 SECOND PHASE: The training of the 1,500 technician as a support of the whole program

4. COST OF THE PROGRAM

The National Training Program	360,000
The Project for improving and expanding recovery, recycling, reclaiming	50,000
The Expansion of 8 new consolidation centers	42,000
TOTAL COST OF THE PROGRAM	US\$ 452,000

THE RECOVERY, RECYCLING AND RECLAIMING OF REFRIGERANTS

1. GENERAL INFORMATION

One of the components of a RMP is a country wide Program for the recovery of refrigerants, specially CFC, through service workshops and the recycling or reclaiming of them in special centers.

In Venezuela this program began in 1994 with the application of a trial project to the vehicle air conditioning service sector (MAC). Twenty service workshops from this sector were selected, although only 17 decided at the end to continue with the program.

Basically that program included the following steps:

- a) A training course was given to 34 technicians (two for each service workshop) and to some others persons as three INCE instructors and some persons invited from Produven, Colombia and Ecuador. The participants were divided in two groups and the course had duration of a whole day for each group. The location of the training was at the INCE facilities and it included the teaching of several topics, the presentation of a video movie about the protection of the ozone layer and practical sessions about how to use an equipment for the recovery of refrigerant.
- b) The seventeen service workshops were provided with a recovery machine, with the exception of one of them that received two, and some others equipment as vacuum pump, refrigerant leak detector, Pressure gauges and two refrigerant containers.
- c) Each Service workshop had to sign a contract regarding their responsibilities with the proper use of the equipment for the recovery program and its obligation to report the amounts of CFC recovered.
- d) An evaluation of this trial program concluded that during six months of application in 1994, it was possible to recover 3566 Kg of R12, the recovery equipment worked properly with only five minor maintenance problems. The problems reported had to do with the need of weighing equipment to verify the amount of CFC recovered and pumped into the container, the lack of written materials about the proper connections of the recovery equipment.

A primary analysis of the results of that program resulted in the decision to continue with future trials, leading to increase the scope of recovery and later to begin a program of recycling and reclaiming

Table 18, shows the amount of the R12 recovered in the trial program from June to November 1994.

Table 17. Results of the Recovery Program from June to November 1994

Name of Service Workshop	Purchases of R12 in Kg.	Number of Vehicle AC Repairs	Number of repairs using recovering Equipment	Recovered R12 in Kg
Aire Acond. Gallegos	1,495	952	343	257
Autom Paraiso	116	261	87	76
Automotriz Dimotor	0	70	46	49
Autofr. Alaska	652	915	161	133
Centro Diagnostico.	118	657	231	155
Consultoria Cold Master	291	66	53	380
Peter Cars	595	1,756	1,438	444
Elec Denver	118	176	60	72
Fran Fat	232	205	85	91
Frio Auto	1,320	1,127	452	252
Frio Cars Andres Bello	1,252	1,096	340	247
Frio Cars Bello Campo	3,532	3,104	353	252
Frio Ferca	360	471	162	116
Refrimovil La Redoma	660	643	194	299
Taller Amana	232	185	82	81
Taller El Drago	420	813	318	124
Taller Núñez e Iglesias	1,460	1,470	746	538
TOTAL	12,853	13,967	5,151	3,566

From the last Table, it can be seen that the 17 service workshops have purchased 12853 Kg of R12 and have recovered 3566 Kg of R12 for a total consumption of 16419 Kg of R12 during the period June/November 1994 (6 Months). The recovered portion represents a 22% of total consumption. It is interesting to note that from the total of 13967 services only 5151 (37%) required the use of the recovering equipment.

Some of the service workshops continue the recovery of R12 and other refrigerants but it is necessary to continue with the system of collecting monthly reports indicating the amounts of different refrigerants recovered.

Venezuela through Fondoin, with the financial support of the MPMF began in 1999 a project for the recycling of refrigerants. A company, Ingarsica, located in the industrial park of Manpote, installed industrial facilities with capacity to recycle 800 metric tons of refrigerants per year. A training program about Recovery and Recycling of Refrigerants was given to personnel of service workshops participating in the program in June 1999. In September of that year a program of registration or affiliation by means of a contract began where each workshop would be provided with a recovery kit of refrigerant and training about how to use the equipment. The cost of this affiliation could be paid partially with recovered refrigerant.

The number of Workshops registered in the recycling since September 1999 to June 2000 were 38 and from July 2000 to January 2001 were 60. This growth is mainly because during this period began the incentives of payment the cost of affiliation with refrigerant up to 70% of it.

The amounts of refrigerant recycled in the period of 18 months (August 1999 to January 2001) were very low.

From the total of 98 workshops affiliated only four: Alston Venezuela, Multiservicios Marrero, El Impulso and Trane recovered gas for recycling.

It is important to point out that there were no R12 or R11 recycled.

The reason for this low interest in the recycling program were the low price of virgin refrigerants, especially R12 and R11, compared to the cost of recovering the CFC due to the long time it takes to recover.

This trend is going to change as the application of restrictions to production and imports because of the Montreal Protocol, would make difficult and costly to buy virgin CFC.

From this analysis is evident that this project should revise the strategy of the recovery introducing new approaches such as the following:

- a) To establish economical and/or fiscal incentives for the service workshops which recover high amounts of refrigerants. They could include ideas such as: payment of recovery equipment or services with recovered CFC, money prizes for completing a goal of recovered CFC, reduction of taxes according with the amounts of recovered CFC, etc.
- b) To establish a certification program of service workshops which includes the obligation of CFC recovery as one of the conditions for the certification. This program should have legal support such as the provided by the Decree 3220.
- c) To introduce new regulations through the Ministry of the Environment forbidding the intentional release of CFC to the atmosphere in any service or repairing job of

refrigeration equipment, new taxes or fines for workshops which do not participate in the recovery program.

- d) To start an educational and promotional campaign directed to air conditioning and refrigeration owners or users about the need of recovering refrigerant to protect the ozone layer.

2. OBJECTIVES

The objective of this project is the implementation of a National Program for the recovery of refrigerants especially R12 and R11, to be worked out through the refrigeration and air conditioning service workshops and for the recycling or reclaiming of part of the recovered gas in consolidation centers furnished with equipment for that purpose. It should include the following activities:

2.1- EVALUATION OF THE RESULTS OF THE TRIAL TESTS FOR THE RECOVERY OF CFC.

It is necessary to investigate in all service workshops participating in preceding programs: the amounts of CFC recovered or recycled until year 2001, the problems and experiences in the use of the recovery equipment, the influence of the recovery process in the average time of the services and in the service techniques currently used, the influence of recovering on the prices of the services, the cost of one Kg of virgin refrigerant in comparison with the cost of recovering it, description of the reasons if the recovery is not applied anymore or if on the contrary, is being applied nowadays.

2.2- REVISION OF THE STRATEGIES FOR THE RECOVERY.

To study the results of the preceding evaluation and those strategies used in the preceding recovery programs to design specific new strategies which should lead to administrative procedures with economical incentives, service recommendations and proposal of new fiscal or environmental regulations applied to workshops, that could increase the recovery of refrigerants. The use of a certification program for workshops should be considered.

One of the difficulties of the recovery program is the need of a net of enterprises for the collection, transport, trade and storage of CFC. The use of the distributors of refrigerant for this purpose could be considered, although experiences in this matter should be evaluated.

2.3 SELECTION OF THE SERVICE WORKSHOPS

It is necessary to select new service workshops that could participate in the program especially in locations or sectors not included in the preceding programs with the

condition that they must register at the Office responsible for the Administration of the Plan using a company resume with the following information:

- a) The list of technicians indicating their studies and practical experience.
- b) The number of years in operation, the number of repairs made and the amount of CFC bought in the year before the registration.
- c) Description of the facilities (Area), vehicles, tools and equipment.

It is needed to review the information included in the service workshops data base in order to verify how this data could be useful for the process of selecting the service workshops for the program.

Care should be taken to include within the selected group the following service workshops: vehicle air conditioning, domestic refrigeration, commercial or industrial refrigeration companies located in all major cities of Venezuela.

The selection should be done based on the amount of repairs performed and the amount of CFC bought per year and at least one of its technicians should be required to take the Training of Service Workshop Technicians course, given by FONDOIN or being in the process of certification.

2.4 SPECIFICATION OF RECOVERY EQUIPMENT

Each selected service workshop, should be provided with the following equipment: a CFC leak detector, a service manifold valve, two 50 pounds (22.7 Kg) containers, a balance of at least 100 pounds and the recovery machine.

At the present moment there are 370 new recovery machines available for this program. In case that more machines could be needed, the Recovery Equipment designed by Venezuelan Universities should be assessed in order to evaluate the technical and economical feasibility of manufacturing some units, under the sponsorship of FONDOIN, as additional units required in the program.

The service of the recovery equipment could be provided by the same workshop where is installed, because their components are similar to those of a refrigeration unit.

2.5 EVALUATION OF THE RECYCLING PROCESS

It is necessary to estimate the amounts of refrigerants that could be recycled from the workshops participating in the National Recovery Program. Additionally, the current capacity of the available recycling equipment should be evaluated as compared with the needs derived from the recovery as well as the difficulties found in the recycling program

supported by FONDOIN indicating reasons of the each workshop of not being interested in the recycling of refrigerants.

In case that could be necessary, it should be proposed any extension of the recycling program under execution and the cities where these extensions could take place, giving estimates of the amount to be recycled in each city.

2.6 ORGANIZATION OF THE PROGRAM

The Administration of the Program should take all the provisions needed to organize it such as: the application of the strategy decided for recovering refrigerants, the contract form between the workshop and FONDOIN for the recovery, the plans of payment of the recovery equipment, the selection of recycling/ reclaiming centers, the monitoring of the recycling and recovery program, the legal conditions of the purchase or manufacturing of recovery equipment, the financial scheme of capital return and profits of the recovery, recycling or reclaiming centers.

3. COST OF THE PROGRAM

The cost of this Program includes the project for the evaluation and extension of the current program of recycling and reclaiming and the design of new recovery strategies to be applied in the future, estimated at US\$ 50,000.

Additionally it includes the expansion and restructuring of the recycling scheme according to the recommendation of the evaluation. At the moment the recovery program could be extended to 370 service workshops located in cities not covered so far in the first program, using the existing 370 new recovery machines. In this case it will be necessary to increase the number of regional consolidation centers from 8 to 16 to cover other major cities of Venezuela.

The investment needed for the purchase of the equipment to be provided to the 8 new regional collecting centers, in order to extend the recovery program to different cities, is of US\$ 5,250 Dollars for each center for a total investment of US\$ 42,000 Dollars. Each center will receive a refrigerant analyzer, leak detector, Storage Tank, several refrigerant containers and a kit of connections and valves.

The total cost of the new recovery, recycling and reclaiming program is of US\$ 92,000 that will increase the number of participating service workshops from 104 to 474 and the collecting regional centers from 8 to 16, but the most important operating with a more appropriate strategy, which it will include a tight monitoring system.

4. TIME OF EXECUTION OF THE PROGRAM

It is estimated that the evaluation of previous programs and the revision of the strategies will require a period of six months, but the recovery and recycling is an activity already under development. The extension of the program to other workshops could start with the existing recovery equipment, immediately after the new strategies had been approved.

5. ADMINISTRATION OF THE PROGRAM

The administrative provisions required to develop the whole program should be headed by FONDOIN, although, it is suggested that this program should be lead by an Institution created specifically for this purpose, dealing with concluding contracts with the service workshops, controlling the payments of the loans, supervising the fulfillment of the conditions for the recovery plan of each workshop, supervising the purchase or manufacturing of any additional equipment that may be needed, coordinating the activities of the recycling or reclaiming centers, conducting a promotional campaign about the benefits of recovering, defining the incentives to be used to assure the success of the program, etc.

It is recommended that the loans provided for the acquisition of the recovery equipment could be paid not only in cash but with recovered CFC.

6. IMPACT

The impact is computed considering that the existing 474 recovery machines (only 104 have been used), will be put into operation in the recycling/reclaiming new program and the total capacity of the reclaiming center of 800 tons per year will be operating at about 50% of its capacity. Because these facilities were bought with the old program the impact computed for it of 258 tons in 18 months (172 tons per year), should be deducted from the impact of the new program

The consumption of CFC in year 2000 reached legally 1,281 tons (including illegal imports is 2,329 tons) it is reasonable to think that once the imports control are being fully operational and the production plant Produven could be phased out, the demand of reclaimed CFC will increase.

Taking the goal of recycling only 27% of the legal consumption of year 2000 (15 % of real consumption) or 384 tons (lower than the 800 tons of capacity of the reclaiming plant), and recovering 3 kg. per day and per each recovery machine working 270 days per year in the workshops, the impact of the total program will be 384 metric tons of ODS per year .

Deducting the impact of the old program of 172 tons we will have for the new program an impact of 212 metric tons of ODS.

In addition to this amount, it is expected that the service workshops will continue to recover refrigerant that will be used without recycling, for their own needs, reducing the yearly consumption of CFC at the service shops

TRAINING REFRIGERATION WORKSHOP SERVICE TECHNICIANS

1. GENERAL INFORMATION

One of the components of a Refrigerant Management Plan is a Project for Training Workshop Service Technicians in the good service practices in refrigeration and air conditioning, to avoid or reduce the intentional or unintentional release of refrigerant gases to the atmosphere and particularly about the proper use of controlled refrigerants (ODS) under the MONTREAL PROTOCOL such as R12 and R11. In addition this project should promote the recovery, recycling and reclaiming of refrigerants in order to reduce their production and imports.

2. DESCRIPTION OF THE TRAINING

The National Training Program for refrigeration technicians should comply with the following conditions:

The training should include practical demonstrations with recovery machines and service equipment and it will emphasize the use and handling of refrigerants during the installation, servicing and dismantling of refrigeration equipment

The contents of the course should include the following topics:

- The effect of ODS on the depletion of the ozone layer
- The consequences of the depletion of the ozone layer on the life on earth
- The national and international regulations about ODS
- The proper handling and storage of ODS
- The most common mistakes in servicing and repairing refrigeration equipment causing the waste and release of refrigerant.
- The proper service techniques for evacuation, charging of refrigerant, leaks detection etc.
- The recovery and recycling of refrigerant, installation of recovery valves, the use of recovery machines.

2.1- OBJECTIVES OF THE TRAINING

The training provided should be specified in such a way that at the end of the courses each one of the technicians should be able to:

Describe how the refrigerant (R12, R11, etc), will affect the ozone layer and what kind of effects will have the damage of the ozone layer concerning the life on earth.

Apply appropriate methods of doing repairs, maintenance and installation of refrigeration or air conditioning equipment.

Use refrigerant detection equipment to identify early leaks of gases to the atmosphere.

Apply proper methods of cleaning, charging and discharging refrigeration units to avoid or to reduce the release of ODS into the atmosphere.

Apply proper methods to assess the correct amount of refrigerant to be put into the refrigeration unit during service or repair.

Use properly the equipment for the recovery or the recycling of refrigerant in the workshops.

Recognize the ethical implications of using ODS for the future of the world.

2.2- LEVELS OF TRAINING

The courses should be directed to workshop service technicians, working with refrigeration or air conditioning equipment and with two different levels according to their educational profile as follows:

2.2.1- For technicians with any of the following educational background: High School Graduate, Community College Graduate (TSU) or Vocational School Graduate (INCE). They will be called academic Technicians.

2.2.2- For empirical technicians with very low academic knowledge.

2.3- PURPOSES OF THE TRAINING

The National Training Plan will be developed in two phases

2.3.1- First Phase: To instruct at least 1500 service technicians: 750 Academic Technicians (TSU, High School or INCE graduates) and 750 Empirical technicians, about the instructional objectives as described in Part 2.1 of this report.

2.3.2- Second Phase: To continue with the instruction of all technicians within a National Certification Program of Refrigeration Technicians and/or Service workshops.

The conditions and specifications of this Technician Certification Program should be written by the Administration of the Program and it should have the following points: requirements, needed personal qualifications, costs, type of tests, period of certification, conditions for renewal and official institutions providing certification.

Table 17, shows the number of technicians in both categories (academic or empirical) as included in the Data Base of Refrigeration and Air Conditioning Service Workshops of

different cities in Venezuela. For more details about the list of technicians see Appendix 4 Data Base Report of Technicians.

2.4- LOCATIONS FOR THE TRAINING PLAN

The courses should be planned, so they can be presented in all major cities of Venezuela including Caracas and neighboring suburbs: La Guaira, Los Teques and Charallave; Valencia and neighboring suburbs Puerto Cabello and Guacara; Maracaibo; Cabimas; Barcelona; Puerto La Cruz; Anaco; El Tigre; Ciudad Bolivar; Puerto Ordaz; San Felix; Coro; Punto Fijo; Maracay; La Victoria; Cagua; Barquisimeto; Merida; San Cristobal; Porlamar; Maturin and neighboring Caripito; Barinas; San Felipe and San Juan de Los Morros.

Table 18. Number of Technicians included in Data Base

City	Academical Technician	Empirical Technician
Barcelona	13	3
Barquisimeto	115	59
Bolivar	24	12
Cabimas	40	24
Cagua	13	2
Caracas	234	134
Coro	16	7
Guacara	8	5
Guarenas	12	8
Guatire	11	7
Guayana	12	16
Los Guayos	7	1
Los Teques	15	13
Maracaibo	118	87
Maracay	107	12
Maturín	54	16
Puerto Cabello	17	8
Punto Fijo	36	19
Puerto La Cruz	21	14
Puerto Ordaz	18	7
San Cristobal	43	23
San Félix	15	4
San Joaquín	5	8
Valencia	99	66
Villa de Cura	3	1
Total	1,056	556

2.5- TRAINING INSTITUTIONS

The educational institutions that could be used to provide the training could be selected from the following list: Instituto de Tecnología del Oeste Mariscal Sucre, Instituto Universitario de Tecnología Industrial, Universidad Nororiental Gran Mariscal de Ayacucho, Instituto Universitario de Tecnología de Caripito, Universidad Fermín Toro, Universidad Simón Bolívar, Instituto Universitario Politécnico Santiago Mariño, Instituto Universitario de Tecnología de Puerto Cabello, Instituto Universitario de Tecnología Leonardo Chirinos, Universidad Tecnológica del Centro, Instituto Universitario de Tecnología de La Victoria, Instituto Universitario Carlos Soublette, Instituto Nacional de Cooperación Educativa (INCE), Instituto Universitario de Tecnología Antonio José de Sucre, Universidad Nacional Experimental Rafael María Baralt, Instituto Universitario de Tecnología Federico Rivero Palacios, Instituto Universitario de Tecnología Alonso Gamero, Instituto Universitario de Tecnología de Cabimas, Universidad Nacional Experimental Politécnica Antonio José de Sucre, Instituto Universitario de Tecnología de El Tigre José Antonio Anzoátegui, Instituto Universitario de Tecnología del Mar, Universidad de Oriente, Universidad de Carabobo, Universidad Central de Venezuela, Universidad Metropolitana, Universidad del Zulia, Universidad Nacional Experimental del Táchira, Universidad Nacional Experimental Politécnica de las Fuerzas Armadas, Universidad de los Andes, Universidad Francisco de Miranda, Centro de Entrenamiento Técnico Industrial, Centro de Entrenamiento Técnico Anaco, Centro de Investigación Educación y Desarrollo de PDVSA (CIED) and Consultores en Computación e Informática (C.I.C.A.).

In order to cover all the country it is recommended the following institutions: in the east Universidad de Oriente, in the west Universidad del Zulia, in the capital region Universidad Simón Bolívar, in the central region Universidad de Carabobo, the vocational school INCE and from the training private sector Consultores en Computación e Informática (CICA).

The Data Base about training instructional institutes should be revised for more details about them (See Appendix 6).

2.6- CHARACTERISTIC OF TRAINING MATERIALS

The instructor or the Administration of the courses, should develop or select the appropriate training materials for the courses in Spanish, which includes standard textbooks with the support of audiovisual materials such as computer assisted animations, technical films, transparency films, etc.

The suitability of using the publication ISBN 92-807-1469-4 from the United Nations as a textbook of any of the courses should be evaluated, as well as any other training materials from other Spanish speaking countries for similar training.

2.7- SELECTION OF THE INSTRUCTORS

The instructors for the training Program should demonstrate their technical skills and experience in training and that they should speak Spanish Language by registering at the Office with the responsibility for the Administration of the Program using their curriculum vitae or resume.

According with the required profile they should have:

- a) Academic Background appropriate for each level of training.
- b) Experience as instructor in refrigeration.
- c) Practical experience in the area.
- d) Knowledge about the national and international regulations for protecting the ozone layer.

3. COST OF THE PROGRAM

The training Program will be developed in two phases. The first phase financed by the MFMP for training 1,500 technicians and the second phase for training the rest of technicians as a part of the cost of a Certification Continuous Program to be developed in the future.

The cost of the first phase was obtained considering that the 1,500 technicians to be trained will be grouped into 20 participants courses for a total of 75 courses of 24 hours (three days courses) nation wide. The cost of each course is estimated in US\$ 4,800 Dollars for a total of approximately US \$ 360,000 for the Program. As a reference the cost of one day refrigeration training in the project VEN/97/G61 was US\$ 1,936.45

The cost of US\$ 4,800 Dollars of a three-day course for 20 participants is computed as follows:

Professional services of 24 hrs. at US\$ 70 per hour.....	US\$ 1,600
Travel expenses and transportation of instructor 4 days....	US\$ 800
Local Support personnel.....	US\$ 900
Rental of meeting room and equipment.....	US\$ 900
Documentation and training textbook for 20 persons.....	US\$ 600

4. TIME OF EXECUTION OF THE TRAINING PROGRAM

The duration of the first phase of the program (training 1,500 technicians) is estimated in one year, considering that the training will be executed by four instructors and that each instructor will teach one course of three days per week. The planned 75 courses of the first phase could be given in a period of 20 weeks, in addition it is necessary a period of 10 weeks for promotion and registration and 18 weeks for the preparation of training materials.

5. ADMINISTRATION OF THE PROGRAM

FONDOIN as Head Office for the management of the Program should take all the administrative provisions required to organize the program and among these provisions are the organization of local courses in major cities of Venezuela in agreement with the training institutions registered for the plan, the publicity through local media, registration of participants classified for both levels of the course (Academic or empirical), appointment of instructors, logistics (rooms, dates, hours, training materials, certificates, provide the recovery machine and other equipment for practices, audiovisual facilities, etc.).

The following information should be available to the administrators and instructors of the program:

- b) The Report about the training Institutions of Venezuela, Appendix 6.
- c) The information from the National Survey about Service workshop of Venezuela in the field of refrigeration and air conditioning.
- d) Fondoin Reports with information about the recovery, recycling and reclaiming of refrigerants in Venezuela.
- e) The TextBook "Manual de Instrucción sobre enfriadores y Gestión de Refrigerantes" UN Publication ISBN 9280714694.

6. SUSTAINABILITY OF THE PROGRAM

The program could be sustained by charging each participant with a 40 % of the actual cost of the course per participant of US \$96. This amount could be considered as part of the cost of the Certification of the technicians and it produce enough resources for the continuation of the program.

The Amount Recovered from the total of 3,000 technicians (First and Second Group) or US \$ 288,000 will assure the financial support for the training of the second group. The difference with the actual cost of the training could be financed by the government or by the service shops were the technicians are working

7. IMPACT

Taking into consideration that the service sector has, nowadays, the large proportion of consumption of CFC in Venezuela, the training will have big impact by reducing the intentional and unintentional release of refrigerant during service.

The assessment of a numerical value for the impact of the training in tons of ODS, is difficult, although, it is estimated from the number of repairs performed on vehicle Air Conditioning and the domestic refrigeration sectors in year 2000 that reached a

value of 1,500,000 in almost 1,000 service shops visited, that the impact will be important

PROJECTS EXECUTION CALENDAR

Project Activities	Months																	
FIRST PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Formulation of project for New Recycling and Reclaiming Program																		
Extension of Consolidation Centers																		
Application of New Program																		
SECOND PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Training Service Technicians																		

15. TIMETABLE

TASK / PERIOD	TIME FOR COMPLETION							
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1. PREPARATION MLF Approval Procurement preparation Arrival of equipment	XX XX	XXX				XX	XXX	
2. DEMONSTRATION SEMINARS			XXX				XXX	
3. STARTING RECOVERY & RECLAMATION Distribution of equipment			XX	XXX	XXX	XXX	XXX	XXX
4. COORDINATION AND SUPERVISION Setting up the Co-ordination and Supervision System Co-ordinating and Supervising of Activities			XXX	XXX	XXX	XXX	XXX	XXX

16. CO-ORDINATING NATIONAL BODY

The Government of Venezuela has designated FONDOIN to be the co-ordinating and supervising body for the present project.

17. PROJECT COSTS

17.1 Training

	NUMBER OF UNITS		US\$/Unit	US\$
17.1		TRAINING		
	2	Travel of Refrigeration Consultant to and from Country	\$ 1,300	\$ 2,600
	46	DSA + Number of days for the Refrigeration Consultant	\$170	\$ 7,800
	12	Local Travel for the Refrigeration Consultant	\$60	\$ 720
	31	Days work for One Refrigeration Consultant / lecturer	\$ 650	\$20,150
		SUB-TOTAL		\$ 31,290
	31	Rental of Equipment, Meeting rooms in Colleges for the Workshops	\$140	\$4,340
	31	Local Support Personnel (3 persons) for the organization of the workshops in the regions and for the assistance during the training	\$400	\$12,400
	600	Documentation	\$20	\$12,000
		SUB-TOTAL		\$28,740
		SUB-TOTAL FOR TRAINING		\$60,030

APPENDIX 1:

NATIONAL SURVEY

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NATIONAL SURVEY

In the development of a Controlled Refrigerants Management Plan for Venezuela, a Sampling Plan was required to collect data from the marketing sector, air conditioning service workshops and refrigeration service workshops, which could be useful to estimate tendencies of national consumption in Venezuela, to evaluate the actual marketing process, to identify the components of the marketing chain, to verify the use of the appropriate containers for the marketing of CFC and to learn about service procedures and the kind of facilities of the service workshops in Venezuela

SAMPLING PLAN

1.- POPULATION DETERMINATION. THE SAMPLING FRAME

1.1 Characteristics

The target population was conformed by large, medium and small establishments dedicated to refrigerant marketing, manufacturing, repair services and maintenance of all kind of equipment that use controlled refrigerants.

As sampling frame the list of all members of VENACOR was selected (The Venezuelan Chamber of Refrigeration, Air Conditioning and Ventilation Industries), with the addition of the list of the yellow pages and telephone guides of the same categories of business.

1.2.- Geographical reach.

The establishments who were considered for this study were those located in the principal cities of the country including the following categories:

- Air conditioning.
- Industrial gases.
- Refrigeration.
- Commercial and industrial refrigeration.
- Equipment, service and parts of refrigeration.
- Bus and vehicles air conditioning equipment.
- Air conditioning systems.
- Air conditioning services.
- Electric home appliances.
- Electric home appliance services.

Table 1. Registered establishments selected as sampling frame

CITY	TOTAL
Caracas	790
Valencia	365
Maracaibo	338
Aragua	242
Barquisimeto	223
San Cristóbal, Táriba y San Antonio	117
Puerto La Cruz	112
Pampatar y Porlamar	91
Guayana Pto. Ordaz	77
Falcón	65
Maturín	57
Ciudad Bolívar	56
Barcelona	55
Mérida	54
Barinas	44
Guanare y Acarigua	43
Cumaná	33
San Fernando	20
San Juan de los Morros	11
San Felipe	11
Guarenas	11
San Carlos	8
Trujillo	4
Tucupita	3
Puerto Ayacucho	1
Rest of the Country	169
TOTAL	3000

The establishment list was made by using the following information sources:
CAVEGUÍAS and Telephone guides for 2001.

Information provided by FONDOIN.

Electronic yellow pages guide (www.caveguías.com.ve).

VENACOR magazine (2001 edition).

2.- STRATIFICATION AND SIZE DETERMINATION OF THE SAMPLE

2.1- Sample Size Justification

The principal objective is to determine the establishment proportion related to controlled refrigerants marketing, air conditioning maintenance, marketing and service of refrigeration equipments. To compute the sample size, this equation was used:

$$n = \frac{p * (1-p) * Z^2}{D^2}$$

Where:

n = Number of establishments in sample of interest.

p = Population proportion that have the characteristics (refrigerant equipment marketing or controlled refrigerant equipment services) to be studied. Considering the secondary sources and the Project team agreement, “ p ” was estimated by 60% of population.

D = Desired precision level or maximum difference between sample proportion and population proportion, “ D ” was chosen in 0.03.

Z = Unit number of standard deviation in the normal distribution, that will produce a confidence level. For a Confidence level of 95%, “ Z ” = 1.96.

Then:

$$n = \frac{0.60 * (1 - 0.60) * (1.96)^2}{(0.03)^2}$$

$$n = 1025$$

2.2- Corrected Sample size for the finite population

Since the sample size exceed 10% of the population, it is possible to compute the corrected sample size of a finite population from the following equation:

$$nc = \frac{n * N}{N + (n - 1)}$$

Where:

n = Sample size, without correction, of the finite population.

N = Population size (3000 establishments).

Then:

$$nc = \frac{1025 * 3000}{3000 + 1024}$$

$$nc = 764 \text{ (establishments)}$$

2.3- Stratified Sample

Initially the following variables were considered for the stratification:

- Proportion of establishments related to the study in each city. Later, with the results of the trial test in Puerto La Cruz city it was assigned values to the proportion to the second variable for the sample stratification.
- The proportion of establishments related to the type of business used were: service shop 80% and stores 20%.

The next Table, shows the sample distribution for the first considered variable.

Table 2. Assignations and distribution of questionnaires by city
(n = 1025, precision = 0.03, Confidence level = 95%)

CITY	ESTABLISHMENT NUMBER (1)	PROPORTION (2) = (1) / 2512	Questionnaire NUMB. = (2)*1025
Caracas, Guarenas	801	0.31886943	327
Valencia	359	0.14291401	146
Maracaibo	327	0.130117516	133
Barquisimeto	264	0.10509554	108
Maracay	232	0.09235669	95
San Cristóbal	113	0.04498408	46
Coro	65	0.0258758	37
Pto. La Cruz	81	0.03224522	33
Pto. Ordaz	68	0.02707006	28
Maturín	56	0.02229299	23
Porlamar	55	0.0218949	22
Ciudad Bolívar	49	0.01950637	20
Barcelona	42	0.01671975	17
TOTALS	2512	1.0	1025

- (1) Number of business for each city from the target population list used in the study.
- (2) Proportion for the city.
- (3) Number of sampling units or questionnaires to be applied.

3.- QUESTIONNAIRE DESIGN

Three questionnaires were elaborated to collect information from the studies sectors. The questionnaires used in the sampling, are shown in the Appendix 1, 2 and 3, additionally Table 3 shows the relationships between objectives and questions.

Table 3. Relationships between questions and objectives of the sampling

QUESTIONNAIRES	INFORMATION OBJETIVES	CORRESPONDENT QUESTIONS
MARKETING	<ul style="list-style-type: none"> - COMPANY DATA - REFRIGERANT MARKETING - EQUIPMENT MARKETING 	<p style="text-align: center;">1</p> <p style="text-align: center;">5,6,7</p> <p style="text-align: center;">2,3,4</p>
SERVICE WORKSHOP OF AIR CONDITIONING, REFRIGERATION EQUIPMENTS.	<ul style="list-style-type: none"> - LOCATION - SERVICE TYPE - TECHNICAL PERSONNEL - EQUIPMENTS AND TOOLS AVAILABLES - REFRIGERANT PURCHASE, CHARGE CONSUMPTION SERVICE FREQUENCIES - RECOVERY OF, REFRIGERANTS KNOWLEDGE ON OZONE 	<p style="text-align: center;">1</p> <p style="text-align: center;">2</p> <p style="text-align: center;">3</p> <p style="text-align: center;">4</p> <p style="text-align: center;">5,6,7</p> <p style="text-align: center;">8</p>

4.- THE FIELD WORK OR APPLICATION OF THE SAMPLING

The questionnaires application was done through trained personnel to assure the correct data collection.

Each region was assigned to one team leader and they were provided with a company's list obtained from the secondary sources.

Following a trial test in Puerto La Cruz city, where the data collection sheets were applied to 43 establishments that include: 13 air conditioning service shops, 13 refrigeration service shops and 23 stores, it was concluded that the establishment

selection could not be done entirely at random, because the sampling procedure should fulfill the following conditions:

- Each sampling should have a proof of the visit, by mean of a presentation card, stamping of the data sheet or a copy of invoices used by the company.
- The company should have been in business during the whole year 2000.
- Availability of a person with the knowledege to provide the information, it was required. Additionally authorization it was given to the persons conducting the sampling authorization to select other establishments in the area, to replace those from the list that had wrong addresses, those that did not cooperate or were closed at the time of the sampling; but always keeping the proportions assigned to each kind of establishments.

5.- REVISION OF THE SAMPLE DESIGN

The selection of the sampling units was not at random, but the total number of establishments in the sample was 1056, that represent about 36% of the national population in study and that exceeds the 1025 needed for the study. The sample composition was: 527 air conditioning vehicles service shops, 381 refrigeration service shops and 148 marketing shops. Table 4 shows the distribution of questionnaires for each city.

6.- GENERAL RESULTS OF THE STUDY

At the end, the sampling was applied to 1075 establishments, but 19 questionnaires were not taken into consideration because they did not comply with the conditions required resulting that only the data of 1056 questionnaires was introduced into the data base. The questionnaires applied to service workshops of vehicle air conditioning (527) exceeds the number of this kind of business of the target list, those applied to refrigeration and domestic or commercial air conditioning service workshops (381) represents approximately 75% of this category in the target list and the 148 marketing business visited represents 7% of the stores listed in the target list.

Table 4. Geographical Distribution Of The Sampling

CITY	STORES	REFRIG/AC	VEHICLE AC	TOTAL
Barcelona	6	4	5	15
Barquisimeto	7	57	44	108
C. Bolívar	7	10	6	23
Cabimas, C Ojeda	8	16	19	43
Cagua, Villa de Cura	4	9	8	21
Caracas	17	38	186	241
Coro	2	6	2	10
C. Guayana, S Felix	4	5	15	24
Guacara	0	8	3	11
Maracaibo	21	43	55	119
Maracay	10	44	34	88
Maturín	4	10	15	29
Guarenas	0	10	2	12
La Victoria	0	6	5	11
Morón	1	1	1	3
Guatire	0	5	4	9
Pto. Cabello	2	12	4	18
Los Guayos	0	4	1	5
Punto Fijo	5	13	13	31
Mariara, San Joaquín	0	7	2	9
Pto. La Cruz	20	9	9	38
Los Teques	0	7	6	13
Pto. Ordaz	3	4	5	12
San Cristóbal	15	19	19	53
Valencia	12	34	64	110
TOTAL	148	381	527	1056

ANNEXES

ANNEX A: AIR CONDITIONING AND REFRIGERATION STORE QUESTIONNAIRE

ANNEX B: AIR CONDITIONING AND REFRIGERATION SERVICE WORKSHOP QUESTIONNAIRE

ANNEX C: VEHICLE AIR CONDITIONING SERVICE WORKSHOP QUESTIONNAIRE

ANNEX D: LIST OF REFRIGERATION ESTABLISHMENTS. TARGET POPULATION

ANNEX E: LIST OF AIR CONDITIONING AND REFRIGERATION STORES. NATIONAL SURVEY

ANNEX F: LIST OF REFRIGERATION SERVICE WORKSHOPS. NATIONAL SURVEY

ANNEX G: LIST OF VEHICLE AIR CONDITIONING SERVICE WORKSHOP. NATIONAL SURVEY

ANNEX A:

*AIR CONDITIONING AND
REFRIGERATION STORE QUESTIONNAIRE*

ENCUESTA PARA MERCADEO DE EQUIPOS

1. DATOS DE LA EMPRESA

NOMBRE: _____ CIUDAD: _____
 DIRECCIÓN: _____ Telefono: _____
 FAX: _____ EMAIL: _____ No AÑOS ACTIVIDAD: _____
 PERSONA QUE RESPONDE: _____ CARGO: _____

2. INDICAR NUMERO DE EQUIPOS VENDIDOS QUE USEN R12, R11, R22 y R134A

Tipos equipo	Año 1998				Año 1999				Año 2000			
	R12	R11	R22	R134A	R12	R11	R22	R134A	R12	R11	R22	R134A
Neveras												
Enfriadores Agua												
Aire acondicionado domestico 36000												
Aire acond. Entre 3 y 10 tn.												
Aire acond. 10 a 100 tn												
Aire acond. Mayor a 100 tn.												
Vitrina refrigeradas												
Chiller industrial												
Aire acond. Vehículo.												
Cavas refrigeradas de vehículo.												
Congeladores.												
Maq. Helados												
Compresores												

3. ORIGEN DE LOS EQUIPOS: (marcar con X e indicar el % en cada categoría)

Los equipos que Usted vende son:

Comprados a fabricantes Nacionales: SI _____ % _____ Equipos Usados: SI _____ % _____

Comprados a mayoristas Nacionales: SI _____ % _____ Comprados a importadores: SI _____ % _____

Importa directamente alguno de los equipos: SI NO Cuales: _____

4. Cuales son las marcas que Ud. vende: _____

5. VENDE UD. REFRIGERANTE SI NO

Si la respuesta es SI llene la siguiente información:

TIPO ENVASE Kg.

	<u>Año</u> <u>1998</u>	<u>Año 1999</u>	<u>Año</u> <u>2000</u>	<u>13</u>	<u>24</u>	<u>60</u>	<u>otr</u> <u>os</u>	<u>Color del</u> <u>Envase</u>
Cantidad Kg R12 vendida								
Cantidad Kg R11 vendida								
Cantidad Kg R113 vendida								
Cantidad Kg R114 vendida								
Cantidad Kg R115 vendida								

6. Nombre las empresas que lo suplen de refrigerante y/o equipos: _____

<u>Empresa</u>	<u>Teléfono</u>	<u>Suple Refrigerante</u>	<u>Suple Equipos</u>

7. Cite los nombres de las empresas que le compran refrigerante:

ANNEX B:

*AIR CONDITIONING AND
REFRIGERATION SERVICE WORKSHOP
QUESTIONNAIRE*

ENCUESTA PARA TALLERES Y CENTROS DE SERVICIO DE AA Y REFRIGERACIÓN

1. DATOS DE LA EMPRESA:

Nombre del taller: _____ Ciudad: _____
 Dirección: _____
 Teléfonos: _____ Fax: _____ E-mail: _____
 Nombre del Propietario o Gerente: _____
 Persona que respondió: _____ Cargo: _____

2. TIPO DE SERVICIOS QUE PRESTA

Nevera Doméstica: ___ Enfriador de Agua: ___ Vitrina Refrigerada: ___
 Cava refrigeradas fijas: ___ Congelador: ___ Vehículo Refrigerado: ___
 Enfriador Industrial: ___ Maquina de Helados: ___ AA: ___

3. PERSONAL TÉCNICO DISPONIBLE:

NOMBRE DE LA PERSONA	MESES EMPRESA	EXPERIENCIA EN AÑOS	BACHILLER	T.S.U	INCE	CURSOS PRIVADOS	CURSO FONDOIN	TELEFONO

Si faltan líneas continuar en el reverso de esta hoja.

4. EQUIPOS/HERRAMIENTAS DISPONIBLES.

Bomba de vacío: ___ Válvula servicio Manifold: _____ Balanza: _____

Detector fugas: ___ Equipo recuperador refrigerante: _____ Voltímetro: _____

Amperímetro: ___ Tester: ___ Otros equipos lista: _____

5. FRECUENCIA DE LOS SERVICIOS.

Indicar el numero de reparaciones	Semanal	En un mes	Año 1998	Año 1999	Año 2000	Carga Kg.
Nevera						
Enfriador Agua						
Vitrina refrigerada						
Enfriador Industrial						
Aire Acondicionado Domestico						
Aire Acondicionado 3 a 10 Toneladas						
Aire Acondicionado 10 a 100 toneladas						
Aire Acondicionado Mas de 100 toneladas						
Cava refrigerada						

Congelador						
Cava refrigerada De vehiculo						
Maquina de Helado						

6. COMPRAS DE GAS REFRIGERANTE (Kg)

	R12	R22	R134A	R11	R113	R114	R115
Mensual							
Año 2000							

7. EMPRESA SUPLIDORA DE REFRIGERANTE

Nombre	Teléfono	Tipo Envase	Recarga Envase

8. CONTESTE LAS SIGUIENTES PREGUNTAS:

A)	Tiene conocimientos del efecto del R12, y R11 y otros refrigerantes en la capa de ozono atmosférica? SI ____ NO ____
B)	Qué efecto produce la destrucción de la capa de ozono en el clima y en los seres vivos?
C)	Se recupera el refrigerante de los equipos antes de repararlos? SI ____ NO ____
D)	Se dispone de equipos para recuperar refrigerante? SI ____ NO ____
E)	Cómo se controla en el taller que la carga de gas es adecuada? (indicar instrumentos usados).
F)	Está interesado en participar en un entrenamiento que explique cómo reducir las descargas de gas a la atmósfera? SI ____ NO ____
G)	Ha participado el taller en el programa de recuperación de refrigerantes FONDOIN-INGARSICA? SI ____ NO ____ Cuánto recuperó en el 2000?

ANNEX C:

*VEHICLE AIR CONDITIONING SERVICE
WORKSHOP QUESTIONNAIRE*

ENCUESTA PARA TALLERES Y CENTROS DE SERVICIO DE AA Y REFRIGERACIÓN.

1.DATOS DE LA EMPRESA:

Nombre del taller: _____ Ciudad: _____
 Dirección: _____
 Teléfonos: _____ Fax: _____ E-mail: _____
 Nombre del Propietario o Gerente: _____
 Persona que respondió: _____ Cargo: _____

2.TIPO DE SERVICIOS QUE PRESTA

AA Vehículo: ___ AA de Autobus: ___ AA de Camion: _____

3- PERSONAL TÉCNICO DISPONIBLE:

NOMBRE DE LA PERSONA	MESES EMPRESA	EXPERIENCIA EN AÑOS	BACHILLER	T.S.U	INCE	CURSOS PRIVADOS	CURSO FONDOIN	TELEFONO

Si faltan líneas continuar en el reverso de esta hoja.

4. EQUIPOS/HERRAMIENTAS DISPONIBLES.

Bomba de vacío: _____ Válvula servicio Manifold: _____ Balanza: _____
 Detector fugas: _____ Equipo recuperador refrigerante: _____ Voltímetro: _____
 Amperímetro: _____ Tester: _____ Otros equipos lista: _____

5. FRECUENCIA DE LOS SERVICIOS.

Indicar el numero de reparaciones	Semanal	En un mes	Año 1998	Año 1999	Año 2000	Carga Kg.
AA de Vehículo						
AA de Autobús						
AA de Camión						
Otro						
Cava refrigerada De vehículo						

6. COMPRAS DE GAS REFRIGERANTE (Kg)

	R12	R22	R134A	R11	R113	R114	R115
Mensual							
Año 2000							

7. EMPRESA SUPLIDORA DE REFRIGERANTE

Nombre	Teléfono	Tipo Envase	Recarga Envase

8. CONTESTE LAS SIGUIENTES PREGUNTAS:

<u>A)</u>	Tiene conocimientos del efecto del R12, y R11 y otros refrigerantes en la capa de ozono atmosférica? SI ___ NO ___
<u>B)</u>	Qué efecto produce la destrucción de la capa de ozono en el clima y en los seres vivos?
<u>C)</u>	Se recupera el refrigerante de los equipos antes de repararlos? SI ___ NO ___
<u>D)</u>	Se dispone de equipos para recuperar refrigerante? SI ___ NO ___
<u>E)</u>	Cómo se controla en el taller que la carga de gas es adecuada? (indicar instrumentos usados).
<u>F)</u>	Está interesado en participar en un entrenamiento que explique cómo reducir las descargas de gas a la atmósfera? SI ___ NO ___
<u>G)</u>	Ha participado el taller en el programa de recuperación de refrigerantes FONDOIN-INGARSICA? SI ___ NO ___. Cuánto recuperó en el 2000?

ANNEX D:

***LIST OF REFRIGERATION
ESTABLISHMENTS
TARGET POPULATION***

**City: MATURIN. REFRIGERATION AND AIR
CONDITIONING SERVICES**

NAME	PHONE	ADDRESS
1 Auto Refrigeración 21 SRL	091-435019	Calle 14
2 Auto Refrigeración Salas SRL	091-440798	Cl Azcúe
3 Banna Import SRL	091-435082	Calle 7
4 Electronica Morichal CA	091-424826	Av. Bolivar
5 Fricalorías	091-412655	L Brisas
6 Madosa	091-438487	Av. Orinoco
7 Refrigeración Merchán SRL	091-428619	Cl A Sucre
8 Refrigeración y Repuestos El Clima CA	091-426404	Av. Bicentenario
9 Reparaciones Electrodomesticas	091-428071	Av. Rojas
10 Repuestos Elias CA	091-424948	Av. Juncal
11 Super Trio A-I Maturín CA	091-427716	Negro Primero
12 Taller San Benito CA	091-414151	Calle 24
13 Tecni Radio CA	091-426797	Av. Libertador
14 Tecno Aires Monagas	091-424011	Calle Oscue
15 Videos Servicios Rojas CA	091-413925	Cl Cedeño

**City: MATURIN. MARKETING
SECTOR**

NAME	PHONE	ADDRESS
1 Almacén Alepo	091-412167	Carrera 4
2 Almacén San Andres	091-411544	Cl Cedeño
3 American Refrigeration Service CA	091-426210	Av. Chimborazo
4 Auto Refrigeración El Clima CA	091-410342	Av. Bicentenario
5 Clima CA	091-413984	Calle 20
6 Comercial Apolo 2000 CA	091-412232	Carrera 7
7 Comercial Elarba CA	091-427302	Av. Bolivar
8 Comercial Torres SRL	091-428495	Carrera 4
9 COMERSA	091-425654	Av. Bicentenario
10 Cheito Santa Maria CA	091-414573	Calle 7
11 Distribuidora Guzman CA	091-420924	L Cocuizas
12 Distribuidora Gyman Center CA	091-414689	Sucre
13 Distribuidora Kufaty CA	091-429001	Cl Azcúe
14 Distribuidora Mercantil CA	091-426105	Av. Bicentenario
15 El Potente de Monagas	091-425802	Av. Bolivar
16 Elarba CA	091-428215	Av. Bolivar
17 Enkantos SRL	091-432643	Cl Miranda
18 Frio Aires Monagas CA	091-424665	Centro
19 Grapica Oriente CA	091-411985	Carrera 2
20 Happy Cold SRL	091-411847	Av. Orinoco
21 Imgeve	091-410252	Av. Bicentenario
22 Import Repuestos Monagas CA	091-424723	Cl Monagas
23 Intec Maturín CA	091-411644	Morichal

24 Interfrio	091-433813	Av. Rivas
25 Lux de Venezuela CA	091-426823	Carrera 6
26 Mercantil Roman CA	091-413720	Av. Raul Leoni
27 Multifrio Carúpano	091-433594	Carrera 3
28 Naka CA	091-426885	CI Azcue
29 Omega Termica CA	091-423207	Av. Orinoco
30 P y S Digital CA	091-412918	Av. Bolivar
31 Refrigeración 23 de Enero SRL	091-420744	Calle 12
32 Refrigeración AM CA	091-432006	CI Cedeño
33 Refrigeración Gama CA	091-516966	Via L Cruz
34 Refrigeración Oriente SRL	091-428379	Av. Orinoco
35 Servicios y Refrigeración Arteaga SRL	091-425176	CI Rivas
36 Super Tiendas Bam Bam CA	091-422811	Av. Bolivar
37 Surti Hogar 3 Elefantes	091-426574	Av. Orinoco
38 Surtidora Yamuni SRL	091-426184	Calle 14
39 Tecno Aires Monagas	091-424011	Calle Oscue
40 Vitrinas Júpiter CA	091-420711	Av. Bicentenario
41 Zago Suministros CA	091-516217	Av. Bella Vista

City: BARQUISIMETO. REFRIGERATION AND AIR CONDITIONING SERVICES

NAME	PHONE	ADDRESS
1 Aire Central CA	051-321107	CI 29 E/Cr 24 y 25
2 Alaska SRL	051-450929	Calle 45
3 Automotors GM La 13	051-456205	Avenida 13
4 Casa Cosentino SRL	051-311375	Carrera 19
5 Ceteco SA	051-457747	Carrera 25
6 Clam SRL	051-736617	Carrera 32
7 Climalara de Barquisimeto CA	051-456891	Cr 18 E/CI 51 y 52
8 Colvilca CA	051-453064	Carrera 19
9 Comarca	051-463296	CI 40 E/Cr 27
10 Distribuidora El Shadai CA	051-524423	CI 15 E/Cr 19 y 20
11 Distribuidora Reis Neto	051-453797	E/CI 36 y 37
12 Distribuidora RR 26 CA	051-322893	Av. Vzla E/CI 36 y 37
13 Distribuidora Vimo	051-332259	Carrera 25
14 Electro Abarca CA	051-325398	Calle 32
15 Electro Dosmil CA	051-329317	CI 32 E/Cr 19 y 20
16 Electro Todos Artefactos	051-523934	Carrera 17
17 Electrodomesticos Gersrdo SRL	051-326983	Cr 22 E/CI 31 y 32
18 Electrodomesticos Venezuela	051-452895	Carrera 17
19 Electronic Service Televisión	051-325132	Carrera 25
20 Elga Centro Occidental CA (venacor)	051-321107	CI 29 E/Cr 24 y 25
21 Fitting Aires CA	051-321954	Cr 24 E/CI 29 y 30
22 Frige-Herven SRL	051-434730	Br 5 de Julio
23 Frio Car Saf	051-331701	Calle 37
24 Frio Cars	051-330868	Carrera 22
25 Frio Lara	051-451645	Calle 36

26 Frio Movil CA	051-329705	Cl 33 E/Cr 27 y 28
27 Frio y Refrigeración 92 CA	051-450952	Cr 13 E/Cl 48 y 49
28 Imavroca	051-451178	Carrera 18
29 Industria Refrigeración RR SRL	051-457193	Carrera 30
30 Industrias y Taller 2B	051-736152	Av. Libertador
31 Japoven CA	051-517954	Av. Venezuela
32 La Casa del VHS Montilla	051-525479	Av. Venezuela
33 Lake Shore Electric CA	051-521966	Avenida 20
34 LM Asociados CA	051-521887	Av. Vargas
35 Luferca	051-691790	Zn. Ind. III
36 Madosa	051-312319	Calle 32
37 Mante Hogar	051-522782	Av. Venezuela
38 Mantenimiento Pereira	051-733403	Av. Carabobo
39 Mantenimiento y Repuestos Pegon CA	051-521763	Cr. 18 E/Cl 16 y 17
40 Mantenimiento y Repuestos Pegon CA	051-521763	Cr 18 E/Cl 16 y 17
41 Merlaca	051-331255	Av. Venezuela
42 MR Trading Service CA	051-616933	Av. Los Rastrojos
43 Multi Servicios Garcicars SRL	051-457421	Cr 18 C/Cl 40
44 Mundo Frio SRL	051-332150	Carrera 29
45 Nohir Aire SRL	051-321993	Av. Carabobo
46 Omaira Instalaciones CA	051-432949	Av. L Industrias
47 Oster-Sunbeam	051-332259	Carrera 25
48 Pitijoc CA	051-314635	Carrera 19
49 Quin Lar CA	051-510213	Cl 15 E/Cr 19 y 20
50 Redocentro CA	051-450062	Carrera 21
51 Redolarca CA	051-520458	Carrera 21
52 Ref-Elec-Mec SRL	051-511826	Carrera 24
53 Refri 13-2	051-455818	Calle 13
54 Refriaire Jiménez U	051-370093	Mcpio Unión
55 Refrigeración America	051-467629	Av. Vzla. E/Cl 40 y41
56 Refrigeración Comercial López SRL	051-454945	Carrera 22
57 Refrigeración El Néctar	051-462849	Carrera 19
58 Refrigeración Latinoamericana CA	051-468145	Carrera 19
59 Refrigeración Marieli	051-322713	Carrera 27
60 Refrindustriales Melo	051-461236	Carrera 12
61 Refripartes Lara SRL	051-456298	Cr 19 E/Cl 48 y49
62 Releba CA	051-455831	Carrera 21
63 Repuestos Rivoli	051-316391	Carrera 21
64 Salas TV	051-331447	Av. Venezuela
65 Salazaire CA	051-322366	Calle 25
66 Semprun ADC CA	051-311925	Carrera 25
67 Servicio Tecnico Japoven	051-517954	Av. Venezuela
68 Servicio Tecnico JL SRL	051-523850	Av. Moran
69 Servicios JL	051-329618	Carrera 24
70 Taller Refriger	051-415184	Sta. Isabel Cr 10

71 Tecnimotriz Atlanta	051-513891	Cl 13 E/Cr 21 y 22
72 Tele Tecni Pana Phil CA	051-452716	Calle 35
73 Teomachine	051-543408	Av. Andres Eloy B.
74 Unidel CA	051-510957	Av. Vargas

**City: BARQUISIMETO.
MARKETING SECTOR**

NAME	PHONE	ADDRESS
1 Aire Central	051-329930	Calle 29
2 Aire Central CA	051-321107	Cl 29 E/Cr 24 y 25
3 Aire Central Occidental CA	051-455843	Cr. 25 E/Cl 41 y 42
4 Aire Decoración Air Deco SA	051-326973	Calle 33
5 Aires de Occidente CA	051-464721	Cr 27 E/Cl 47 y 48
6 Alemaris Center CA	051-310589	Avenida 20
7 Almacenes Olimpo SA	051-450068	Carrera 21
8 Alo alo Venezuela	051-452742	Carrera 21
9 Artefactos Luferca CA	051-690228	Zn. Ind. III
10 Articomoron CA	051-453173	Cr 16 Cl 47
11 Audio Video City	051-324854	Carrera 19
12 Bazar Moderno CA	051-320749	Avenida 20
13 Bazar Oriental	051-313589	Avenida 20
14 Black Jack	051-466579	Carrera 21
15 Centro Comercial Rita CA	051-316164	Avenida 20
16 Centro de Electronica Henry	051-321487	Carrera 19
17 Centro Electronica Henry	051-330723	Avenida 20
18 Clean Center Supply CA	051-460127	Cr 22 E/Cl 38 y39
19 Cofricarsa Frio Carma SA	051-330448	Av. Venezuela
20 Cold Front CA	051-319810	Carrera 17
21 Cold Front CA	051-319810	Carrera 17
22 Combate Tocuyano La 21	051-471647	Carrera 39
23 Comercial City Center SRL	051-311388	Calle 28
24 Comercial de Refrigeración Lago CA	051-323221	Calle 37
25 Comercial El Increible	051-471192	Av. P L Torres
26 Comercial El Semaforo Popular	051-452592	Carrera 21
27 Comercial El Trópico	051-511416	Av. Venezuela
28 Comercial Florida	051-332826	Carrera 21
29 Comercial Jusedg CA	051-464146	Carrera 13
30 Comercial Masar	051-455432	Av. R Gallegos
31 Comercial Util Sam	051-334575	Cr. 19 E/Cl 24 y 25
32 Comercial y Muebleria El Brasileño	051-456482	Carrera 21
33 COMERSA	051-453564	Calle 37
34 Corporaca	051-329990	E/Cl 34 y 35 Av. 20
35 Corporación Frio Caruci SA	051-320721	Av. Vzla. Esq./Cl 21
36 Credito Obelisco SRL	051-328490	Avenida 20
37 DC Electronic Barquisimeto	051-549420	Av. L Leones
38 Dismare SRL	051-458608	Av. Venezuela

39 Dist. Nacional Electronics de Vzla CA	051-455265	Carrera 21
40 Distribuidora del Hogar CA	051-518849	Av. Vargas
41 Distribuidora El Brasileño	051-450918	Carrera 21
42 Distribuidora El Paramo	051-375611	Zona Industrial
43 Distribuidora El Shadai CA	051-524423	CI 15 E/Cr 19 y 20
44 Distribuidora La Gran Manzana	051-456168	Cr. 21 E/CI 38 y 39
45 Distribuidora Serveca	051-317787	Calle 37
46 Divenre SRL	051-334182	Av. Vzla. CI 37 y 38
47 Electro Anka CA	051-322926	Avenida 20
48 Elga Centro Occidental CA	051-321107	CI 29 E/Cr 24 y 25
49 Expoaire	051-466841	Carrera 19
50 Ferre Hogar CA	051-516154	Berarida
51 Frigilago CA	051-322514	CI 37 E/Cr 390 y 31
52 Frigo Industrial CA	051-319910	Carrera 17
53 Frio Control Industrial CA	051-690851	Cn. Ind. II
54 Frio First	051-334221	Av. Vzla. Esq. CI 22
55 Frio Sistema CA	051-734025	Av. Libertador
56 Frio-Jorven de Venezuela CA	051-465251	CI 39 E/Cr 30 y 31
57 Friotec CA	051-333464	Calle 19
58 Frioensa CA	051-454281	CI 39 Carrera 24
59 Greca CA	051-453013	Carrera 1
60 Hidro Aire Servicio CA	051-526510	Cr 22 E/CI 10 y 11
61 Imgeve	051-322444	Carrera 19
62 Importaciones JR	051-332855	Calle 32
63 Importadora Japoven CA	051-320655	Avenida 20
64 Importadora Usa CA	051-666751	Via Quibor
65 Interfrio Molina	051-321349	Cr 22 E/CI 19 y 20
66 Internacional de Venezuela	051-464577	Calle 39
67 Inverfrigo CA	051-333905	Carrera 19
68 Inversiones RDR 2000 CA	051-320922	Carrera 25
69 Inversiones San Jorge CA	051-450327	Cr. 21 E/CI 40 y 41
70 Inversiones Texas CA	051-522578	Av. Venezuela
71 Invitrel CA (venacor)	051-371398	Calle 25 Zn Ind I
72 Josanca	051-461669	Carrera 19
73 La Casa Electrica de Lara CA	051-328785	Carrera 22
74 La Electricidad Hispanoamericana CA	051-324670	Av. P L Torres
75 La Rana CA	051-323167	Av. Venezuela
76 Láser Refrigeración	051-455859	Av. Venezuela
77 Lehaca	051-691683	Zn. Ind. III
78 Lux de Venezuela CA	051-519641	Avenida 20
79 Mabotecnica	051-322085	Carrera 19
80 Mercantil Melendez Multitodo	051-312821	Carrera 21
81 Mercantil Rikan CA	051-462895	Ayacucho
82 Mercantil Sami CA	051-470859	Carrera 21
83 Metalurgica del Frio SA Mefrisa	051-370379	Carrera 30
84 Moebleria Josesar CA	051-469894	Carrera 21
85 Monec CA	051-318865	Carrera 23

86 Muebleria La Nena	051-463456	Carrera 24
87 Muebleria Saba CA	051-521170	Av. Vargas
88 Multiservicios Anel CA	051-456891	Carrera 18
89 Multiservicios Electrom	051-662869	Av. Cementerio
90 Neve Industrial CA	051-690096	Zona Ind. II
91 NH Electronica CA	051-551312	Av. L Leones
92 Novedades Loris	051-453265	Cr. 21 E/CI 38 y 39
93 Novedades y Punto	051-518849	Av. Vargas
94 Ocran	051-334220	Cr 29 E/CI 23 y 24
95 Omaira Instalaciones	051-433612	Av. L Industrias
96 Omaira Instalaciones CA	051-432949	Av. L Industrias
97 Prian Music	051-321468	Calle 18
98 Proinductos SRL	051-469473	Crr 30 E/CI 40 y 41
99 Ramita Electronics CA	051-468243	Calle 38
100 Recompress Cáceres SRL	051-514381	E/CI 16 y 17
101 Redoeste	051-424305	Carrera 13 A
102 Refri 2000 CA	051-452280	CI 50 E/Cr 23 y 24
103 Refri. Latinoamericana CA (venacor)	051-468145	Cr 19 E/CI 37 y 38
104 Refribar CA	051-453983	Av. Vzla. Esq/CI 40
105 Refricol	051-454945	Carrera 23
106 Refricoma SA	051-452575	Av. P L Torres
107 Refriemca	051-453643	Carrera 18
108 Refrigeración Artico	051-457693	Carrera 13
109 Refrigeración Burski	051-416294	Av. L Industrias
110 Refrigeración Elio Rojas SRL	051-318761	Calle 21
111 Refrigeración Terán CA	051-466243	CI 43 E/Cr 29 y 30
112 Refrigeración Tionis SRL	051-428998	Calle 58
113 Refrinaca CA	014-9510888	Av. Vzla. CI 19
114 Remate del Sam Hnos. Sabbagh SRL	051-733943	Av. Carabobo
115 Remates Hogaret CA	051-455317	Carrera 21
116 Remopeca	051-462782	Av. P L Torres
117 Representaciones Alberto J. Castañeda	051-420835	Calle 60
118 Representaciones Chinaven	051-452949	Carrera 20
119 Representaciones Luis SRL	051-513155	Carrera 22
120 Representaciones Tarqui SRL	051-513960	Carrera 19
121 Representaciones Walter CA	051-736055	Carrera 18
122 Representaciones y Refrigeración Super	052-216725	Av. Aeropuerto
123 Rossetti Lara CA	051-540667	E Parral
124 Safwan Import CA	051-451231	Calle 39
125 Sam Electronic CA	051-329643	Carrera 19
126 Saroca	051-330234	Carrera 19
127 Semprun ADC CA	051-321389	Carrera 25
128 Servicio de Refrigeración Juan G.	051-324115	Calle 33
129 Servifrio CA	051-421711	CI 60 E/Cr 11 y F.A
130 Social Credito Barquisimeto CA	051-427310	Av. P L Torres

131 Sport Conmwey	051-325027	Calle 28
132 Susege CA	051-669193	Av. Florencio Gnez
133 Taller de Refrigeración Ramial	051-328970	Calle 27
134 Tecobar CA (venacor)	051-323755	E/Cr 26 y 27
135 Tecoven CA	051-414055	Zona Ind. II
136 Tecoven CA (venacor)	051-416101	Zn. Ind. II
137 TTI Wannasudhi CA	051-463607	Crr 16 E/Cl 38 y 39
138 TV Line CA	051-322189	Carrera 19
139 Veneaire CA	051-321110	Carrera 25
140 Venezolana de Refrigeración CA	051-460246	Carrera 18
141 Video y Sonido Habach	051-316149	Avenida 20
142 Yamil Distribuciones CA	051-464381	Carrera 21
143 Yes Import	051-460670	Calle 39
144 YL Mantenimiento Integral CA	051-423026	Carrera 13

**City: FALCON. REFRIGERATION AND AIR
CONDITIONING SERVICES**

NAME	PHONE	ADDRESS
1 Aire Electro Bonilla CA	069-450449	Cl Falcón
2 Almacén Cristo	069-469716	Av. Bolivar
3 Auto Car	069-459891	Av. R Gonzalez
4 Auto Cool Pto. Fijo SRL	069-468633	Cl Ayacucho
5 Centro de Servicio Sierra Nevada	069-457987	J Camejo
6 Comercial Betania SRL	068-512865	L tres Platos
7 Comercial Galiven CA	068-522712	Sc Pza Manaure
8 Comercial Los Andes	069-456676	Cl Arismendi
9 Comercial Relampago	069-469537	Cl Comercio
10 Dalton CA	069-469434	Guarano
11 Distribuidora Assal CA	068-525544	Av. Independencia
12 Gauca Supply CA	069-469543	Cl Girardot
13 Inter Pray	069-459424	Cl Arismendi
14 Man Indus CA	069-456298	Cl Zamora
15 Refriaelectric Falcón CA	068-528476	Av. Independencia
16 Refrigeración Novoa CA	069-464644	Cl Progreso
17 Refrigeración Refrimon CA	069-457148	Pueblo Nuevo
18 Refrigeración Sta Ana	069-450779	Cl Progreso
19 Repuestos La Nacional CA	069-450098	Cl Comercio
20 Servilux SRL	069-465659	Centro
21 Taller Electromecanico Guarano	069-457332	J Camejo
22 Termo Sistemas CA	069-451469	Urb. Casacoima
23 Termosistemas CA	069-469051	Sta. Irene

**City: FALCON. MARKETING
SECTOR**

NAME	PHONE	ADDRESS
1 Almacén La Confianza SA	069-450765	Av. Bolivar
2 Almacén Lola	069-459176	Av. Bolivia
3 Almacén Nacional CA	069-458854	Av. Bolivar
4 Autotécnica del Frio (Pto. Fijo)	069-455001	Sta. Irene
5 Casa Jhonny	068-513121	Churuguara
6 Comercial Chadi	069-472610	CI Ecuador
7 Comercial Diana	069-455389	CI Bolivar
8 Comercial Goafe	069-451154	Av. Bolivar
9 Comercial Ideal CA	069-457692	CI Falcón
10 Comercial La Corona	069-456010	CI Girardot
11 Comercial Mauricio CA	068-514643	CI Falcón
12 Comercial Nival	068-515139	CI Bolivar
13 Comercial Pedro Saab SRL	069-457067	Av. Bolivar
14 Comercial Róliz	069-454676	Av. Bolivar
15 Comercial Yamal CA	068-516109	CI Maparari
16 Cooperativa San Jose Obrero	069-453023	CI Zamora
17 Distribuidora Coronado SRL	068-518778	CI Bolivar
18 Fabri Muebles CA	068-526855	Av. Los Médanos
19 Fercold CA	069-457212	Av. Los Caobos
20 Frio Mare CA	042-834323	Cr Morón Coro
21 Friointeca	068-517517	Cj Gubarca
22 Frioensa CA	068-532715	Av. Independencia
23 Gauca Supply CA	069-469543	CI Girardot
24 Importadora Aiman SRL	069-464347	CI Garcés
25 Importadora Belmeny CA	069-455454	Av. Bolivar
26 Importadora San Jacinto CA	069-473854	CI Libertad
27 La Casa de la Refrigeración CA	042-832449	CI Comercio
28 Muebles Caribe	069-450367	Av. Bolivar
29 Multiservicios Ventura	069-465764	L Marbellas
30 Productos Nordpol CA	068-518421	Zona Industrial
31 Proser SA	069-472212	CI Girardot
32 Refrigeración y Montaje Refrimon	069-464498	Pueblo Nuevo
33 Repuestos Claudio SRL	069-468742	M D Leoni
34 Sedoca	069-468350	Av. Tachira
35 Sedoca	069-468350	Av. Tachira
36 Servicio Técnico Romar SRL	042-831990	Cr Morón Coro
37 Servimateca	068-526381	Av. Independencia
38 Servintegral CA	069-464698	CI Comercio

39 Symalex CA	069-480832	CI Girardot
40 Taller Tecno Vera	069-459076	CI Falcón
41 Termo Sistemas CA	069-451469	Urb. Casacoima
42 Wasan Sonido SRL	069-455145	Av. Bolivar

**City: TACHIRA. MARKETING
SECTOR**

NAME	PHONE	ADDRESS
1 A Qui Me Quedo	076-479663	L Concordia
2 AB Ingenieria SRL	076-438308	Zn. Ind. L Lomas
3 Aire Acondicionado Man-Aire CA	076-430013	Br. Obrero
4 Aire Acondicionado Smair CA	076-567637	Br. Obrero
5 Aire Acondicionado Indaca	076-552550	Br. Obrero
6 Almacen General SRL	076-436814	Calle 7
7 Almacen y Todo Mueble	076-442727	Centro
8 Almacenadora Caribbean	076-433701	5ta Avenida
9 Almacenes La 20 CA	076-558214	Br. Obrero
10 Almacenes La Ermita	076-443992	L. Ermita
11 Almacenen London CA	076-436621	Carrera 8
12 Antonio Mogollon F. CA	076-432511	Av. Libertador
13 Babilonia La Comercial	076-418755	5ta Avenida
14 Casa Electronica RC SRL	076-449585	Carrera 8
15 Cero Grados SRL	076-559698	Br. Obrero
16 Ciro Sanchez y Cia. SA	076-434331	Centro
17 Comercial Casa Blanca	076-410892	5ta Avenida
18 Comercial Damaso	076-461024	L Concordia
19 Comercial Diana CA	076-444708	Centro
20 Comercial El Gocho	076-410549	7ma Avenida
21 Comercial El Gocho	076-410549	7ma Avenida
22 Comercial Flor de Margarita	076-410149	Carrera 8
23 Comercial Madabú	076-439657	5ta Avenida
24 Comercial Nimara	076-410334	Centro
25 Comercial Porfirio Parada	076-430930	Centro
26 Comercial Primavera	076-449748	Centro
27 Comercial Rey	076-442046	Psje. Cumana
28 Comercial Rivers Sony	076-431647	Calle7
29 Comercial Ronald CA	076-468561	L Concordia
30 Comercial Torbes	076-435151	5ta Avenida
31 Comercial Ymosa SRL	076-422643	L. Ermita
32 Comercio Los Ruíces SRL	076-465535	L Concordia
33 Compresores Servicios	076-444334	Br. Obrero
34 Compresores Servicios CA	076-444334	Br. Obrero
35 Compresores y Servicios CA	076-432896	Br. Obrero
36 Credi Centro JMA	076-438870	5ta Avenida
37 CS Import CA	076-468670	L Concordia

38 Discoteca Mundial SA	076-439626	Carrera 8
39 Distribuidora Bermon	076-4609453	L Concordia
40 Distribuidora Edupe	076-436222	L Vega
41 Distribuidora Siherma	076-554350	Br. Obrero
42 Distribuidora Zully	076-416932	Carrera 10
43 El Palacio del Regalo	076-477948	L Concordia
44 Electro Center SRL	076-434541	Centro
45 Frio Alpes	076-558615	Br. Obrero
46 Frios Occidentales CA	076-479708	L Concordia
47 Inversiones Aruba	076-432401	7ma Avenida
48 Inversiones Buen Hogar CA	076-438253	Centro
49 Inversiones Eduardo	076-568633	Br. Obrero
50 Inversiones La Fortaleza	076-434645	5ta Avenida
51 Jhony Muebles	076-410479	L. Ermita
52 La Casa Electrica SA	076-435334	Avenida 5
53 Lacor	076-410382	5ta Avenida
54 Limasa	076-476178	L Concordia
55 Lux de Venezuela CA	076-433596	7ma Avenida
56 Man-Aire CA A/A	076-430013	Br. Obrero
57 Mercantil Especa	076-473641	La Concordia
58 Mercantil Ontiveros SRL	076-561769	Br. Obrero
59 Mercantil Zambrano CA	076-479314	La Concordia
60 Muebleria Super Precio	076-419715	5ta Avenida
61 Mundo Muebles	076-415853	5ta Avenida
62 Olimport Center	076-442360	7ma Avenida
63 Que Frio	076-415382	Br. Obrero
64 Rafagas CA	076-441227	Centro
65 Ravangron	076-554860	Br. Obrero
66 Refrigeración Visac	076-553629	Br. Obrero
67 Refrijair	076-448275	Centro
68 Refrisol CA	076-473392	La Concordia
69 Representaciones Ortiz SRL	076-475914	L Concordia
70 Rossetti Artefactos Tachira CA	076-473605	L Acacias
71 Rossetti Artefactos Tachira CA	076-473605	L. Acacias
72 Sergio Moreno CA	076-433192	5ta Avenida
73 Simenca	076-461327	L Concordia
74 Smair CA	076-567637	Br. Obrero
75 Sol Aire SA	076-472547	La Concordia
76 Taller Aguirre	076-561780	Br. Obrero
77 Taller de Refrigeración Sertee	076-446294	Br. Obrero
78 Taller Osecol	076-448809	Carrera 9
79 teratron Electronic	076-415813	Centro
80 Tokio Sonido	076-418921	7ma Avenida
81 Variedades Anyblan CA	076-473087	L Concordia
82 Venezolana de Comercio SRL	076-441956	Carrera 9

**City: TACHIRA. REFRIGERATION AND AIR
CONDITIONING SERVICES**

NAME	PHONE	ADDRESS
1 Aire Acondicionado Indaca	076-552550	Br. Obrero
2 Aire Acondicionado Man-Aire CA	076-430013	Br. Obrero
3 Comercial Josimar CA	076-713840	Via Ppal. Palotal
4 Comercial Sayago	076-443738	Calle 7
5 Comercializadora Gomez ' Rueda CA	076-463272	J de Maldonado
6 Compresores Servicios	076-444334	Eq. De Cr. 15
7 Con Cars	076-479958	L Concordia
8 Dimaga SRL	076-443652	Carrera 6
9 Distribuidora Santa Ana	076-435832	Br. Obrero
10 Frio TK Cordillera CA	076-417146	Complejo Incosa
11 Frios Acondicionados Uzcátegui	076-464949	L Concordia
12 Marin Electronics	076-552814	Br. Obrero
13 Mercantil Villamizar	076-411134	Sta Teresa
14 Nevetachira	076-446412	Av. Libertador
15 Proimat Refrigeración	076-445229	Br. Obrero
16 Radi-Aire San Cristobal	076-474270	L Concordia
17 Refri Led	076-710529	Curazao
18 Refrigeración Gonzalo	076-940102	Cl M Briceño
19 Refrigeración Imperio	076-438892	Calle 8
20 Refrisol CA	076-473392	L Concordia
21 Sergio Ortega refrigeración	076-623498	La Victoria
22 Servi Car	076-554152	Br. Obrero
23 Servicio Tecnico Quality	077-913467	Carrera 5
24 Simenca	076-461327	L Concordia
25 Taller de Refrigeración Frio Cold	076-430723	Carrera 9
26 Taller de Refrigeración Mosquera	076-471417	La Concordia
27 Taller de Refrigeración Primavera CA	076-472623	La Concordia
28 Taller Friotécnicos	076-715079	Br. Lagunitas
29 Taller Ineor	076-410772	Centro
30 Taller y Repuestos Acevedo	076-465422	La Concordia
31 Tele Radio	076-433646	Carrera 9

**City: MARACAIBO. MARKETING
SECTOR**

NAME	PHONE	ADDRESS
1 AA Cond Serca	061-595609	Sc Paraiso
2 Aimca Aire Acondicionado	061-594809	Cl 90 Nueva Via
3 Air Conditioning Service CA	061-971816	Cl 84 Belloso
4 Air Servis	061-984673	Veritas

5 Air Systems CA	061-494496	Ziruma
6 Airemar CA	061-422050	Irama
7 Airevenca	061-987794	5 de Julio
8 Almacen Tokyo CA	061-517306	5 de Julio
9 Almacenes Giganti CA	061-978101	Tierra Negra
10 Alta Eficiencia Controles CA	061-432355	Av. Universidad
11 Arturo Wilcher CA	061-562117	E Amparo
12 Audio Sony	061-230492	Pza. Baralt
13 Audio Video New York	061-231309	L Playitas
14 Auto Refrigeración Richard	061-235507	L Pamoma
15 Bajo Cero Refrigeración del Zulia CA	061-425881	Av. Universidad
16 Blasi A/A CA	061-923148	La lago
17 Carrier	061-594686	1ro de Mayo
18 Carrier	061-926964	Bella Vista
19 Carrusel Infantil Zulia CA	061-238365	Avenida 100
20 Casa Electrica CA	064-712115	Nvo. Juan
21 Casa Serizawa	061-911994	Bella Vista
22 Centralaire CA	061-922376	Valle Frio
23 Centro de Refrigeración	061-971066	Dr. Portillo
24 Ceteco SA	061-235646	Cañada Hda
25 Clidair CA	061-534550	L Olivos
26 Codelca	061-979485	Tierra Negra
27 Codelca	061-979485	Tierra Negra
28 Comercial Alirio CA	061-222180	L Pulgas
29 Comercial Anfapi SRL	061-563701	Mzna. de Oro
30 Comercial Emilio	064-415912	CI Miranda
31 Comercial Gigante CA	061-526073	L Delicias
32 Comercial Internacional	061-239103	Calle 100
33 Comercial Jhonny CA	064-413208	L Gran Cruzada
34 Comercial Lago Azul	061-224102	Calle 100
35 Comercial Las Cumbres	061-557550	Lmtas. del Zulia
36 Comercial Viva	064-411302	Av. Principal
37 Comercial Viva Guadalupe	061-230062	Calle 100
38 Comercializadora y Desarrollo Codesa	061-876895	Sabaneta
39 Comersa	061-221065	Bella Vista
40 Conexiones Rodriguez JM CA	061-544004	Av. L Limpia
41 Cordero y Cia. SA	061-553239	L Limpia
42 Corporación El Paramo-Zulia CA	061-831105	El Paraiso
43 Corporación Mercantil Venezolana SA	061-231668	Bella Vista
44 Chema CA	061-913607	La lago
45 Disjaica	061-878666	Br. L Pastora
46 Distribuidora Casa Nena CA	061-653613	L Haticos
47 Distribuidora M & S SRL	061-920759	Bella Vista
48 Distribuidora Modica CA	061-979425	Tierra Negra
49 Distribuidora Mundo Electrico	061-212810	L Playitas
50 Distribuidora TA	061-981659	Delicias

51 Distribuidora Telle CA	061-591161	Indio Mora
52 Ductos Lee CA	061-493364	L Tarabas
53 EG Importaciones CA	061-594117	L Limpia
54 El Hogar Electrico CA	061-422072	Sta. Rita
55 Electrodomesticos El Alacran Numero 2	061-547155	L Victoria
56 Electrodomesticos El Gigante	064-21111	Nva. Cabimas
57 Elga de Venezuela CA	061-212366	Sc E Transito
58 Empresas Incorporadas CA	061-651369	L Haticos
59 F & Import CA	061-564497	Panamericano
60 Fibra Sport	061-212443	L Playitas
61 Flash Motors CA	061-971737	L Delicias
62 Frigilux CA	061-360375	Zn. Ind. I
63 Frio 2000	061-970401	Bella Vista
64 Frio Caribe CA	061-984662	Calle 82 S Veritas
65 Frio Plus CA	061-592221	Delicias
66 Friovent SRL	061-982901	Tierra Negra
67 Frisel CA	061-565054	L Limpia
68 Frisel CA	061-565054	Avenida 91
69 Gaby Sonido y Stereo	061-231090	L Playitas
70 Gas Air CA	061-975234	Av. 12 E/CI 70 y 71
71 Gas Air Conditioning Service Gas Air CA	061-975234	Tierra Negra
72 Geloni CA	061-524124	L Limpia
73 Giofo Refrigeración	061-359762	L Estanques
74 Glacial de Venezuela CA	061-433548	Zapara
75 Guancho CA	061-345171	Zn. Ind. I
76 Hisuzu Cool System CA	061-833811	Delicias
77 Hisuzu Cool Systems CA	061-833811	L Delicias
78 Imagen y Sonido CA	061-590493	Calle 77
79 Importaciones Generales Maracaibo	061-863101	M Concepción
80 Importadora del Centro	061-534434	L Limpia
81 Importadora Jegon CA	061-562266	L Postes Negros
82 Importadora Roma	061-220992	Pichincha
83 Importadora Sabaneta CA	061-863756	Av. Sabaneta
84 Improinca	061-869604	L Pastora
85 Industrias Per CA	061-360641	Zona Industrial
86 Inperca	061-360641	Zona Industrial
87 Instalaciones y Proy. Ind. CA	061-868629	L Pastora
88 Instalchiller SA	061-975530	Tierra Negra
89 Invelsa	061-430109	Zapara II
90 Inversiones B y B	061-362401	Zona Industrial
91 Inversiones Duhersa CA	061-491927	L Tarabas
92 Inversiones Hijo Mio	061-832656	San Jose
93 Inversiones Maracaibo Air Supply CA	061-981236	C Acosta
94 Inversiones Sator CA	061-885845	A E Blanco
95 Inversiones Zulia Import	061-238140	Autopista 1

96 Inversora La Trasandina	061-411299	S Belloso
97 Japonex SRL	061-922554	Bella Vista
98 JC Auto Aire	061-930039	San Bartolo
99 Jean Assabatti	061-213628	L Libertador
100 Jeloince CA	061-521013	Paraiso
101 Klimaire SRL	061-418833	Monte Claro
102 L & M Refrigeración de Venezuela CA	061-541279	L Olivos
103 La Casa	064-413152	Ambrosio
104 La Casa Electrica CA	061-988085	5 de Julio
105 La Comercializadora CA	061-862197	Av. Sabaneta
106 La Nueva Tienda Disaco Show CA	061-975152	Dr. Portillo
107 La Primera CA	064-411166	Av. Principal
108 Leiderman Hermanos CA	061-921866	Avenida 6
109 Lizarqui CA	061-562913	Avenida 29
110 Luis Dubuc Representaciones CA	061-421280	L Mercedes
111 Lux de Venezuela CA	061-220942	Bella Vista
112 Lux de Venezuela CA	061-220953	Bella Vista
113 Mabotécnica	061-416477	Delicias
114 Maier CA	061-416367	Av. Milagro Nte
115 Maier CA	061-412964	Av. El Milagro
116 Mater CA	061-419872	L Limpia
117 Maxaire	061-975043	L Delicias
118 Megaire CA	061-977016	Tierra Negra
119 Meroca CA	061-981013	Calle 72
120 modenaje Centro de Las Cocinas	061-221131	Bella Vista
121 Muebles Eudo Mary CA	061-654057	Haticos P Arriba
122 Multi Refrigeración los Esquimales	061-981312	Tierra Negra
123 Multiservicios Bempaca	061-514347	Sta. Maria
124 Multitienda La Beba	061-551471	L Limpia
125 NBC Said Sonido	061-238886	L Playitas
126 Novedades Adolfinia	061-972209	Dr. Portillo
127 P y S Digital CA	061-987803	Cl. 82 Av. 14
128 Proser SA	061-933341	Cotorrera
129 Proven SA	061-977620	5 de Julio
130 Punto Brillante 2000 CA	061-651886	L Haticos
131 RD SRL	061-975566	L Veritas
132 Redomeca (venacor)	061-594737	Avenida 16
133 redomeca CA	061-594737	Socorro
134 Refri & Parte More	061-868916	L Pastora
135 Refri Andry	061-350429	Sierra Maestra
136 Refri Eléctricos Sierra Maestra CA	061-353511	Sierra Maestra
137 Refri Rep. Sta. Barbara CA	075-554339	Avenida 5
138 Refri Ruca	061-971228	Veritas
139 Refri Sousa	061-558954	E Pedregal
140 Refricen CA	061-594686	1ro de Mayo
141 Refrigeración Comercial Inmaca	061-348541	E Silencio

142 Refrigeración del Norte	061-428270	Monte Claro
143 Refrigeración Deus CA	061-880136	Gallo Verde
144 Refrigeración el Pingüino SA	061-236933	Avenida 17
145 Refrigeración Jandama	061-420938	Alto de Jalisco
146 Refrigeración Metalurgica Coy SRL	061-354485	Sierra Maestra
147 Refrigeración Nelson	061-550540	Br. Paramericano
148 Refrigeración RB	061-517535	J de Avila
149 Refrigeración Standard	061-926340	Calle 65 A
150 Refrigeración Super CA	061-921376	Bella Vista
151 Refrigeración Sur del Lago CA	075-550146	Avenida 14
152 Refrigeración total CA	061-976719	Bella Vista
153 Refrihogar	061-481387	Monte Bello
154 Refrirod	061-612590	San Francisco
155 Refri-Sifon CA	061-974334	L Delicias
156 Refriso	061-516110	Av. 15 L Delicias
157 Remeca	061-717982	Av. Intercomunal
158 Remezuga	061-593651	L Delicias
159 Repuestos de Refrigeración Yánes	064-414150	Sc Tierra Negra
160 Rfei Joerca CA	061-345067	Sierra Maestra
161 Sael CA	061-918664	E Milagro
162 Safe de Venezuela CA	061-915675	Av. Universidad
163 Sermacold CA	061-973921	Bella Vista
164 Sermacold CA	061-973921	Av. 4 Bella Vista
165 Serviaire SA	061-928055	Tierra Negra
166 Servicio Tecnico MC CA	061-932967	Bella Vista
167 Servicios Tecnicos JK	061-221475	L Veritas
168 Servitecnica Persan	061-619639	San Felipe
169 Simca	061-495883	Naranja
170 Taller Alcazar	061-593489	1ro Mayo
171 Taller de Refrigeración Don Chucho	061-347003	L Estanques
172 Taller de Refrigeración JM	061-561395	L Limpia
173 Taller Grano de Oro	061-412304	Alto de Jalisco
174 Taller Refrigeración Elite	061-914975	E Milagro
175 Tecni Frio	061-413373	18 de Octubre
176 Tecni Hogar CA	061-970179	Avenida 9B
177 Tecno Refrigeración MC	061-981275	Tierra Negra
178 Tecno Servicios Mara CA	061-926964	Bella Vista
179 Tecnología Electrónica Frigilux	061-653286	L Haticos
180 Toto Refrigeración CA	061-980462	Avenida 9
181 Unicentro del San SRL	061-211651	Av. Libertador
182 Universal Import CA	061-527552	L Delicias
183 Ventaire CA	061-933019	Valle Frio
184 Ventaire CA	061-933019	Qta. Severiana
185 Zuamerica Import	061-653054	L Haticos

**City: MARACAIBO. REFRIGERATION AND AIR
CONDITIONING SERVICES**

NAME	PHONE	ADDRESS
1 ACR Componentes	061-526802	L Limpia
2 Airca CA Representaciones	061-222275	Bella Vista
3 Auto Aire Ignacio CA	061-591655	L Limpia
4 Auto Aire JC	061-914450	L Lago
5 Auto Aire Levi CA	061-981203	Avenida 14b
6 Auto Aire Occidental SRL	061-921997	Bella Vista
7 Auto Aire Raul CA	061-984752	Tierra Negra
8 Auto Frio El Morocho	061-343214	Sierra Maestra
9 Auto Refrigeración Alberto CA	061-213214	Avenida 5
10 Auto Refrigeración Augusto CA	061-592574	CI 70 Sta. Maria
11 Auto Refrigeración el Griego	061-641032	L Haticos
12 Auto Refrigeración Icecar	061-870205	L Pastora
13 Auto Refrigeración Semprun SA	061-923847	Valle Frio
14 Carrier	061-926964	Bella Vista
15 Cerogradados CA	061-979661	Sta. Rita
16 Codeairca	061-565912	L Delicias
17 Coldvenca	061-360798	Circunvalación 2
18 Comatec CA	061-411046	Av. Universidad
19 Comercio Don Manuel	061-551892	L Rotaria
20 Confort Aire	061-213118	E Transito
21 Cool Master	061-981729	Cecilio Acosta
22 D y L Repuestos	061-426556	E Rosal Sur
23 Di Marco CA	061-926735	Bella Vista
24 Disfrioca	061-862895	Sabaneta
25 Disreca	061-972448	Av. 11 Dr Portillo
26 Disrezuca	061-426023	L Estrella
27 Distribuidora Lombardo CA	061-496555	Av. Universidad
28 Draaca	061-925681	L Lago
29 Duhersa CA	061-495392	L Guajira
30 El Nevado Zuliano CA	061-984411	C Acosta
31 El Sistema Electrico CA	061-225968	Calle 99
32 Elec Gas	061-530997	L Rosaleda
33 Electro Frio Lombardo	061-496555	Av. Universidad
34 Electro Guimera Lux CA	061-976341	Av. 13a E/CI 71y72
35 Electro Refrigeración Internacional	064-415837	E Amparo
36 Electrodomesticos La Unión	061-222844	L Pulgas
37 Electronica Suem SRL	064-413079	Av. Principal
38 Falop CA	061-533875	Br. Paramericano
39 Ferre Repuestos Perdomo	061-525003	Nueva Via
40 FH Asociados CA	061-520629	La Fusta

41 Frigiking CA	061-422705	Monte Claro
42 Frio Cars CA	061-413495	Bella Vista
43 Frio Edgar CA	061-869571	Br. Bolivar
44 Frio Partes Roferca CA	061-563066	L Limpia
45 Frio Plus CA	061-592221	L Delicias
46 Frioca	064-510634	Carretera H
47 Friocenter	061-647910	L Haticos
48 Friomara	061-514333	L Limpia
49 Frioted	061-864487	1ro Agosto
50 Frioted	061-591905	Cl 90 Nueva Via
51 Friveca	061-361997	Zn. Ind. II
52 G & F Refrizulia CA	061-869417	L Pastora
53 Gas Air CA	061-975234	Av. 12 E/Cl 70 y 71
54 Imerca	061-536730	L Lomas
55 Importadora Martheins Marquez	061-352734	Circunvalación II
56 Indile	061-529196	La Fusta
57 Instalaire CA	061-974676	Veritas
58 Inversiones BHN SA	061-562545	E Amparo
59 Inversiones Cruz CA	061-987949	Tierra Negra
60 L y M Refrigeración	064-512761	Carretera H
61 Lavadoras en Alquiler	061-613882	Zona Industrial
62 Lefer Partes y Equipos CA	064--511990	Bello Monte
63 Luce CA	061-429278	
64 Manufac. De Aparatos Domest. SA	061-983420	Bella Vista
65 Marvin Haon CA	061-521533	Av. 25 Urb. Sucre
66 Mavenser CA	061-923280	Bella Vista
67 Merocha CA	061-983010	Tierra Negra
68 Mhaonca	061-512882	Av. 25 Urb. Sucre
69 Miami Compressors CA	061-561355	L Limpia
70 Peláez Hermanos de Maracaibo	061-348623	L Robles
71 Recopar SRL	061-612181	San Francisco
72 Redrefrigeración Pacheco CA	061-595863	Socorro
73 Redocci SRL	061-594614	Avenida 16
74 Redolandia CA	061-972465	Bella Vista
75 Redomara CA	061-525125	Av. Goajira
76 Redoquín SRL	061-972811	L Delicias
77 Refri Cars Paraiso SRL	061-515898	L Delicias
78 Refri Inn Center	061-527576	Santa Maria
79 Refri Shop	061-880776	Gallo Verde
80 Refri Sur SA	061-355696	Sierra Maestra
81 Refri. Mto. Refriman	061-511221	L Limpia
82 Refri-Auto Ender	061-358542	Br. L Andes
83 Refriauto J & R	061-975823	L Veritas
84 Refric Electric Los Olivos	061-534812	L Olivos

85 Refri-Electric Cabimas	064-511005	L Delicias Nuevas
86 Refrigeración A & M	061-515451	E Paraiso
87 Refrigeración Automotriz CA	061-916747	5 de Julio
88 Refrigeración Cordillera CA	061-976475	E/Cl 13a y 14a
89 Refrigeración El Cóndor	061-870830	L Paz
90 Refrigeración El Sol CA	061-520652	L Limpia
91 Refrigeración La Limpia	061-535111	L Limpia
92 Refrigeración Mejías	061-831281	Amparo
93 Refrigeración Montilla	061-530303	L Victoria
94 Refrigeración Palma	061-591121	Calle 90
95 Refrigeración Piña	061-222969	Valle Frio
96 Refrigeración Ríos	061-511132	Sta. Maria
97 Refrigeración Traelca	061-925839	L Lago
98 Refriher CA	061-864682	1ro Agosto
99 Refrilaca	061-595993	Pza R Guillermina
100 Refrimar	061-349517	S Maestra
101 Rehoco SRL	064-715080	E Lucero
102 Remeca	064-717982	Av. Intercomunal
103 Repahogar	061-977227	Bella Vista
104 Representaciones Airca CA	061-222275	Bella Vista
105 Representaciones Brigamsa SRL	061-653953	L Haticos
106 Representaciones Carsuca	061-874038	L Claveles
107 Repuestos de Refrigeración Niño CA	061-235271	L Pomona
108 Repuestos Plutón	075-551014	5ta Avenida
109 Repuestos Redomar SA	061- 212634	Puente España
110 Reserca	061-428738	Av. 5, 18 de Oct.
111 Retelca	061-976894	5 de Julio
112 Revenca	064-413730	Av. A Bello
113 Segur Aire SA	061-984458	Tierra Negra
114 Sermacold CA	061-973921	Bella Vista
115 Sermateca CA	061-420701	Bella Vista
116 Serter CA	061-353291	Sierra Maestra
117 Servi Aire SG CA	061-977006	Tierra Negra
118 Servicio Tecnico Chambita	061-364850	Sierra Maestra
119 Servicios Antartic CA	061-918061	E Milagro
120 Servicios Rainbow SRL	061-979328	C Acosta
121 Servicios Técnicos Edisson CA	061-922527	Sta Rita
122 Servicios Tecnicos Tang	061-213641	Belloso
123 Servimaco SA	061-911034	San Martin
124 Taller de Refrigeración Frio Cold	061-546265	L Limpia
125 Taller de Refrigeración La Victoria	061-595095	L Delicias
126 Taller de Refrigeración RGP	061-343681	Via Perijá
127 Taller de Refrigeración Serca	061-357097	Sierra Maestra
128 Taller Gabriel Inciarte	061-912209	L Lago
129 Taller Junín	061-234065	Bella Vista
130 Taller TV Lente Visión	061-594928	Avenida 23

131 Talleres Cool Cars	061-921675	Valle Frio
132 Tecni Electric Lizarqui CA	061-980689	Avenida 4
133 Tecnica Venezuela	061-357905	L Haticos
134 Tecno Control Maycom CA	061-973557	Bella Vista
135 Tecno Servicios Mara CA	061-926964	Bella Vista
136 Tecnomar	061-970108	Belloso
137 Therclima CA	061-931476	E Milagro
138 Tony Frio	061-834626	1ro de Mayo
139 Ventaire CA	061-933019	Qta. Severiana
140 Viemca	061-521106	L Limpia
141 W Asociados Car CA	061-341827	Sierra Maestra
142 York	061-926964	Bella Vista

**City: ARAGUA. MARKETING
SECTOR**

NAME	PHONE	ADDRESS
1 A J Mundial CA	043-45482	Av. Miranda
2 Aaisa	043-515285	San Vicente II
3 Aire Proyectos CA	043-543624	L Coromoto
4 Aixen	043-515285	L Coromoto
5 Arte Hogar SRL	043-450043	Cl. Vargas Sur
6 Audio Video Hawaii SRL	043-471050	Av. Miranda
7 Casa Belmar CA	043-465665	Av. Stos Michelena
8 Casa Japonesa	043-458245	Av. Miranda
9 Centrolux CA	043-453834	Av. Bolivar
10 Comercial Admar CA	043-533921	L Romana
11 Comercial Cen	043-451409	Cl. S Carrero
12 Comercial El Encanto	043-454791	Cl P Almarza
13 Comercial El Gran Descuento	043-473063	Cl. Carabobo Nte
14 Comercial Frio Madeirense CA	043-690051	L Morita
15 Comercial La Florida CA	043-453919	Av. Stos Michelena
16 Comercial La Vega	043-359534	Av. Los Cedros
17 Comercial Marun SRL	043-455602	Av. Stos Michelena
18 Comercial Morantes	043-345232	Av. Aragua Este
19 Comercial Rosa Linda	044-631738	Av. Bolivar
20 Comercial Turkey	043-467666	Av. Stos Michelena
21 Comercial Victoria SRL	043-332121	Av. 10 de Dic
22 Comercial Yimi CA	043-461343	Cl Paez O.
23 Comercial Zoraida	043-452079	Av. 19 de Abril
24 Comersa	043-473936	Av. Miranda Oeste
25 Consorcio Mundolimpio de Vzla. CA	043-537649	San Vicente I
26 Controles Electricos	043-542203	Av. Bolivar O.
27 Corporación Alhamad CA	043-513639	Av. Miranda
28 Corporación Espacio Integral	043-720441	Campo Alegre
29 Corporación Tijuana CA	043-465102	Av. Miranda
30 Corven CA (venacor)	043-463967	Zn. Ind. L Hamaca

31 Criotec CA	044-89340	Zn. Ind. Las Minas
32 D'Capricho	043-452346	Av. Stos Michelena
33 Daireca	043-835412	El Limón
34 Depositos de Audiovideos y Electrodo.	043-320186	Cl. Paez Este
35 Distribuidora Caribbean	043-458097	Cl S. Michelena
36 Distribuidora Genaro Electric CA	043-472668	Cl S. Michelena
37 Distribuidora Los Chinos	043-356630	Santa Ana
38 Distribuidora Multihogar	043-450090	Av. Miranda
39 Distribuidora Yazaca CA	043-456267	Av. Miranda
40 Dureca de Refrigeración Ca	043-544718	L Democracia
41 Eco y Visión CA	043-463344	Av. Miranda
42 Ecoclimas	043-359062	San Ignacio
43 El Condor de Aragua	043-453223	Cl S. Michelena
44 El Equipo Modernode A E Reyes B. CA	043-453496	Cl Vargas Nte
45 Equipos Multiples	043-347876	Los Samanes
46 Expogar CA	043-466276	Cl. S Carrero
47 Exposan	043-460571	Cl Vargas Nte
48 Frio Sistemas SRL	043-325928	L Barraca
49 Frio TK CA	043-356289	Zn. Ind. Piñonal
50 Frioambientes CA	043-471873	Br. Lourdes
51 Funmanca CA	043-473090	Cl Mariño Sur
52 Gabimar 2000	043-469020	Cl Vargas Nte
53 Galerias Adonis SRL	043-343654	Av. Los Cedros
54 Galerias Mil CA	043-452478	Cl. Soubllette
55 Hipertiendas Kovy	043-452009	Av. Bolivar O.
56 Iframca (venacor)	043-515382	San Vicente II
57 Import Servi CA	043-543530	Av. Bolivar oeste
58 Industrias Proaire SRL	043-352959	L. Samanes
59 Inelec CA	043-712201	Zn. Ind. Piñonal
60 Infrimaca	044-633944	Sc E Macaro
61 Integral de Serv. Navales de Vzla. CA	043-466691	Br. L Libertad
62 Inversiones AA CA	043-472847	Cl Boyaca
63 Inversiones Drikha	043-466257	Av. Bolivar O.
64 Inversiones El Nur CA	043-326134	Av. Bolivar
65 Inversiones Fami 255 CA	043-460933	Cl Soubllette
66 Inversiones Giannoni CA	043-339087	Av. Miranda
67 Inversiones JH	043-461174	Av. Miranda
68 Inversiones Laser CA	043-453653	Cl Vargas Nte
69 Inversiones Makhlof CA	043-456242	Cl. S Carrero
70 Inversiones Paniagua	043-461547	Cl Libertad
71 Inversiones Su Hogar CA	043-515813	San Vicente I
72 Isamar Import	043-465462	Av. Bolivar
73 Kason Suramericana CA	044-217033	Zn. Ind. La Mora
74 La Casa del Colchon CA	043-463975	Av. Bolivar
75 La Casa del Colchon II	043-467338	Cl L Aveledo S
76 LP Visión	043-457990	Av. Miranda

77 Lux de Venezuela CA	043-332018	L Barraca
78 Menasa	041-573132	Av, Lara
79 Mercantil Los Tres Hermanos	043-336909	Av. Miranda
80 Meza Frio SRL	043-723241	Zn Ind. La Hamaca
81 Modulaire	043-344556	Urb. Ind. Sn. J
82 Modulaire CA	043-340965	Sn. Jacinto
83 Muebleria Central CA	043-458334	CI S. Michelena
84 Muebleria La Favorita	043-455324	CI S. Michelena
85 Neve Madeirense CA	043-694579	L Providencia
86 Peñalver CA	043-457634	Av. Bolivar
87 Polemaq CA	043-345323	Av. Bermudez
88 Redrefrigeración Miranda Plaza CA	043-331497	Av. Miranda
89 Redomar CA	043-540357	L Ramona
90 Refri Saga	043-352898	San Carlos
91 Refrigeración Amaris	043-450013	Av. Constitución
92 Refrigeración Bermudez	044-77201	CI Ayacucho
93 Refrigeración Delta CA	044-72707	CI Bermudez
94 Refrigeración Dina	043-456597	Av. Miranda Oeste
95 Refrigeración Hermanos	043-363628	Piñonal
96 Refrigeración Ind. DI Carlo (venacor)	044-863040	Av. Paradisi
97 Refrigeración Latinoamericana SRL	044-72548	Cajigal
98 Refrigeración Reflomar CA	043-335490	L Barraca
99 Refrigeración Ruiz	044-70921	A Barrios
100 Refrigeración Servicamp SRL	044-74245	CI Comercio
101 Refrimara	043-337064	L Barraca
102 Refrimaster CA	044-79350	Cagua
103 Refrindustrias Mycom CA	043-691850	L Providencia
104 Refri-Servi Maracay	043-332601	Av. Constitución
105 Refrivemeca CA	043-514669	Sta. Rosa
106 Renelaire CA	043-342872	Av. Aragua
107 Representaciones Edward HG	043-465909	CI. S Carrero
108 Representaciones Import	043-455879	Av. Stos Michelena
109 Representaciones Pestana CA	043-451953	CI 5 de Julio
110 Representaciones ZH 10 CA	043-454201	CI S. Michelena
111 Repuestos Franco SRL	043-455357	CI Paez Oeste
112 Repuestos y servicios Mil CA	043-546940	Sc L Romana
113 Revimar CA	043-694163	Santiago Mariño
114 Sertinca	043-670512	CI Paramaconi
115 Servi Aire Doble S SRL	043-417378	L. Cooperativa
116 Servi Engels CA	043-358357	Piñonal Sur
117 Sonelys CA	043-454798	CI S. Michelena
118 Su Aire Rodelca	043-338423	Av. Bolivar O.
119 Super Bazar CA	043-469254	CI S. Michelena
120 Taller de Refrigeración	044-630864	CI Ricaurte
121 Taller Ingles SRL	043-324525	Olivos Viejos
122 Talleres Service Company	043-345265	Av. Bermudez
123 Tecni Luz	043-333528	L Barraca

124	Técnica Electrónica TV Sound SRL	043-341162	Av. Aragua
125	Tecno Refrigeración y Rebobinados	043-516104	San Vicente II
126	Tecno Refrigeración y Rebobinados	043-463244	Av. Los Cedros
127	Tecno Rfri. La Cooperativa SRL	043-424830	La Cooperativa
128	Termodinamica Maracay CA	043-513725	Sta. Rosa
129	Top Audio Video	043-331909	Pque. Aragua
130	Ventiladores PS	043-333421	Av Bolivar E.
131	Video Sonido Cristal CA	043-471272	Av. Miranda
132	Video Sonido Script SRL	043-455619	Av. Stos Michelena

**City: ARAGUA. REFRIGERATION AND AIR
CONDITIONING SERVICES**

	NAME	PHONE	ADDRESS
1	A/A Rep. y Serv. Mil SRL	043-546940	CI Paez Oeste
2	ABC Repuestos del Hogar CA	043-331306	Av. Miranda
3	Acondicionado Integral SA	043-516327	San Vicente II
4	Air Harb CA	043-345254	San Ignacio
5	Aire Acondicionado Integral SA (venacor)	043-516327	San Vicente II
6	AM Tiendas CA	043-463409	Av. Constitución
7	Articar CA	043-451131	Av. L Cedros
8	Auto Aire Nevada SRL	043-474874	E Hipódromo
9	Auto Radio Fit Cars	043-334550	Br. Sn. Agustín
10	Auto Servicio Los Criollitos CA	043-337285	San Agustín
11	Bodiam Aire SRL	044-630084	CI Urdaneta
12	Cayrca	043-470634	CI L Aveledo
13	Clima Ambiente CA	043-464262	CI San Jose
14	Climaire	043-413634	L Olivos Nuevos
15	Climat Glas CA	043-322705	Av. Miranda
16	Climaven Aragua CA	043-340032	Av. Aragua
17	Comercial Extra Son SRL	043-467734	CI 5 de Julio
18	Comercial HR SRL	043-532877	Br. J F Rivas
19	Comercial Rubi SRL	043-468687	Av. Miranda
20	Comercializadora Suramericana	043-339621	Av. Miranda
21	Consultoria Técnica Cold Master CA	043-839578	CI Girardot
22	Dimarca Flotimar CA	043-691955	A Michelena
23	Dismar SRL	043-712115	F de Miranda
24	Distribuidora los Ramos SRL	043-674461	CI Rondon
25	El Gigante de la Refrigeración CA	045-645148	Guacara
26	Electro Aire Motors SRL	043-332491	L Barraca
27	Electro Aire Pepe	043-360345	San Jose
28	Electro Zoning	043-342545	Piñonal
29	Electronica ABC	043-335110	Av. Miranda
30	Equipos La Mixta	043-458448	CI Paez
31	Equipos Macoca CA	043-349598	Av. Aragua
32	Euro Aire CA	043-358989	Sta. Ana

33 Faconec CA	043-516806	San Vicente II
34 Frio Calor SRL	043-346329	Piñonal
35 Frio Central La Victoria	044-211135	CI F M Paredes
36 Frio Chaguaramos SRL	043-341313	Piñonal
37 Friocaven CA	044-521737	Ct Nacional
38 Hogar Refri CA	044-221317	CI C Blank
39 IM Refrigeración CA	043-473630	L Democracia
40 Inversiones Ferremox CA	043-332509	Sn. Agustín
41 Maxi Frio	044-633190	CI Ricaurte
42 Multi Servicios Frio Tejerías	044-341860	L Pradera
43 Multiservicios Mundial	043-838390	Av. Universidad
44 Multiservicios y Montajes Albornoz CA	043-341786	Rio Blanco
45 Nevevictoria CA	044-217980	CI G de Sena
46 Nevocar	043-338865	CI Paez Este
47 Novedades Macth SRL	043-459425	CI S. Michelena
48 Perfec-Frio I CA	043-346998	Av. Aragua
49 Refri Auto Campo Elias SRL	044-221084	CI Padre Machado
50 Refri Auto El Indio II SRL	044-959455	CI Mariño
51 Refri Auto Maracay	043-540613	Av. S Michelena
52 Refri Her SRL	044-215101	CI R Davila
53 Refri Repuestos Narvaez CA	043-358866	Br San Jose
54 Refriair Aragua CA	044-212231	CI G Blanco
55 Refrica CA	043-532847	CI. Libertad
56 Refrigeración America CA	043-459320	Av. 10 de Dic.Mcay
57 Refrigeración Brimor SRL	043-546066	23 de Enero
58 Refrigeración Delta CA	044-954853	Calle Bermúdez
59 Refrigeración Farrera	043-335797	Av. 10 de Dic.Mcay
60 Refrigeración Frio Equipo CA	043-325815	Av. 10 de Dic.Mcay
61 Refrigeración Hermanos	043-363628	Piñonal
62 Refrigeración Ind. Di Carlo	044-863040	Av. Paradisi
63 Refrigeración Industrial Mavi SA	044-633360	CI Petión
64 Refrigeración La Villa	044-862524	Av. L Hernandez
65 Refrigeración Miranda Plaza CA	043-331497	Av. Miranda E
66 Refrigeración New York	043-540666	L Flores
67 Refrigeración Torres CA	043-712330	Sta Rita
68 Refrigeración Universal SRL	043-457597	CI S Carrero Sur
69 Refriser CA	043-334098	Av. 10 de Dic.Mcay
70 Refriservicios Cagua SRL	044-78071	Sc L Meregotos
71 Refrivemeca CA	043-514669	Sta. Rosa
72 Reidi CA	044-862147	Av. Paradisi
73 Rep. De Refrigeración Com. Victoria SRL	043-334412	Av. 10 de Dic.Mcay
74 Rep. De Refrigeración Maracay CA	043-320724	L Barraca
75 RV Mantenimiento	043-417317	E Castaño
76 Sercli CA	044-222806	El Estadio
77 Servi TK CA	041-590624	Av. San Blas
78 Serviair	043-544843	Av. Miranda Oeste
79 Servicios Glaciar	043-331220	L Barraca

80 Servicios Industriales SRL	043-356655	Av. Aragua
81 Servivera SRL	043-359257	E Piñonal
82 Sistemas Integrales CA	043-461204	Av. Miranda Oeste
83 Sucore CA	043-473871	Br Lourdes
84 Sudica SA	043-470274	CI Sucre
85 Suministros Air Tiuna	043-473474	L Democracia
86 Taller Benton	044-211701	L Mercedes
87 Taller de Refrigeración Francisco	043-460854	CI Paez Oeste
88 Taller Frio-Zam	044-70172	CI Ayacucho
89 Taller Ingles	043-418256	Los Olivos Viejos
90 Taller Johan Manuel	043-670301	L Pica
91 Taller Tito	044-212475	CI A Bello
92 Tecni Aire-Tencars	043-325730	Br. Independencia
93 Tecni Aire-Tencars	043-325730	Br. Independencia
94 Tecni-Refri Maracay	043-336410	Av. 10 de Dic
95 Tecno Refrigeración y Rebobinados MC	043-516104	San Vicente II
96 Tecno Servicio CA	043-531864	Sta. Rosa
97 Tecnofrigo	044-863590	Av. Paradisi
98 TecnoLine CA	043-692331	Br. Sorocaima II
99 Tito Refrigeraciones CA	044-227486	CI G Blanco
100 Tu Aire Cars SRL	144454261	CI Bicentenario

**City: CARABOBO. REFRIGERATION AND AIR
CONDITIONING SERVICES**

NAME	PHONE	ADDRESS
1 A G Refrigeración CA	041-314470	Av. E Tejera
2 Aconter CA	041-354712	Av. Michelena
3 Acosa	045-714306	CI Carabobo
4 AG Refrigeración CA	041-314470	Av. E Tejera
5 Air Tech CA	041-718589	Zona Ind.
6 Airca	041-310004	L Candelaria
7 Aire Servicios Valencia CA	041-250762	Sc Agua Blanca
8 Alemana de refrigeración	041-665964	Av. Universidad
9 Alf Service	041-328779	Los Guayos
10 Arte Casa CA	041-661658	Av. Bolivar
11 Auto Clinica del Sonido	042-610779	CI Regeneración
12 Auto Refri. Michelena CA	041-571497	Av. Branger
13 Auto Refrigeración Alex	041-586250	Michelena
14 Auto Refrigeración Caceres	042-615470	Rancho Grande
15 Auto Refrigeración Rami I CA	16-4475826	Av. Michelena
16 Avantec CA	041-220237	Prebo
17 Carbuinyección Val. CA	041-358547	L Candelaria
18 Carlos Aravena	041-255456	E. Parral
19 Casa Electrica Mantilla CA	041-581950	Av. Farriar
20 Casa Sain	041-576747	L Candelaria
21 Comercial El Gran Descuento CA	041-714943	Zn. Ind. Castillito
22 Comercial Esperanza CA	041-570721	CI Comercio

23 Comercial Jota Jota SA	041-582881	Catedral
24 Comercial Nol	041-573304	Centro
25 Comercial Salvador CA	042-614118	CI Bolivar
26 Comersa	041-356011	Av. Diaz Moreno
27 Conduaire CA	041-318426	Cabriales
28 Confrío CA	041-577238	San Jose
29 Congel Cars CA	041-586028	Av. Cedeño
30 Corporación Harsost CA	041-683201	Av. Bolivar
31 Coryser CA	041-222876	Agua Blanca
32 Dir-Aire Valencia	041-718493	Zn. Ind. Castillito
33 Distribuidora Beze CA	049-92128	Av. Sucre
34 Distribuidora BMG CA	042-612107	Rancho Grande
35 Distribuidora Ribadesella CA	041-575355	La Michelena
36 Distribuidora Templair	041-588164	Av. Urdaneta
37 El Gigante de la Refrigeración CA	045-645148	Av. Bolivar
38 El Mundo del Repuesto CA	041-596738	CI Girardot
39 Electro Eeprom SRL	041-355289	CI Michelena
40 Electro Neveaire SRL	041-590853	San Blas
41 Electronic Center CA	041-215357	CI Miranda
42 Electronica Actual	041-228440	Av. Bolivar Nte.
43 Electronica Belmonte	045-42338	Av. Bolivar
44 Equipos Macoca CA	041-339224	Zn. Ind. L Quizanda
45 Fambell CA	041-592297	San Blas
46 Frio Car	041-941216	Pocaterra
47 Frio Industria SRL	041-470471	CI Pto Cabello
48 Frio Ven	041-597732	L Colorados
49 Inaire CA	041-590223	San Blas
50 Industrias Pedetel CA	045-712622	Ct. Nacional
51 Inter Coold CA	041-315989	L Florida
52 Inversiones Domelectric	041-477070	13 de Septiembre
53 Inversiones Reyka SA	042-720106	Av. Falcón
54 J D Electronics CA	041-241589	Sba. Larga
55 La Casa de las Cafeterias SRL	041-317316	Av. Escalona
56 La Casa del Artefacto	041-432972	L Chimeneas
57 Mantenimiento Gigante	041-235547	L Alegria
58 Manufac. de Aparat. Domest. SA	041-717376	San Diego
59 Mia	041-316390	Av. Soubllette
60 Mister Frio	041-226268	Sta. Cecilia
61 Multirepuestos del Hogar	045-645106	CI L Silva
62 Osterval CA	041-580350	Av. Carabobo
63 Osterval CA	041-580350	Av. Carabobo
64 Palpha Motors SRL	041-662283	CI G Blanco
65 Plic CA	045-641648	Av. Bolivar
66 PND Mantenimiento	041-676070	Av. Bolivar

67 Preserca	041-244732	Prebo
68 Preserca	041-244732	Prebol
69 Productos Alogenados de Venezuela	042-720205	Ct M Coro
70 Productos Utiles CA	041-571015	Av. Bolivar Norte
71 Refitec CA	041-592184	San Blas
72 Refri Cobas CA	041-574831	La Michelena
73 Refri Luz	049-930453	Av. L Fundadores
74 Refriamérica Center SA	041-354758	La Candelaria
75 Refrico	041-590087	San Blas
76 Refrigeración América CA	041-354935	La Candelaria
77 Refrigeración Delta CA	041-595266	Av. Branger
78 Refrigeración Europa CA	041-312785	Av. Ldro. Alvarado
79 Refrigeración Europa CA	041-312785	Av. Ldro. Alvarado
80 Refrigeración Galicia CA	041-832126	E. Socorro
81 Refrigeración Giuseppe	041-235672	B Cousins
82 Refrigeración Hernandez	041-312871	La Candelaria
83 Refrigeración Ind. Naguanagua	041-666053	Av. Bolivar
84 Refrigeración Iris CA	041-317329	Av. Bolivar Sur
85 Refrigeración La Gran Familia	041-582362	Av. Fdo. Figueredo
86 Refrigeración La Oriental CA	041-593405	San Blas
87 Refrigeración Venezolana CA	041-714869	Urb. Ind. Castillito
88 Refrihenca	041-343891	CI Mariño
89 Refrihogar	041-591269	San Blas
90 Refrilara	041-589290	Av. Mtes. De Oca
91 Refri-Mundial CA	041-590067	San Blas
92 Remates del San	041-581738	Catedral
93 Rep. Refri. Conelaire CA	041-319662	La Candelaria
94 Repelca CA	041-321287	Zn. Ind. Carabobo
95 Repitecnico Valencia	041-483608	Av. P Melian
96 Representaciones Praseg	041-242555	Los Colorados
97 Representaciones y Mto. Velasquez	041-350719	E Carmen
98 Repuestos El Padre	041-591789	San Blas
99 Repuestos Electrodomesticos RE SRL	041-328627	La Isabelica
100 Repuestos Hogar Servicios	041-572059	Av. Boyaca
101 Repuestos Roca CA	041-576738	CI Comercio
102 Repuestos Venus	041-571392	Catedral
103 Repuestos Victor	041-572740	CI Comercio
104 Roca	041-576738	CI Comercio
105 Roprats CA	041-322518	Zn. Ind. Quizanda
106 Segeteca	041-323136	Zn Ind. Sur
107 Serclimair	041-314243	L Taladros
108 Servi Tec Unidos SRL	041-587825	Av. Lara
109 Servi TK CA	041-590624	San Blas
110 Servicio de Refrigeración Paulino	041-940436	Tocuyito
111 Servicios Modernos del Centro SRL	041-581786	CI Rondon

112 Servifrio 55	045-521046	Av. San Joaquin
113 Servindustria	042-617024	CI Regeneración
114 Serviteca	041-575804	Av. L Alvarado
115 Sia Valencia	041-587126	Av. Cedeño
116 Siaaca	041-592297	San Blas
117 Sirtec	041-575736	Catedral
118 Soluciones Climáticas	041-593538	Cj Rosarito
119 Supliaire	041-333766	Zn. Ind. Quizanda
120 Suply Aire CA	041-333766	Zn. Ind. L Quizanda
121 Surti Centro CA	041-352104	L Candelaria
122 Taller Abraham SRL	041-710309	L Arales
123 Taller de Refrigeración Domingo CA	041-211207	Agua Blanca
124 Taller El Armenio	041-582045	CI Comercio
125 Taller Electromecanico Henriquez	042-612762	Rancho Grande
126 Talleres Catatumbo SRL	041-575753	Av. Michelena
127 Tecno Frio	045-643731	CI A Gonzalez
128 Tecno Refri. Rangel SRL	045-521957	Av. Carabobo
129 Tecno Talleres Lu Kars SRL	041-589506	CI Arizmendi
130 Termo Equipos Carabobo CA	041-322930	Zn. Ind. Carabobo
131 Thermo Servicios King CA	041-587704	Av. Bolivar Norte
132 Todo Servicio CA	041-248663	Sta. Cecilia
133 Valenlux CA	041-219101	Av. Bolivar Nte.
134 Valenlux CA	041-219101	Av. Bolivar Nte.
135 Vornado de Venezuela CA	042-720911	Palma Sola

City: CARABOBO. MARKETING SECTOR

NAME	PHONE	ADDRESS
1 Ainca	041-715534	Zn. Ind. Castillito
2 Air Gomez CA	041-386539	Zn. Ind. Mpal. Nte.
3 Air Quality CA	041-327752	Zn. Ind. Carabobo
4 Air Solutions CA	041-430311	Trigal Norte
5 Air Tech Ingenieria CA	041-715817	Big Low Center
6 Aire Acondicionado Industrial CA	041-718076	Zn. Ind. Castillito
7 Aire Acondicionado Valencia CA	041-211925	Av. Miranda
8 Aire Acondicionado Sutil	041-327830	Zn. Ind. Carabobo
9 Aire Central Valencia CA	041-593495	Av. Lara
10 Alpar CA	041-326809	Via San Diego
11 AM Tiendas	041-385258	Zn. Ind. Mpal. Nte.
12 AM Tiendas	041-581182	Av. Bolivar
13 Antonys San	041-574834	Catedral
14 AR Home CA	041-577352	Av. Cedeño
15 Artico Morón CA	042-720016	Av. Falcón
16 Audio Video Gino Su Reloj CA	041-585506	Av. Bolivar
CA		
17 Auto Refrigeración Castellano	041-319924	Sta. Rosa

SRL

18 Ayko Center CA	041-583782	Av. Boyaca
19 Big Sale	041-325696	Av. Bolivar
20 CAI Trading Company CA	041-684042	Av. Val. Ngua.
21 Car Audio y Video CA	041-226522	Los Sauces
22 Carolina Center CA	041-581517	Catedral
23 Casa Di Cosas CA	041-675247	L Granja
24 Celan Inversiones CA	041-718105	Castillito
25 Ceteco SA	045-646184	Guacara
26 Cine Master	041-589554	CI Comercio
27 Climatizaciones Standard AAC CA	041-336208	Zn. Ind. Sur
28 Climaven CA	041-589256	Av. A E Blanco
29 Comercial B and P CA	041-358281	L Candelaria
30 Comercial Beirut	041-584678	CI Colombia
31 Comercial El Cine SRL	041-942084	CI Sucre
32 Comercial Electronica	041-583013	Av. Diaz Moreno
33 Comercial Frio Madeirense CA	041-715620	Castillito
34 Comercial Jean Pier SRL	041-474731	Av. Las Ferias
35 Comercial La Oferta del Centro	041-596170	5 de Julio
36 Comercial Lator SA	041-585161	Santa Rosa
37 Comercial Lorenzi CA	041-571303	Catedral
38 Comercial Nol	041-573304	Av. Diaz Moreno
39 Comercial Refeh	041-585373	Av. Bolivar
40 Comercial Rio	041-585423	Centro
41 Comercial Rosimar	042-610743	CI Bolivar
42 Comercial Said SRL	042-613864	CI Juncal
43 Comercial Taita	041-586710	Av. Diaz Moreno
44 Comercial Tamanaco SRL	041-570074	Av. Boyaca
45 Comercial Valencia 2000	041-589483	Av. Urdaneta
46 Comersa	042-610646	Av. Bolivar
47 Comersa	041-313011	Sc L Candelaria
48 Comersa	041-356011	Av. Diaz Moreno
49 Comrefricon CA	041-471001	Av. P Melean
50 Consolidada del Mueble	041-216161	Av. Bolivar Nte.
51 Corporación Best CA	041-716497	Zn. Ind. Castillito
52 Corporación JJ Rocha CA	041-780422	Flor Amarillo
53 Corporación Mercantil Venezolana	041-332920	Zn. Ind. Munizipal
54 Corporación Rodriguez CA	042-612172	Av. Bolivar
55 Cotermica	041-661570	Tarapio
56 Danfoss SA (venacor)	045-710248	Zn. Ind. L Guayos
57 Danfoss SA (venacor)	045-710248	Zn. Ind. L Guayos
58 DBP Inversiones	041-385749	Zn. Ind. Mpal. Nte.
59 DC Electronic	041-244842	El Viñedo
60 Dileca	041-359680	Av. Aranzazu
61 Diraval CA	041-576554	Av. Urdaneta
62 Dishaire CA	041-421496	Trigal Norte
63 Disovica CA	041-577474	CI Independencia

64 Disproair Centro Ca	041-336935	Zona Industrial
65 Distraire CA	041-358284	L Candelaria
66 Distribeca	041-714549	Zn. Ind. Castillito
67 Distribuciones Parra A CA	041-596505	Calle Farriar
68 Distribuidora Eduardo CA	041-594139	E Comercio
69 Distribuidora Kanbaz SRL	041-589634	CI Comercio
70 Distribuidora La Mina CA	041-571520	Centro
71 Distribuidora Razik CA	041-716574	Zn. Ind. Castillito
72 Distribuidora Rodal SRL	041-250437	Av. Bolivar Nte.
73 Distribuidora Serra	042-618627	CI Anzoategui
74 División de A/A y Ventilación Ind. SRL	041-979507	Av. Cvlción Oeste
75 Divmar SRL	042-615547	Bermudez
76 Ducto Panel CA	041-325061	Zn. Ind. Mpal. Nte.
77 El Faro Inversiones HF CA	041-587090	CI Paez
78 El Gigante de los Repuestos	045-647547	Av. Bolivar
79 El Rey del Enfriador	041-571529	La Michelena
80 Electro Service	041-227987	Prebo
81 Electrodom SA	041-714660	Zn. Ind. Castillito
82 Equipas SRL	041-424825	La Trigaleña
83 Esquinita del San SRL	041-579457	CI Comercio
84 Expoaire	041-714511	Zn. Ind. Castillito
85 Franquicia BS1 Castillito CA	041-715015	Zn. Ind. Castillito
86 Frego Electrico CA	042-612095	Segrestaa
87 Fricava CA	041-310896	CI Peña
88 Friocar SRL	042-615665	CI 36 Rancho Grd
89 Friocon CA	041-316732	Sta. Rosa
90 Friomax SA	041-715496	Zn. Ind. Castillito
91 Girardot Center CA	041-570164	CI Girardot
92 Grupo Inmensa CA (venacor)	041-343598	Zn. Ind. Sur II
93 Grupo Inmensa CA (venacor)	041-343598	Zn. Ind. Sur II
94 Grupo Inmensa CA (venacor)	041-343598	Zn. Ind. Sur II
95 Grupo Meinseparc	043-631270	Pueblo Nuevo
96 Hidroteca	041-326879	Aeroclub Valencia
97 Hogar 2001	041-581692	Santa Rosa
98 Hogar Dos Mil Uno	045-646256	CI A Gonzalez
99 HR Servi Hogar SRL	041-216263	Santa Cecilia
100 Iderca Valencia CA	041-324284	Av. Michelena
101 Idesa	041-325693	Zn. Ind. Mpal. Nte.
102 Imgeve	041-675030	Av. Valencia
103 Importaciones Mar CA	041-317010	L Candelaria
104 In Saire 2000 CA	041-323722	Zn. Ind. Carabobo
105 Inaire CA	041-590223	San Blas
106 Incasa	041-715534	Zn. Ind. Castillito
107 Industrias de Electrodomesticos Alron	041-321182	Zn. Ind. Mpal. Nte.
108 Inge Aire I CA	041-667509	Tarapio
109 Ingenieria 896 CA	041-432261	Las Chimeneas
110 Ingermaca	041-318006	La Candelaria

111 Inghipeca CA	041-257950	Las Acacias
112 Inmfevica CA	041-384158	Zona Industrial
113 Inreca	041-592023	San Blas
114 Inteica	041-355427	Centro
115 Interfrigo de Venezuela CA	041-717573	Zn. Ind. Castillito
116 Internacional de Refrigeración CA	041-718132	Zn Ind. Castillito
117 Intertem Aires CA	041-388301	Zn. Ind. L Quizanda
118 Inver.Heating & Cooling de Vzla CA	041-389618	Zn. Ind. Sur II
119 Inverking CA	041-324110	Zn. Ind. Mpal. Nte.
120 Inversiones Akros CA	041-588218	Catedral
121 Inversiones Guadalupe CA	041-571093	Av. Boyaca
122 Inversiones Sorocaima CA	041-310949	Av. Bolivar Sur
123 Inversiones y Novedades Brini I	041-572454	Av. Bolivar Sur
124 Invhecor CA	041-590342	San Blas
125 Kari Bian SRL	041-579092	Av. Diaz Moreno
126 Kool-Aire CA	041-646822	Av. La Paz
127 Kosangas SRL	041-214508	CI Prebo
128 L G Electronics	041-210087	Las Acacias
129 La Casa del Artefacto	041-432972	L Chimeneas
130 La Fortuna del San CA	041-577066	Av. Montes de Oca
131 largsi SRL	041-582328	Av. Lara
132 Lumalac Carabobo	041-715923	Tzas de Castillito
133 Mabe	041-320814	Zn. Ind. Sur
134 Menasa	041-573132	Av. Lara
135 Mercantil Arvelo	045-411471	Av. Bolivar
136 Mercantil Avelardo CA	045-640721	Av. Carabobo
137 Mercantil La Primavera	041-473475	E Carmen Sur
138 Mercantil Michelena	041-585718	CI Comercio
139 Mercantil Saga SRL	041-236083	Av. Bolivar
140 Mercantil Samira CA	041-717504	Zn. Ind. Castillito
141 Mobba de Venezuela CA	045-641955	Zn.Ind. El Tigre
142 Multiservicios Don Luis	041-430185	Mañongo
143 Mundo Intimo	041-578924	Av. Diaz Moreno
144 Ofirr CA	041-717535	Mañongo
145 Olympia de Venezuela CA	041-590383	San Blas
146 P y S Digital CA	041-389179	Zona Industrial
147 Per Mor SRL	041-579528	San Jose
148 Pol Import	041-787172	Flor Amarillo
149 Premier Electric de Venezuela CA	041-718025	Castillito
150 Productos Utiles CA	041-585210	San Jose
151 Proglá CA	041-680520	Calle 180A
152 Promair CA	041-315940	Av. Ldro. Alvarado
153 Proyectos Tecnicos CA	041-581140	Av. Michelena
154 Pul Import CA	041-574775	CI Girardot
155 Rebeca Sonido CA	041-595875	Av. Constitución
156 Redolará	041-575153	Av. Lara
157 Refer CA	041-590261	San Blas

158 Refri Servi	041-593697	San Blas
159 Refriambiente CA	041-590860	San Blas
160 Refribar CA	041-357055	Av. Las Ferias
161 Refricentro	041-591631	San Blas
162 Refrico SRL	041-590087	San Blas
163 Refriconfort	041-342466	Pque Valencia
164 Refrigeración Coa CA	041-382981	La Isabelica
165 Refrigeración Cristian	042-610659	CI Municipio
166 Refrigeración Diaz	041-591872	San Blas
167 Refrigeración El Mar SRL	041-588789	La Michelena
168 Refrigeración Europa CA (venacor)	041-312785	Av. Ldro. Alvarado
169 Refrigeración Faria & Teixeira CA	041-592242	Av. Lara
170 Refrigeración Industrial Cabriales CA	045-718702	Zn. Ind. Paraparal
171 Refrigeración Industrial Venezolana SA	041-320463	Zn Ind. Carabobo
172 Refrigeración Los Andes	041-592857	CI Independencia
173 Refrigeración Morón CA	042-721012	CI Ayacucho
174 Refrigeración Orinoco	041-592545	San Blas
175 Refrigeración Royal CA	041-663365	CI A Plaza
176 Refrigeración Sta Rosa SRL	041-353471	Sta. Rosa
177 Refrigeración Standard Carabobo SRL	041-328329	Zn. Ind. Carabobo
178 Refrigeración Sur América CA	041-312722	La Candelaria
179 Refrigeración Tecnica CA	041-320703	Zn.Ind. Carabobo
180 Refrigeración Venezolana CA	041-714869	Urb. Ind. Castillito
181 Refrigeraciones CA	041-591254	San Blas
182 Refrimaster CA	041-319572	Av. Ldro. Alvarado
183 Refri-Mundial CA	041-590067	San Blas
184 Refri-Mundial CA	041-590067	Av. A Gonzalez
185 Refripeca CA	041-715641	Zn. Ind. Castillito
186 Refritec CA	041-667831	Av. Bolivar
187 Refritecnica	041-312258	La Candelaria
188 Rejhoca	045-642564	CI L Silva
189 Repuestos Alfredo	041-660693	Av. Bolivar
190 Reveca	041-714869	Zn.Ind. Castillito
191 Roro Hogar CA	041-583461	CI Girardot
192 Sepeca CA	041-237089	Carabobo
193 Ser Amil CA	042-610769	CI Libertad
194 Servi Hogar	041-318760	E Carmen Sur
195 Servicio Tecnico de Radio y TV	042-614197	CI 1ra Segresta
196 Servicios Dulban SRL	041-317127	La Candelaria
197 Shedy Shop	045-411615	Av. Bolivar
198 Show Electronic CA	045-642819	Negro Primero
199 Sisteproaa 02 CA	041-474479	Bello Monte I
200 Split Multiples CA	041-257152	El Parral

201 Steaa Parts CA	041-326597	Zn. Ind. Carabobo
202 Suministro Lavafrío	041-589883	Ritec
203 Super Ofertas La Corona CA	041-573064	CI Boyaca
204 Super San CA	041-589056	Av. Diaz Moreno
205 Super Solución Económica CA	041-590387	San Blas
206 Suplitécnica	041-359183	CI Michelena
207 Suplitécnica	041-359183	CI Michelena
208 Suply Aire CA	041-333766	Zn. Ind. L Quizanda
209 Suply Aire CA	041-389691	Zn. Ind. L Quizanda
210 Taller de Refrigeración Abreu	041-668891	Calle 190
211 Taller de Refrigeración Hnos. Cortez	041-788283	Flor Amarillo
212 Tecfrica Valencia CA	041-718441	Zn. Ind. Castillito
213 Tecni Servicios	041-470485	Bello Monte I
214 Tecno Frio CA	043-631951	Av. Bolívar
215 Tecno Frio Camoruco CA	041-259550	Prebo
216 Temperlux CA	041-355955	L Candelaria
217 Termoal CA	041-587734	Av. Escalona
218 Tio San CA	041-573353	Av. Diaz Moreno
219 Titronic	041-587796	Av. Bolívar Nte.
220 Valenlux CA	041-219101	Av. Bolívar Nte.
221 Valimpor CA	041-590059	Av. Lara
222 Ventima CA	041-678875	Av. Bolívar
223 Wind Cool CA	041-716976	E Castillito

**City: CIUDAD BOLIVAR.
MARKETING SECTOR**

NAME	PHONE	ADDRESS
1 Arte Muebles La Selecta CA	085-26764	Av. Andres Bello
2 Artico refrigeración	085-23605	Av. Cumana
3 Big Bom CA	085-23619	CI Venezuela
4 Centro Hogar CA	085-20920	CI Piar
5 City Center	085-21792	Psje Orinoco
6 Climerca SRL	085-46601	Avenida 17 de Dic.
7 Cocinas Empotradas Artef. Coemar	085-20239	Av. Cumana
8 Comercial El Cacique SRL	085-24471	CI Venezuela
9 Comercial Santa Ana CA	085-28857	CI Venezuela
10 Comercial Torre de Oro	085-23005	CI Venezuela
11 Comersa	085-20883	Av. Upata
12 Corporación Mercantil Venezolana SA	085-23334	Av. Upata
13 Creaciones Guzman	085-515789	L Sabanita
14 Distrane Guayana CA	085-520761	Unare II
15 Distribuidora America Kun CA	085-21942	CI Zea
16 Distribuidora Sweda CA	085-247412	Av. Germania
17 El Gran Cañon	085-20885	CI Venezuela

18 Electro Disco CA	085-49653	Av. Sucre
19 Exclusivas Jupiter	085-26807	Av. Republica
20 Friovar	085-23331	Av. J Soto
21 Frioven CA	085-42006	Av. Siegert
22 Galerias San Jose	085-20957	Av. Pso Orinoco
23 Imgeve	085-23435	Av. Cumana
24 Impo Exportaciones Erwin CA	085-46597	San Rafael
25 Internacional Business Orinoco CA	085-43093	L Sabanita
26 Refrigeración Automotriz Universidad	085-29696	Upata
27 Refrigeración City CA	085-27261	Av. Upata
28 Refrigeración Guayana CA	085-27107	L Alameda
29 Refrigeración Rome SRL	085-40613	Urb. Vista Hermosa
30 Re-Reca	085-44945	Av. Republica
31 Sersa SRL	085-21823	Urb. Pso Meneses
32 Servi Mac SRL	085-25684	Urb. Pso M. Mdza
33 Super Hogar	085-24804	CI San Jse
34 Tecni Frio CA	085-21504	Av. Upata
35 TV Libano CA	085-26853	CI Roscio

City: CIUDAD BOLIVAR. REFRIGERATION AND AIR CONDITIONING SERVICES

NAME	PHONE	ADDRESS
1 Air Call Sud America CA	085-46355	Urb. CI Vidal
2 Clinica Amadecasa	085-26878	Av. Guayana
3 Electro Motriz Oscar	085-28878	Av. 5 de Julio
4 Refinca CA	085-511430	Urb. L Sabanita
5 Refrigeración Angostura SRL	085-42523	Av. Siegert
6 Refrigeración Automotriz Aled CA	166850581	Urb. Centro
7 Refrigeración para Autos Corona CA	085-25902	Av. Paseo Heres
8 Refrigeración Tecnifrio	085-22491	Av. 19 de Abril
9 Repuestos Electrodomes. Cambalache	085-513656	L Sabanita
10 Serfreca CA	085-26091	Av. Upata
11 Sertec CA	085-23432	CI Zea
12 Servi Estacionamiento Aeropuerto SRL	085-26719	Av. J Soto
13 Taller de Refrigeración Gran Kike	085-44842	CI Nueva Granada
14 Tecnoglacial	085-28256	Av. Cumana

City: PUERTO ORDAZ. MARKETING SECTOR

NAME	PHONE	ADDRESS
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1 Air Service Center Guayana SRL	086-235210	Cl. Potosi
2 Aire Acondicionado Deicam CA	086-221900	Orinoco
3 Aire Sur CA	086-228845	Castillito
4 Artefactos RG	086-223820	Av. Via Caracas
5 Auto Refrigeración La Escarcha	086-513735	Unare II
6 B & B Company CA	086-520690	Unare I
7 BBP Ingenieros CA	086-521078	Unare II
8 Canaima Import CA	086-629073	Alta Vista
9 Cemi CA	086-520583	Zn. Ind. Unare
10 Cold Car SRL	086-230812	Villa Alianza
11 Comercial Supersonico CA	086-233113	Cl Guasipati
12 Comersa	086-235438	Castillito
13 Comersa	086-526414	Unare II
14 Conaire CA	086-513261	Zn. Ind. Unare
15 Constru-endo CA	086-621210	Alta Vista
16 Crelinca	086-530609	Unare II
17 Diesca	086-230677	Av. Ciudad Bolivar
18 Distribuidora El Paramo Guayana CA	086-518560	Unare II
19 Distribuidora Ronalca	086-511366	Unare I
20 Distribuidora Traffic Sound CA	086-227812	Av. M Zabaleta
21 Ductos Monagas CA	086-233876	Urb. Orinoco
22 Frio CA	086-232312	Av. L. Americas
23 General de Servicios Multiples CA	086-231085	Orinoco
24 JC Ingenieria CA	086-236923	Castillito
25 La Ciudad del Aire CA	086-618546	Alta Vista
26 Novedades y Punto Guayana	086-231960	Av. Pso Rotario
27 Pronto Frio CA	086-233759	Castillito
28 Refriauto CA	086-229047	Av. M Zabaleta
29 Refrigeración Arichuna	086-235239	Castillito
30 Refrigeración Barbosa CA	086-227711	Castillito
31 Refrigeración Univalco Guayana CA	086-232461	Cl. L Urbina
32 Refrigeración Villarreal	086-233696	Av. Via Caracas
33 Representaciones Ramos SRL	086-221526	Castillito
34 Servicios Termicos Caroni SA	086-230769	Castillito
35 Stereovisión	086-613716	Alta Vista
36 Stifem SRL	086-224059	Av. M Zabaleta
37 Taller de Refrigeración Friomara	086-223267	Castillito
38 Telecfri CA	086-515646	Zn. Ind. Unare
39 V y C Electronics CA	086-621601	Alta Vista

City: PUERTO ORDAZ. REFRIGERATION AND AIR CONDITIONING SERVICES

NAME	PHONE	ADDRESS
1. Air Condittion MPM CA	086-520392	Unare II
2 Auto Refrigeración Pablo	086-516902	Unare II
3 Ceteco SA	086-521461	Unare I
4 Comercial Ivo CA	086-525561	Ard Atlantico

5 Comercial Tecnolux CA	086-616544	Urb. L. Olivos
6 Electro Refrigeración Automotriz Tovar	086-230730	Orinoco
7 Electrovolta	086-515395	Unare
8 Friocomercio CA	086-229231	Orinoco
9 Iarsa	086-513689	Unare I
10 Imgeve	086-230242	CI Guasipati
11 Luherca	086-520934	Zn. Ind. Unare
12 Misas Los Repuestos del Hogar CA	086-228415	Urb. Cr Upata
13 Ofinco SA	086-222860	Av. L Americas
14 Olimasven SRL	086-222369	Castillito
15 Osmec CA	086-530038	Unare II
16 Proaire	086-232760	Castillito
17 Refivial CA	086-525655	Unare II
18 Refrigeración Junior CA	086-525126	Unare II
19 Refrinscold CA	086-237653	Urb. Orinoco
20 Refriorca	086-221177	Av. L Americas
21 Remys CA	086-220953	Orinoco
22 Repaven CA	086-522967	Unare II
23 Repuestos Hogar SRL	086-510910	Unare I
24 Resergen CA	086-220878	Castillito
25 Resergen Unare CA	086-514732	Unare II
26 Servicios Múltiples Industriales ATM CA	086-522257	Unare I
27 Servi-Master CA	086-230848	CI La Urbana
28 Suministros Industriales Oriman CA	086-611882	Alta Vista
29 Tecnoconfort CA	086-510316	Unare I

City: BARCELONA. MARKETING SECTOR

NAME	PHONE	ADDRESS
1 747 Multiservicios	081-776368	Portugal Abajo
2 Anro y Asociados CA	081-741915	Br Sucre
3 Asociación Civil Colegio Internacional	081-741913	Sc Bnos. Aires
4 Ceregeca CA	081-776673	Vda. Anzoategui
5 Comercial Edison	081-778326	Av. Intercomunal
6 Deaire CA	081-765111	Av. Jose Anzoateg.
7 Electrodomesticos Neveri	081-748349	Av. 5 de Julio
8 FD Refrigeración	081-771420	B Campo Claro
9 Frio Pierre CA	081-749546	Tricentenario
10 Grupo AKS CA	081-747156	Av. 5 de Julio
11 Refri Cars	081-772254	Av. Intercomunal
12 Refriclark Ger	148042421	Boyaca II
13 Refrifab	081-777832	Camino Nuevo
14 Refrigeración Carlos	081-777366	L Aduana
15 Refrigeración Casil CA	081-776735	Urb. Portugal

16 Refrigeración Misam	081-748716	Av. Alterná
17 Refrigeración Perez	081-760271	Campo Alegre
18 Refrigeración Roca CA	081-773656	Zn. Ind. L Montones
19 Refrigeración TA SRL	081-776719	Br Sucre
20 Refrigeración Useche	149801527	Boyaca II
21 Refrigeración y Radiadores Ramirez	081-773126	Br Sucre
22 RF CA	081-773930	E Espejo
23 Servicio Mantenimiento Martin	081-779846	Br. Portugal
24 Super Repuestos Adalmeri Import CA	081-764864	L Aduana
25 Suply Frios de Oriente	081-749422	Av. Costanera
26 Yoly Toys SRL	081-762481	Av. P M Freites

**City: BARCELONA. REFRIGERATION AND AIR
CONDITIONING SERVICES**

NAME	PHONE	ADDRESS
1 Bienes e Inver. Chavez y Asociados	166811862	Av. J de Urpin
2 Difrica	081-747185	Br Sucre
3 Distribuidora Rivas CA	081-775812	Av. Intercomunal
4 Electrotecnica JV SRL	081-764377	Urb. Campo Claro
5 Flash Service	081-710150	Boyaca
6 Refrigeración F & H	148006826	Br Sucre
7 Refrigeración Hermanos Rodriguez CA	081-771457	Urb. Portugal
8 Refrigeración Pino SRL	081-771797	Palotal
9 Refrigeración Santoyo	148007250	Av. 5 de Julio
10 refrigeración Tesare	081-761620	CI Ricaurte
11 Refrimarca Refrigeración Mardelli CA	081-772520	Av. Rolando
12 Servilux	081-751688	CI Maturin
13 Taller Lux	081-778701	CI Bolivar
14 Tecno Electrica	081-774063	Zn. Ind. L Montones
15 Vareca	081-776347	Av. Intercomunal
16 Yaguara Electric	081-776942	CI L Rosales

**City: PORLAMAR. MARKETING
SECTOR**

NAME	PHONE	ADDRESS
1 Almacen La Porteña CA		
2 Bazar Isla Bella CA	095-631969	CI Igualdad
3 Blue Point Import CA		
4 Clima Oriente Margarita CA	095-623755	Av. Bolivar
5 Cocotronic CA	095-625055	Urb. L Robles
6 Comersa	095-745729	Av. Miranda
7 Docaven Import CA	095-613912	CI Marcano
8 El Italiano del Frio CA	095-643839	Urb. Llano Adentro
9 FC Refrigeración CA	095-644516	Urb. Sc Bucaneros
10 Importadora Cristaly CA		
11 Importadora China de		

Margarita		
12 Importadora Jos I CA	095-611580	CI J M Patiño
13 Importadora Rosmat CA	095-618467	Av. 4 de Mayo
14 Jav Electronics CA	095-623555	Urb. L Robles
15 K Herman	095-630995	CI Mariño
16 La Ballena	095-635990	CI Velasquez
17 Liseca CA	095-639104	CI Maneiro
18 Margarita Internacional Trading SA	095-618557	Bulevard Guevara
19 MC CA	095-642087	CI San Rafael
20 Metal Frio CA	095-622171	Av. J Villalba
21 Payless CA	095-639501	Av. R Betancourt
22 Radio Shack CA	095-626590	Av. J Villalba
23 Refricenter Margarita CA	095-639306	Av. R Betancourt
24 Refrigeración Guaiqueri	095-634202	Av. Fco. de Miranda
25 RP Compañía Anonima	095-614179	CI Narvaez
26 Salim Import CA	095-633094	CI L Flores
27 Saris Import CA		
28 Servicio de Refrigeración Oscar	095-618884	CI Velasquez
29 Servicio Tecnico Triple A	095-743084	Urb. Conejeros
30 Soni Store CA	095-623125	Urb. L Robles
31 Super Frio Alaska	095-744037	E Poblado
32 Target		
33 Tecnifrio Los Robles	095-627298	Urb. L Robles
34 Zena Import CA	095-619308	Bulevard Gomez

**City: PORLAMAR. REFRIGERATION AND AIR
CONDITIONING SERVICES**

NAME	PHONE	ADDRESS
1 Audio Video Correct CA	095-626743	Playa El Angel
2 Auto Frio Alaska CA	095-740052	E Poblado
3 Comersa	095-745215	Av. Fco. de Miranda
4 Frio Auto Center	095-639535	B Delgado
5 Friobien Margarita CA	095-643106	CI Igualdad
6 Insmaca	095-618008	Urb. E Poblado
7 Margarita Cold CA	095-636018	CI Marcano
8 Megara CA	095-627791	Urb. L Robles
9 Mica Oriente CA	095-630043	Sabanamar
10 Refrigeración El Teide	095-742078	Urb. Conejeros
11 Refrigeración Insular CA	095-632205	Av. Miranda
12 Repuestos y Auto Frio Alaska CA	095-741873	E Poblado
13 Servicios Tecnicos GR CA	095-636033	CI Larez
14 Super Aire CA	095-621446	Playa El Angel
15 Super Service One CA	095-641076	E Poblado
16 Taller Italia CA	095-631384	CI L Marina

17 Taller Maxi	095-636539	CI A Hernandez
18 Tecni Shop	095-644451	Av. Terranova
19 Telequip CA	095-635154	CI San Rafael
20 Torres-Mejias SA	095-610913	Av. Miranda
21 Villa Marina SRL	095-637211	Av. Miranda

**City: PUERTO LA CRUZ.
MARKETING SECTOR**

NAME	PHONE	ADDRESS
1 Auto Refrigeración Gerson	081-667156	Cl. Simon R.
2 Centro National SRL	081-650737	Cl. Maneiro
3 Comersa	081-669431	Av. Municipal
4 Credi Muebles 2000	081-652001	Cl. Sucre
5 Dialca	081-653763	Cl. Sucre
6 Disproair Oriente CA	081-670350	Bella Vista
7 El Palacio del San	081-661160	Cl. Juncal
8 El Placer del Hogar	081-674043	Cl. Ricaurte
9 Electro Tecnica Saqui Oriente CA	081-674111	Cl. L Flores
10 Expoaire Expoca	081-657986	Cl. Maneiro
11 Gama Electronic SA	081-674050	Cl. Bolivar
12 Gentex	081-651360	Blvard Sucre
13 Imgeve	081-651218	Av. Municipal
14 Importadora Batman	081-686304	L. Caraqueña
15 Importadora Hawaii	081-688885	Cl. Sucre
16 Instaira SA	081-674167	Br. Mariño
17 Inversiones 94 SRL	081-650521	Cl. Honduras
18 Inversiones Dimarca CA	081-652086	Cl. Ricaurte
19 Inversiones Joseph CA	081-669046	Av. 5 de Julio
20 Inversiones Kawas	081-657571	Cl. Juncal
21 Inversiones Lorena Betania	081-657923	Av. 5 de Julio
22 Inversora 94 SRL	081-688850	Cl. Honduras
23 Luferca de Oriente CA	081-660008	Av. Municipal
24 Lux de Venezuela CA	081-687871	Av. Municipal
25 Mantening CA	081-663413	Br. Mariño
26 Monelec	081-663872	Pueblo Nueblo
27 Muebles El Condor	081-685014	Cl. Girardot
28 Multi Royal CA	081-665618	Cl. Juncal
29 Novedades Nadia	081-650464	Av. 5 de Julio
30 Plaza Center CA	081-657876	Cl. Libertad
31 Productos y Sistemas	081-687531	Av. 5 de Julio

Digitales CA		
32 Raymond Shop	081-673554	Blvard Sucre
33 RC Ingenieros CA	081-653377	Cl. E Buroz
34 Refri King CA	081-674833	Av. Constitución
35 Refriconic	081-669031	Bella Vista
36 Refrigeración Alaska	081-653596	Cl. Bolivar
37 Refrigeración Hercis-SRL	081-652343	Cl. Honduras
38 Refrigeración Industrial Eliasca	081-669249	Av. Pso Miranda
39 Refrigeración Jerome CA	081-687252	Cl. Libertad
40 Refrigeración Marcano	148330180	Urb. L Charas
41 Refrigeración Pedmar	081-686968	Bella Vista
42 Refrimar CA	081-673023	Cl. Bolivar
43 Refrimaster CA	081-664150	Av. Constitución
44 Reminca	081-655649	Cl. Bolivar
45 Representaciones Parrinello CA	081-660056	Av. Municipal
46 Repuestos Electroauto Miranda' SRL	081-673687	E. Pencil
47 Re-Reca	081-665172	Urb. Chuparin
48 Rubi Hogar	081-668259	Cl. Guaicaipuro
49 Rubi Import CA	081-656428	Av. Municipal
50 Sono Visión Leon SRL	081-671144	Cl. Miranda
51 Super Todo	081-651148	Cl. Venezuela
52 Taller de Refrigeración King CA	081-655042	Av. Bolivar
53 Thermo Ducto Caribe CA	081-660560	Cl. Democracia
54 Venaire CA	081-667990	Cl. Maneiro
55 Yoly Toys SRL	081-685331	Cl. Guaicaipuro

**City: PUERTO LA CRUZ. REFRIGERATION AND
AIR CONDITIONING SERVICES**

NAME	PHONE	ADDRESS
1 Boet & Asociados SRL	081-666379	Cl. Sucre
2 Centrolux CA	081-687154	Cl. Bolivar
3 Ceteco SA	081-660224	Cl. Sucre
4 Coinfer CA	081-670054	Bella Vista
5 Comercial Caribe SRL	081-660509	Bella Vista
6 Compresores Bella Vista	168811880	Bella Vista
7 Corporación Mc Cord SRL	081-661765	Av. Bolivar
8 Distribuidora Airelec CA	081-671955	Br. Mariño
9 Electronica PK SRL	081-671536	Cl. Esperanza
10 Frio Pullman	081-633514	Razetti
11 Proyectos Serviaire CA	081-666102	Av. Bolivar
12 Proyesica Anzoategui	081-672360	Isla de Cuba
13 Refrigeración Dinamic	081-652115	Bella Vista
14 Refrigeración Los Nevados	081-687779	Urb. Sc Latinia
15 Refrimovil	081-668635	Cl. Concordia

16 Reminca	081-655649	Cl. L Cocos
17 Servicio Tecnico y Mto. El Katire	081-666421	Cl. Democracia
18 Servicios Tecnicos Nardo	081-670154	Av. Constitución
19 Sia Puerto La Cruz SRL	081-662312	Av. Municipal
20 Soluciones Metalurgicas CA	081-687850	Av. 5 de Julio
21 Suministros y Asesorias Tecnicas SA	081-652801	Cl. Buenos Aires
22 Suplidores del Servicio CA	081-679776	Cl. Bolivar
23 Taller El Electron	081-681556	Urb. L Caraqueña
24 Taller Refrigeración New Car	081-667498	Cl. Democracia
25 Tecno Refrigeración Avila	081-680861	Av. Universidad
26 Torres-Mejias SA	081-688940	Av. 5 de Julio

City: GUARENAS. REFRIGERATION AND AIR CONDITIONING SERVICES

NAME	PHONE	ADDRESS
1 ABC Electric, S.R.L	0212-3622146	Calle Páez
2 Auto Frio Ceci S.R.L	0212-3621830	Calle Ayacucho
3 Guatifrio S.R.L	0212-3446313	Calle Santa Rosalia
4 Inversiones Refrio	0212-3633753	Calle Andrés Bello
5 Oficina Técnica Fetta	0212-3622520	Calle Santa Rosalia
6 Refrigeración Perac Cass S.R.L	0212-3444505	Calle El Carmen
7 Refrigeración Villa Heróica	0212-3444417	Calle Urdaneta

City: GUARENAS. MARKETING SECTOR

NAME	PHONE	ADDRESS
1 A.A Saber Guinand	0212-3611723	Calle Comercio
2 Distribuidora Super Aires	0212-3446666	Valle Arriba
3 Refrigeración Helimar, C.A	0212-3628728	Calle Francisco García
4 Serarca, C.A	0212-3447029	Av. Miranda

City: CARACAS. MARKETING SECTOR

NAME	PHONE	ADDRESS
1 2020 LEG Electrónica, C.A	0212- 6624648	Los Chaguaramos
2 4R Instalaciones C.A	0212- 2413652	La Urbina
3 A.A Chander, C.A	0212- 5630082	La Candelaria
4 A.A Corao C.A	0212- 5772285	La Candelaria
5 A.A Coro C.A	0212- 5726274	La Candelaria
6 A.A Pingüino Car`s	0212- 6329729	Sabana Grande
7 A.A Refrigeración Frio Seco	0212- 7624749	Los Chaguaramos
8 A.A Saver Guinand	0212- 2437232	La Urbina
9 A.A Star S.R.L	0212- 2393423	Los Ruices
10 Acoma Ing. S.A	0212- 2357616	Los Rosales

11 Acoustic Sound' 98, C.A	0212- 5762301	La Candelaria
12 Afra C.A	0212- 2398385	Boleita Sur
13 Air confort Ing. C.A	0212- 9517443	Sabana Grande
14 Air Control I, C.A	0212- 8601621	La Pastora
15 Aire y Fuego	0212- 7540446	Colinas de Bello Mte.
16 Airfax	0212- 2398619	Boleita Sur
17 Airmoinca	0212- 4828578	Qta Crespo
18 Almacén Sami C.A	0212- 4816216	San Juan
19 Almacenes Negrín C.A	0212- 2614463	Chacao
20 AM Tiendas C.A	0212- 9032389	La Trinidad
21 Ambiente J.A S.R.L	0212- 2344538	Boleita Sur
22 Arco de Vzuela. Energy Inc.	0212- 2660144	La Castellana
23 Ardy Electrodomésticos	0212- 4713923	Montalban III
24 Artef. El Planeta 2005 C.A	0212- 9911064	Las Mercedes
25 Artef. La Nota C.A	0212- 2869087	Los Palos Grandes
26 Artef. La Notaca	0212- 2868869	Av. Fco. de Miranda
27 Artef. Milcentro C.A	0212- 4838580	Sta. Teresa
28 Artefactos Baruta C.A	0212- 9451820	Baruta
29 Artefactos Caurimare	0212- 9852252	El Cafetal
30 Artefactos Frigilux C.A	0212- 9415411	Las Minas
31 Artefactos JJ, C.A	0212- 4845933	El Silencio
32 Artefactos Natalia C.A	0212- 4846529	Av San Martin
33 Audio electrónica Alcabal	0212- 5727419	La Candelaria
34 Audio Surcos C.A	0212- 2722283	El Marqués
35 Audio Video Interprise C.A	0212- 5648907	La Candelaria
36 Auto Frio Alaska S.R.L	0212- 6321740	Prado de Maria
37 AVT Electrónica C.A	0212- 5648069	La Candelaria
38 B&P Servicios de Ing. C.A	0212- 7623054	Av. Casanova
39 Barnacha C.A	0212- 6826546	Calle 14, El Valle
40 Bazar Caracas	0212- 5649673	Altigracia
41 Bazar Jose Antonio C.A	0212- 8703359	Catia
42 Bazar La Hacienda	0212- 4311090	Ruiz Pineda
43 Bazar las Madrices C.A	0212- 8625679	Catedral
44 BBP Ing. C.A	0212- 2516330	Palo Verde
45 Becaen C.A	0212- 9590142	C.C.C.T Piso 5
46 Becaen parts, C.A	0212- 6311086	Av. Roosevelt
47 Bepecasa S.R.L	0212- 310142	La Florida
48 Big Gil Electrónica C.A	0212- 2632881	Chacao
49 Blampeco S.A	0212- 4429087	Santa Teresa
50 Botonic Import C.A	0212- 2376864	Monte Cristo
51 Brands Electronics C.A	0212- 5767017	La Candelaria
52 Breaire C.A	0212- 2720379	La California Norte
53 Caronga	0212- 2344139	Boleita Norte
54 Casa Paul M C.A	0212- 5626669	Altigracia
55 Cavenaire	0212- 2716752	La California Norte
56 Central El pingüino C.A	0212- 9938037	Las Mercedes

57 Centro Moviter	0212- 2912339	San Isidro
58 Century, C.A	0212- 2348219	Av. Rómulo Gallegos
59 Ceteco S.A	0212- 2377342	Boleita Norte
60 Clima Sánchez C.A	0212- 2711057	Petare
61 Climar	0212- 2356733	Boleita Norte
62 Climaster C.A	0212- 2618927	Chacao, Av. Libert.
63 Climatiza	0212- 2867764	Av. Andrés Bello
64 Cocinas Madeirense C.A	0212- 2396008	Boleita Sur
65 Cold Service C.A	0212- 5621494	San Jose
66 Colservicios Escobar	0212- 2666313	Chacao
67 Comercial Alvarez	0212- 2716513	Lebrún
68 Comercial Astronick	0212- 5761809	La Candelaria
69 Comercial Barlovento C.A	0212- 2716151	Petare
70 Comercial Ben C.A	0212- 2652846	Chacao
71 Comercial Bolo C.A	0212- 4727373	La Paz
72 Comercial Boyamar 58 C.A	0212- 5777666	San Agustín
73 Comercial Colón S.R.L	0212- 8704862	Catia
74 Comercial Cóndor C.C	0212- 4844855	El Silencio
75 Comercial Contemporáneo	0212- 4828640	San Martín
76 Comercial Electro Casa 893 C.	0212- 2668201	Chacao
77 Comercial Electrodurex C.A	0212- 4321713	San Martín
78 Comercial Electrodurex C.A	0212- 4821713	San Juan
79 Comercial Elistar	0212- 4847877	El Silencio
80 Comercial Elotex C.A	0212- 5619450	Catedral
81 Comercial Feyamin C.A	0212- 9432301	Baruta
82 Comercial Fiori SRL	0212- 4847552	San Juan
83 Comercial Fonty Si C.A	0212- 5639092	Altagracia
84 Comercial George S.R.L	0212- 2415458	La Urbina
85 Comercial Giordani C.A	0212- 8718701	Catia
86 Comercial Josady C.A	0212- 4840205	Qta. Crespo
87 Comercial Kabir	0212- 2633977	Chacao
88 Comercial Kahale	0212- 2676590	Chacao
89 Comercial La Gran Detal SRL	0212- 8712652	Catia
90 Comercial La Orbita SRL	0212- 5645664	Catedral
91 Comercial Madrid C.A	0212- 9451995	Baruta
92 Comercial Mappin C.A	0212- 8625420	Los Frailes
93 Comercial Mar Azul S.R.L	0212- 8721446	Catia
94 Comercial Marina Mar C.A	0212- 2712280	Petare
95 Comercial Mendieta C.A	0212- 4825320	Sta. Teresa
96 Comercial Niño	0212- 8607405	Catedral
97 Comercial Nuria SRL	0212- 6316823	El Cementerio
98 Comercial Palmira C.A	0212- 2727930	Buena Vista
99 Comercial Sirin	0212- 8708687	Catia
100 Comercial Taguaple S.R.L	0212- 4430614	Antimano
101 Comercial Universidad C.A	0212- 4848301	El Paraiso
102 Comercial Vepecasa C.A	0212- 7301271	La Florida
103 Comercial Villaronte S.R.L	0212- 2410448	La Urbina

104 Comercial Viña del Mar S.R.L	0212- 2516813	Palo Verde
105 Comercial Yornelli	0212- 2714055	Petare
106 Comercializadora Nella	0212- 5761006	Guaicaipuro
107 Comercializadora Radison C.A	0212- 8719157	Catia
108 Compra Gratis C.A Vendeven	0212- 5760209	La Candelaria
109 Comprotec	0212- 8722051	Catia, Calle Maury
110 Continental Electric C.A	0212- 6323821	La Bandera
111 Controlaire C.A	0212- 4840437	El Silencio
112 Controles N y N C.A	0212- 9594269	C.C.C.T , Chuao
113 Cooling Sistem mr C.A	0212- 8613324	La Pastora
114 Coquiven C.A	0212- 9512089	Bello Monte
115 Coronet	0212- 4033653	Zona Ind. Ruiz Pineda
116 Corp. Benagui C.A	0212- 2345598	Los Dos Caminos
117 Corp. Best C.A	0212- 5753332	La Candelaria
118 Corp. Magesport C.A	0212- 2419938	La Urbina
119 Corp. Morillo	0212- 4728109	Antimano
120 Corp. Nevar Frio C.A	0212- 6723194	El Valle
121 Corp. Sherman C.A	0212- 5721718	La Candelaria
122 Corp. Suplin HA C.A	0212- 4624861	San Martín
123 Corp. Total House C.A	0212- 2423117	La Urbina
124 Corp. Venezuela	0212- 7933234	Plaza Venezuela
125 Corpoaire C.A	0212- 3630734	Plaza Venezuela
126 Corporación Bonanza C.A	0212- 9922148	Chuao
127 Corporación Coscot C.A	0212- 7612152	Sabana Grande
128 Corporación Madili C.A	0212- 8627955	Los Flores de Catia
129 Corporativa Universitaria	0212- 4844421	Sta. Teresa
130 Cuina C.A	0212- 2851330	Los Dos Caminos
131 Daewoo Electronics Vzla C.A	0212- 9510211	El Rosal
132 Desaca	0212- 2650740	Chacao
133 Dielca Comercializadora	0212- 8620953	Los Frailes
134 Difusores Friodan C.A	0212- 4724874	La Yaguara
135 Dikersman C.A	0212- 9411857	La Trinidad
136 Dir.Aire C.A	0212- 2346971	Av. Fco. de Miranda
137 Diskerman C.A	0212- 9455613	La Trinidad
138 Dist. El Hogar de Trelles	0212- 2382683	Los Cortijos de Ldes.
139 Distr. El Magnate del San Brill.	0212- 8612754	Las Flores
140 Distr. El puño de Hierro	0212- 6826306	El Valle
141 Distr. Electra C.A	0212- 5632931	Catedral
142 Distr. Electroplaza C.A	0212- 2516152	Palo Verde
143 Distr. Fabysa SRL	0212- 2387717	Los Dos Caminos
144 Distr. Galia C.A	0212- 5633740	Altigracia
145 Distr. HBC 2000	0212- 6936055	Sta. Mónica
146 Distr. HC C.A	0212- 8716894	Propatria
147 Distr. La Increíble C.A	0212- 8645533	Las Flores
148 Distr. Linamar 94 C.A	0212- 8647660	Los Frailes
149 Distr. Mejía S.R.L	0212- 2672280	Chacao
150 Distr. Omega S.R.L	0212- 5768875	La Candelaria

151 Distr. Palmira C.A	0212- 8719062	Catia
152 Distr. Reproland JV C.A	0212- 2320966	Boleíta Norte
153 Distr. Sonia	0212- 5615147	Catedral
154 Distr. Suemafer C.A	0212- 4816628	San Juan
155 Distraire C.A	0212- 2383571	Los Cortijos de Ldes.
156 Distrane Caracas C.A	0212- 6325544	Las Acacias
157 Distribeca	0212- 2428934	Urb. Miranda
158 Distribuciones Topaco C.A	0212- 2345176	El Marqués
159 Distribuidora Artelectra C.A	0212- 2388875	Boleíta Sur
160 Distribuidora Bilbania C.A	0212- 4825070	Av Lecuna
161 Distribuidora Colane, S.R.L	0212- 7511013	Colinas de Bello Mte.
162 Distribuidora Deiquartz C.A	0212- 4836910	Catedral
163 Distribuidora Deoster C.A	0212- 2716357	Petare
164 Distribuidora Desony C.A	0212- 4825706	Sta. Teresa
165 Distribuidora Dubeaire C.A	0212- 6613675	Santa Mónica
166 Distribuidora Electra C.A	0212- 5632931	Catedral
167 Distribuidora Electrolux	0212- 2672280	Chacao
168 Distribuidora Hoover	0212- 2672280	Chacao
169 Distribuidora Hydra C.A	0212- 2861771	Los Dos Caminos
170 Distribuidora Mejia S.R.L	0212- 2672279	Chacao
171 Distribuidora Olansa C.A	0212- 6629282	Los Chaguaramos
172 Distribuidora Reantoni, C.A	0212- 6310619	Prado de Maria
173 Distribuidora Reca C.A	0212- 4725437	Antimano
174 Distribuidora Sabina C.A	0212- 7630247	Sabana Grande
175 Distribuidora Sertsoon C,A	0212- 4717113	La Yaguara
176 Distribuidora Sideral S.R.L	0212- 2415219	La Urbina
177 Distribuidora Super aire	0212- 9531462	El Rosal
178 Distribuidora Térmica 2000	0212- 4516396	San Martín
179 Distribuidora Vanessa S.R.L	0212- 4819391	Santa Teresa
180 Districuidora Cacique C.A	0212- 7937101	Las Palmas
181 Diventorsa	0212- 4820165	San Martín
182 DK Distribuidora Kelzi	0212- 4813804	Santa Teresa
183 Domésticos Gomis C.A	0212- 7930328	Los Caobos
184 Dowco C.A	0212- 2350881	Boleita Sur
185 Ecliser Equipos	0212- 6626259	Los Chaguaramos
186 Efi-Service, S.R.L	0212- 4849001	San Martín
187 El Arguallero	0212- 6326361	El Cementerio
188 El Bodegón de la Electrónica	0212- 5724924	La Candelaria
189 El Hogar de Catia	0212- 8705203	Propatria
190 El Palacio Popular	0212- 8722123	Propatria
191 El Rey Del A.A	0212- 7314812	La Florida
192 Elect. Dom. Nueva Barlovento	0212- 2712464	Petare
193 Electro Baralt C.A	0212- 4821938	Sta. Teresa
194 Electro Center SN C.A	0212- 4846849	El Silencio
195 Electro Doméstico L.M.C	0212- 7537991	Bello Monte
196 Electro Home 21 C.A	0212- 9412482	La Trinidad

197 Electro Mecánica C.A	0212- 4626014	San Martín
198 Electrod. La Mia Casa C.A	0212- 7535407	La Candelaria
199 Electrod. Nevetec	0212- 2392245	Bello Monte
200 Electrod. Novas C.A	0212- 2386874	Los Ruices
201 Electrod. Osalich	0212- 4614330	La Carlota
202 Electrod. Ruiz Pineda	0212- 4333034	El Paraíso
203 Electrod. Todo Kasa C.A	0212- 5644167	Ruiz Pineda
204 Electrodom C.A	0212- 2386232	Los Cortijos de Ldes.
205 Electrodomésticos Fernández	0212- 5620473	Altagracia
206 Electromanía	0212- 9599240	Catedral
207 Electronic Panama	0212- 2723121	Los Ruices Sur
208 Electrónica Anfe	0212- 2653505	Chuao
209 Electrónica David M C.A	0212- 9763307	Chacao
210 Electrónica Hiroshima S.R.L	0212- 5455828	Pdos. Del Este
211 Electrónica Isaac S.R.L	0212- 5635809	Sta. Teresa
212 Electrónica Pardo	0212- 2613644	Catedral
213 Electrónica Puente Hierro S.R.L	0212- 5413943	Chacao
214 Electrónica RL S.R.L	0212- 4848252	Sta. Rosalía
215 Electrópolis	0212- 7631273	San Juan
216 Electroshock	0212- 2728334	Sabana Grande
217 Electrosonido Morgan C.A	0212- 6724971	El Marqués
218 Eliaca C.A	0212- 4843325	Sarría
219 Enfrica 3000 C.A	0212- 7536056	Colinas de Bello Mte.
220 Equip. Congrio C.A	0212- 2579855	Av. Principal Macarac.
221 Equip-aire C.A	0212- 5730109	Guaicaipuro
222 Equipamientos Confrio C.A	0212- 2579855	Macaracuay
223 Escala Ingenieros	0212- 4723472	Bella Vista
224 Esp. Técnicas Chiller C.A	0212- 7530737	Bello Monte
225 Feibo Servicios Industriales	0212- 4726623	Bella Vista
226 Fono Surcos S.R.L	0212- 2728119	El Valle
227 Formtop C.A	0212- 2340755	Boleíta Norte
228 Frio del Este S.R.L	0212- 2651183	Chacao
229 Frio Europa, C.A	0212- 2718702	Campo Rico
230 Frio Horizonte	0212- 7828661	Sabana Grande
231 Frío Mérida C.A	0212- 5778547	San Bernardino
232 Frio Productos C.A	0212- 7315725	El Bosque
233 Frio Repuestos C.A	0212- 7629153	Bello Monte
234 Frioman Oficina Técnica C.A	0212- 2659224	Chacao
235 Friomatic S.R.L	0212- 2355413	El Marqués
236 G L O Ingeniería C.A	0212- 6618842	Los Chaguaramos
237 G.L.O Ingeniería C.A	0212- 6618842	Los Chaguaramos
238 Gal C.A	0212- 5612238	Catedral
239 Gasteca C.A	0212- 9922921	Sta Rosalia de Lima
240 GMG Ingenieros C.A	0212- 9595874	Chuao
241 Gonzalez & Bolivar	0212- 4849461	Santa Teresa
242 Grin Gras C.A	0212- 2575997	Macaracuay
243 Grupo Integral Afilcom	0212- 9934590	Las Mercedes

244 Hermanos Pucciarelli. S.R.L	0212- 9534208	El Rosal
245 High Definition Televisión	0212- 9411450	La Trinidad
246 Hnos. Macari S.R.L	0212- 7311960	La Campiña
247 Hogar C.A	0212- 5750664	La Candelaria
248 HPG de Vzuela. B&D	0212- 2637360	Chacao
249 Hydroclima S.A	0212- 2384637	Boleita Sur
250 Iglutec C.A	0212- 5746932	San Agustin del Norte
251 IKP de Vzla	0212- 7613794	Av. Fco. Solano
252 Import. Gem C.A	0212- 5413949	El Paraíso
253 Importadora George HM	0212- 8702302	Catia
254 Importadora Lemon Elegancia	0212- 5761010	San Bernardino
255 Importadora Soler C.A	0212- 2516365	Palo Verde
256 Ind. Air-cam 2000	0212- 8601281	Alta Vista
257 Ind. Friovent HL C.A	0212- 7313817	El Bosque
258 Industrias Country 1820	0212- 2421648	La Urbina
259 Industrias Fibreproxi C.A	0212- 6815737	Turmerito
260 Industrias Refrimaq C.A	0212- 5780181	Av. Sur 23- Av. Este 2
261 Industrias Tecnofrigo C.A	0212- 6334736	Las Acacias
262 Infrisa	0212- 6624898	Santa Mónica
263 Insaire C.A	0212- 2351051	Los Ruices
264 Inserman S.R.L	0212- 9513340	Bello Monte
265 Inspecciones Ciem C.A	0212- 5733556	El Conde
266 Inst. Electromecánicas RM	0212- 5738334	El Conde
267 Inst. JMG C.A	0212- 2637206	Chacao
268 Inst. R y C C.A	0212- 5753324	Guaicaipuro
269 Instaira S.A	0212- 5729145	San Agustin del Norte
270 Instal. Enafrica 3000, C.A	0212- 7534959	Bello Monte
271 Instal. Fahrenheit	0212- 5752356	La Candelaria
272 Instinca	0212- 2410964	La Urbina
273 Intraca C.A	0212- 4621836	San Martín
274 Inv. 30 21 C.A	0212- 2675573	Chacao
275 Inv. Bombay	0212- 2511021	Palo Verde
276 Inv. Capello Valente	0212- 6611406	Santa Monica
277 Inv. Electrofertás C.A	0212- 4834948	Catedral
278 Inv. Novatronic C.A	0212- 9925779	Las Mercedes
279 Inv. Pérez Franklin y Asoc. C.A	0212- 6721971	El Valle
280 Inv. Serra Video	0212- 5780409	Sarría
281 Inv. Taguanes C.A	0212- 7616870	Sabana Grande
282 Inv. Telesoud C.A	0212- 2426165	La Urbina
283 Inve. Creditotal SA Sideral	0212- 5734231	La Candelaria
284 Inversines Freezy point C.A	0212- 2851985	Los Dos Caminos
285 Inversiones 1931	0212- 7533986	Bello Monte
286 Inversiones 5529 C.A	0212- 7616234	Sabana Grande
287 Inversiones Big Classic	0212- 2510843	Palo Verde
288 Inversiones Dosave C.A	0212- 7307532	La Florida
289 Inversiones Gasbrilu, C.A	0212- 5742227	Parque Central
290 Inversiones Magar C.A	0212- 9593433	Chuao

291 Inversiones PaCO	0212- 4833725	Sanat Rosalía
292 Inversora Menar C.A	0212- 2617284	Altamira
293 Inversora Pradotec C.A	0212- 9516614	El Rosal
294 Isby Electronics C.A	0212- 6717373	El Valle
295 Istaservicios Sánchez C.A	0212- 5634403	Catedral
296 Jasper SRL	0212- 8643552	Catia
297 JB Aire Acondicionado	0212- 5722028	San Agustin del Norte
298 JB Aire Acondicionado	0212- 5722028	San Agustin del Norte
299 JCM Ofic. de Ing.	0212- 2912550	Petare
300 JCM Ofic. de Ing.	0212- 2912550	Petare
301 Jim Electronic Asoc. SRL	0212- 7619102	Bello Monte
302 Jim Electronic Asoc. SRL	0212- 7619102	Bello Monte
303 JK21 C.A	0212- 8721139	Catia
304 JK21 C.A	0212- 8721139	Catia
305 Junonia	0212- 5713291	La Candelaria
306 Junonia	0212- 5713291	La Candelaria
307 JVG Hogar C.A	0212- 2856707	Los Dos Caminos
308 JVG Hogar C.A	0212- 2856707	Los Dos Caminos
309 L.J Blaire C.A	0212- 5736764	San Agustin del Norte
310 L.J Blaire C.A	0212- 5736764	San Agustin del Norte
311 La Boutique del Sonido C.A	0212- 7626509	Sabana Grande
312 La Boutique del Sonido C.A	0212- 7626509	Sabana Grande
313 La Feria Del Mueble	0212- 5713702	Los Caobos
314 Laboratorio Eléctrico	0212- 4617581	El Paraíso
315 Láser Sonic C.A	0212- 5724719	La Candelaria
316 Latin coll C.A	0212- 6331310	Los Rosales
317 Leonor Import C.A	0212- 8612692	Las Flores
318 LFD Ingeniería C.A	0212- 5523307	La Candelaria
319 Lindogar C.A	0212- 5768826	La Candelaria
320 Luciani A.A	0212- 5519548	San Bernardino
321 Luferca	0212- 2353646	La California
322 Lux de Vzuela. C.A	0212- 2724011	La California Sur
323 Mabotecnica	0212- 2840532	Los Palos Grandes
324 Madosa	0212- 9032480	La Trinidad
325 Mancoma, S.A	0212- 2392452	Boleita Sur
326 Mantenimiento OAC de Vzla	0212- 2510665	Palo Verde
327 Mantenimiento Semahinst	0212- 2383808	Los Ruices
328 Manufactura Vikingo C.A	0212- 9852361	Santa Paula
329 Manufacturas Latina C.A	0212- 4827287	Sta. Teresa
330 Manufacturas Lelele C.A	0212- 6628131	Los Proceres
331 Mark IV de Venezuela, C.A	0212- 2621700	Bello Campo
332 Masiven	0212- 5736287	Santa Rosa
333 Max Frio A.A S.R.L	0212- 5412882	La Candelaria
334 Mcquay de Venezuela	0212- 2416242	La Urbina
335 Meranal C.A	0212- 7931147	Maripérez
336 Mercantil Candoral	0212- 5731908	La Candelaria
337 Mercantil Los Cedros C.A	0212- 7622541	La Florida

338 Mercantil Sanchez	0212- 2718324	Petare
339 Mercantil Sánchez	0212- 2718324	Petare
340 Metafibras Sudameris C.A	0212- 5322662	Filas de Mariche
341 Mike Electronics	0212- 2359925	Av. Rómulo Gallego
342 Mirca C.A	0212- 2398245	Los Dos Caminos
343 Mitsubishi A.A	0212- 9850051	Santa Paula
344 Moonlighting C.A	0212- 9854553	Catedral
345 Muebleca S.R.L	0212- 5768516	La Candelaria
346 Muebleria El Metro S.R.L	0212- 8703696	Catia
347 Muebleria Lustgarten	0212- 9516480	Sabana Grande
348 Mueblería Obayi S.R.L	0212- 4722282	Antímáno
349 Mueblería Utilmueble Mum C.A	0212- 8626028	Los Frailes
350 Muebleria Yanet S.R.L	0212- 9455436	Las Minas
351 Mueblería Yanet SRL	0212- 9453880	Baruta
352 Multi bazar Eléctrico Young C.A	0212- 5773641	San Agustín del Nte.
353 Multicentro El Dorado C.A	0212- 2719708	Petare
354 Multiclíma A.A	0212- 2728724	Petare
355 Nakamura & Cia. S.A	0212- 5529508	San Bernardino
356 Nasomay C.A	0212- 4825133	Santa Teresa
357 New Concept C.A	0212- 2343768	Boleita Sur
358 Novedades y Punto	0212- 8702933	Catia
359 Novedades y Punto C.A	0212- 8715824	Catia
360 Novedades y Punto El Oeste	0212- 8705257	Propatria
361 Ofitécnica Uma C.A	0212- 5737086	Parque Central
362 Ok Ingeniería, C.A	0212- 6624667	Parque Central
363 Omar Girón C.A	0212- 4823429	Sta. Teresa
364 Orsa C.A	0212- 2726301	La California
365 OS Artefactos C.A	0212- 9458316	Los Samanes
366 Oster de Vzuela. S.A	0212- 2851811	Los Palos Grandes
367 Otal C.A	0212- 2665934	Chacao
368 Otefrisa Suplidores C.A	0212- 2572432	Macaracuay
369 P & F Sistem C.A	0212- 2561478	El Llanito
370 P.C Aire Acondicionado	0212- 5763406	Parque Central
371 Padre Sierra C.A	0212- 4824956	Catedral
372 Panasonic de Vzuela. C.A	0212- 9453622	La Trinidad
373 Pinova S.A	0212- 3727322	San Ant. de los Altos
374 Polaris	0212- 8722178	Los Magallanes
375 Prevideo	0212- 8646015	Altagracia
376 Pro-Clima	0212- 2359738	La Carlota
377 Productos Termico de Vzla	0212- 2561058	Macaracuay
378 Proinaca C.A	0212- 6937109	Los Chaguaramos
379 Proinser AJR C.A	0212- 5770172	La Candelaria
380 Promociones Yanlopat SRL	0212- 8716141	Catia
381 Proseteca C.A	0212- 4622463	Arvelo
382 Proyecciones Ind. Chaustre	0212- 5644616	Carmelitas
383 Proyectaire C.A	0212- 2417298	La Urbina Calle 3-A

384 Proyectos Teconam	0212- 4629373	San Martín
385 Queriman S.R.L	0212- 9520460	Chacaito
386 Radio Capri S.R.L	0212- 2348342	Campo Claro
387 Radio TV Mundial	0212- 6323568	Los Rosales
388 Refrigeración González S.R.L	0212- 2637174	La Castellana
389 Refregeración E.B.A	0212- 2567624	Av. Fco de Miranda
390 Refricold S.R.L	0212- 5774013	San Agustin del Norte
391 Refrig. Hermanos Santos C.A	0212- 2386114	Los Ruíces
392 Refrig. Ind. Martínez C.A	0212- 6711914	Los Jardines del Valle
393 Refrig. Uniclíma II C.A	0212- 7540910	Plaza Lincoln
394 Refrigeración Coyaki, C.A	0212- 5500665	San Bernardino
395 Refrigeración Doble G C.A	0212- 2712035	La California Sur
396 Refrigeración Lagonell	0212- 9510532	Bello Monte
397 Refrigeración Lumpel C.A	0212- 8626387	Altagracia
398 Refrigeración Marque's S.R.L	0212- 4340326	Las Adjuntas
399 Refrigeración Pereira	0212- 5732490	Qta Honda
400 Refrigeración Piñango	0212- 6317856	El Cementerio
401 Refrigeración Pramár	0212- 6314989	Prado de María
402 Refrigeración Sadee C.A	0212- 8731856	Catía
403 Refrigeración Vallario	0212- 5754113	San Agustin del Sur
404 Rehafe	0212- 9852553	Caurimare
405 Rep. Nuevas Tecnologías S.A	0212- 5764633	Av. Universidad
406 Representaciones Alejandro	0212- 6315789	El Cementerio
407 Representaciones Ceteco	0212- 2347672	Boleíta Norte
408 Representaciones FR	0212- 7511624	Bello Monte
409 Representaciones Thermal	0212- 5528636	San Bernardino
410 Reysuaben C.A	0212- 9862170	Los Naranjos
411 RMA 92 Instalaciones C.A	0212- 5745712	El Conde
412 ROA Ing.	0212- 7816434	Zona Rental Plaza V.
413 Rolavica C.A	0212- 6627348	Los Chaguaramos
414 Rolls Business C.A	0212- 2838431	Sebucán
415 Rosuca	0212- 2724146	Av. Buen Vista
416 Rotex	0212- 5777605	El Conde
417 Royal center C.A	0212- 6624725	Sta. Mónica
418 Samisan Import C.A	0212- 4724724	Antimano
419 Santronic	0212- 7941919	Los Caobos
420 Sapikas Intern. Trading CO	0212- 7534959	Bello Monte. Av. Caroní
421 Semaire Ingeniería C.A	0212- 2710666	La California
422 Ser Gas SRL	0212- 7828968	Las Palmas
423 Sercli C.A	0212- 6614215	Santa Monica
424 Serclisa	0212- 9455774	Baruta, Calle Bolívar
425 Sermanto Mantenimiento C.A	0212- 2356866	Los Cortijos de Ldes.
426 Serv. Artic Cold C.A	0212- 2325182	Boleíta Norte
427 Servi Artefactos El Punto	0212- 2717542	Petare
428 Servicio del Frio Friper	0212- 5624124	La Candelaria
429 Servicios Frio Land C.A	0212- 2392956	La Urbina

430 Servicios Jipza C.A	0212- 7614079	Sabana Grande
431 Servicios Speed, C.A	0212- 9413413	Charallavito
432 Servicios Tecnicos Axis	0212- 5764066	Av. Parque Central
433 Servinal Ing. C.A	0212- 6615750	Los Chaguaramos
434 Servinal Ingenier{ia, C.A	0212- 6612635	Los Chaguaramos
435 Servitécnica Kuper	0212- 6623421	El Valle
436 Sinabro C.A	0212- 5768324	La Candelaria
437 Sisteinca	0212- 5647781	Altagracia
438 Solrock Ing. C.A	0212- 9535297	El Rosal
439 Soluciones Mi Casa	0212- 9445523	La Trinidad
440 Sonido La Gran Esquina C.A	0212- 4817025	Sta. Teresa
441 Sonido Salvador C.A	0212- 4842219	Santa Teresa
442 Sonido San Juan C.A	0212- 5420720	San Juan
443 Sonido Video y Stéreo MP C.A	0212- 2562882	Macaracuay
444 Sono Ganga Electrodomésticos	0212- 5727510	La Candelaria
445 SPS representantes C.A	0212- 2861752	La Candelaria
446 Staace C.A	0212- 2859573	Los Dos Caminos
447 Starce C.A	0212- 2862146	Los Dos Caminos
448 Stereo'clock	0212- 2667634	Chacao
449 Sulca A.A C.A	0212- 2382533	Boleita Norte
450 Sumelpro C.A	0212- 2324442	Montecristo
451 Suministros e Inv. 5380	0212- 2640402	Bello Campo
452 Sunaire C.A	0212- 9430152	Baruta
453 Super Barato SRL	0212- 2425760	La Urbina
454 Suplidora Berni, C.A	0212- 9796964	C.C. Concreta
455 Suplitec C.A	0212- 6626648	Los Chaguaramos
456 Surodia CA	0212- 5644165	Altagracia
457 Taller Astur	0212- 7823621	Las Acacias
458 Taller de Precisión C.A	0212- 8603743	Catia
459 Taller de Rep. La Economía	0212- 7308953	La Campiña
460 Taller Frio Tecnica C.A	0212- 2340130	Los Dos Caminos
461 Taller Unión	0212- 5628966	San José
462 Tecfrica Refrigeración C.A	0212- 2357509	Boleita Sur
463 Tecni Hogar C.A	0212- 2718204	California Norte
464 Técnica Más	0212- 2392202	Montecristo
465 Técnica Ordaz C.A	0212- 4428916	Zona Ind. San Martín
466 Tecniservicios Goldest	0212- 6627360	Los Chaguaramos
467 Tecno Calpa C.A	0212- 9932822	Las Mercedes
468 Tecno Frio Vencur	0212- 2663017	Chacao
469 Tecno Thermical C.A	0212- 9797075	Prados del Este
470 Tecnoaire C.A	0212- 7940791	San Antonio
471 Tecnoconfort mant. C.A	0212- 5634267	Altagracia
472 Tec-Relec Servicios C.A	0212- 4844811	San Juan
473 Telestar CA	0212- 4727017	Antímano
474 Termo Centro	0212- 2344077	Boleita Sur
475 Termotrol C.A	0212- 2382854	Montecristo
476 Tevetronic S.R.L	0212- 7621010	Sabana Grande

477 Themo Sistemas, C.A	0212- 6318111	Av. Los Castaños
478 Therclima C.A	0212- 2858504	Los Palos Grandes
479 Thermo Control C.A	0212- 5628685	Altagracia
480 Thermotrol C.A	0212- 2392670	Sabana Grande
481 Tienda Electromanía	0212- 7626070	Sabana Grande
482 Tienda Guía Util	0212- 5769513	La Candelaria
483 Tienda Susana CA	0212- 2714179	Petare
484 Tiendas El Venezolano	0212- 8703384	Catia
485 Toinmecca C.A	0212- 4840845	Santa Teresa
486 Topaco C.A	0212- 2350137	Boleíta Sur
487 Tortolero TV SRL	0212- 8716372	Catia
488 Totaaire C.A	0212- 7829956	Los Caobos
489 Total Home Electrodomésticos	0212- 2675050	Chacao
490 Trane A.C	0212- 2394746	Los Ruices
491 Transca	0212- 6624898	Santa Monica
492 Turbo Servicio	0212- 2419745	Santa Monica
493 Tuttigo Electrónica C.A	0212- 5431943	Sta. Rosalía
494 Ultrafast C.A	0212- 4824848	El Silencio
495 Venetrane C.A	0212- 2644121	La Castellana
496 Ventilair C.A	0212- 2373968	Boleita Sur
496 Video Sonido Martell	0212- 2635735	Chacao
496 Vir Aire C.A	0212- 2372273	El Marqués
496 Voltaire C.A	0212- 9512980	Boleita Sur
496 Vornado de Venezuela	0212- 2384596	La California
496 Wao S.R.L	0212- 2653251	Chacao
496 York, Venezuela	0212- 9444489	Zona Ind. La Trinidad

City: CARACAS. REFRIGERATION AND AIR CONDITIONING SERVICES

NAME	PHON E	ADDRESS
1 A.A Cubaire, S:R:L	0212- 6312969	El Cementerio
2 A.A José González	0212- 6623727	Los Chaguaramos
3 A.A Tecnomac	0212- 6321133	Los Rosales
4 Aireprix C.A	0212- 4437616	El Paraiso
5 Aires Friomaster, C.A	0212- 6622735	Santa Monica
6 All Solucions C.A	0212- 2414641	La Urbina
7 Americana de Equipos C.A	0212- 2435951	Petare
8 Amerio Industrial	0212- 2630111	Chacao
9 Apretec C.A	0212- 2371155	Horizonte
10 Aracond S.R.L	0212- 2673012	Bello Campo
11 Articars	0212- 2673492	Altamira
12 Ateprogeca	0212- 7626394	Sabana Grande
13 Audio Video Tecnisur C.A	0212- 9782597	Alto Prado
14 Audio Video Tecnisur C.A	0212- 9782597	Pdos. del Este
15 Auto Cerrajería JP	0212- 9411075	Baruta
16 Auto Fresco S.R.L	0212- 6939597	Calle Vargas
17 Auto Refrig. Bello Campo	0212- 2669870	Bello Campo

18 Autodiagnóstico Pimafra C.A	0212- 2348523	Boleita Norte
19 Automecánica Paraíso C.A	0212- 4515451	El Paraíso
20 Automotriz 134-A	0212- 6930864	Los Chaguaramos
21 Automoviles Chacao	0212- 7820108	Av Andrés Belo
22 Autorefrigeración 200, C.A	0212- 4827113	Qta Crespo
23 Bazar Gallego 2000	0212- 2669103	Chacao
24 CA Carlos Cars	0212- 4721897	Bella Vista
25 Canal 1	0212- 4824613	Santa Teresa
26 Casa Eléctrica Ces S.A	0212- 5761839	La Candelaria
27 Casa Sur 12 C.A	0212- 2341451	Boleíta Sur
28 Centro de servicio ATC	0212- 7636201	Sabana Grande
29 Cerrajería Stabia S.R.L	0212- 6613758	Los Chaguaramos
30 Cocinas Montecristo 2000	0212- 2388008	Montecristo
31 Comercial Coccinea C.A	0212- 5458471	Catedral
32 Comercial Galarza C.A	0212- 2632636	Chacao
33 Comercial Helimar	0212- 2579161	Av. Tamanaco
34 Comercial Mempe C.A	0212- 4843195	Sta. Teresa
35 Comercial Menpe C.A	0212- 4843195	Sta. Teresa
36 Comercial Pejima C.A	0212- 2632441	Altamira Sur
37 Comercial Prato	0212- 5519159	San Jose
38 Comercial Radio Elect. Bello M.	0212- 7535939	Bello Monte
39 Comercial Rorarima	0212- 5769566	El Conde
40 Comerfrío	0212- 5723280	San Agustín del Nte.
41 Comersa	0212- 2399495	Boleíta
42 Compresores CPR C.A	0212- 2357509	Boleita Sur
43 Comprotec S.R.L	0212- 8709513	Catía
44 Consultaire C.A	0212- 9510254	Bello Monte
45 Corp. J. Oropeza	0212- 9453507	Baruta
46 Corp. Soutel C.A	0212- 5456637	Catedral
47 Corp. Técnica J. Oropeza	0212- 9440627	Baruta
48 Corp. Tokio Ven I S.A	0212- 2669337	Bello Campo
49 Corporación R-4, C.A	0212- 2844043	Santa Eduvigis
50 Creaciones Rebus Hogar C.A	0212- 2864208	Los Dos Caminos
51 Cruz R, Manual C.A	0212- 4844849	El Silencio
52 Curiosidades El Pote SRL	0212- 9878134	Sta. Paula
53 Dafoss S.A	0212- 9411154	La Trinidad
54 Deincopa C.A	0212- 2857986	Los Dos Caminos
55 Depositario Yoyi	0212- 6311873	El Cementerio
56 Direfrica C.A	0212- 8701705	Catía
57 Distr. Casa Gar SRL	0212- 7828287	Sabana Grande
58 Distr. Comfrio C.A	0212- 8721209	Catía
59 Distr. Dinifica C.A	0212- 8727929	Catía
60 Distr. Vanessa C.A	0212- 4819381	El Silencio
61 Distrib. Adaptaire C.A	0212- 2345454	Los Ruices
62 Distrib. Colane S.R.L	0212- 7533408	Bello Monte
63 Distribuidora Aire Classic	0212- 6619204	Av. Las Aulas
64 Electric Center SA ECSA	0212- 6336051	Las Acacias

65 Electro Frio Alaska S.R.L	0212- 2713780	California Norte
66 Electro Mar	0212- 2652854	Chacao
67 Electro Servi-lux, C.A	0212- 7817245	Sabana Grande
68 Electro Técnico Unidos	0212- 2836575	Los Palos Grandes
69 Electroauto Turbo Electric	0212- 6622654	Los Chaguaramos
70 Electrod. La Muchachera C.A	0212- 5710806	Guaicaipuro
71 Electrónica Almart C.A	0212- 5751086	La Candelaria
72 Electrónica CPU Service	0212- 2395126	Los Chorros
73 Electrónica Ethnan G SRL	0212- 4515107	El Paraíso
74 Electrónica La California	0212- 2715623	La California Nte.
75 Electrónica Pettier CA	0212- 7537668	Bello Monte
76 Electrónica Richards TV	0212- 5410157	Sta. Rosalía
77 Electrónica Ruíz Pineda	0212- 4825890	El Silencio
78 Electrónica Yenshu	0212- 4430846	La Vega
79 Electrotécnica Mauro	0212- 6322413	Las Acacias
80 Equipohogar	0212- 7512773	Bello Monte
81 Euster SRL	0212- 4723592	Antímamo
82 Faprec C.A	0212- 6334917	Los Rosales
83 Fran Fat, C.A	0212- 6628658	Bella Vista
84 Fran-Mar Inverfrío	0212- 2388753	Lois Ruices
85 Freites & Fernández C.A	0212- 4338156	Las Adjuntas
86 Frigus C.A	0212- 2579855	Macaracuay
87 Frío Aire Quintero	0212- 2715713	Buena Vista
88 Frío Auto Palmer S.R.L	0212- 5765389	Parque Centarl
89 Frio Auto S.R.L	0212- 9536005	El Rosal
90 Frio Cars Andrés Bello C.A	0212- 2613884	Guaicaipuro
91 Frío Colina	0212- 7516835	Bello Monte
92 Frío Nueva Granada S.A	0212- 6320126	Los Rosales
93 Frío Repuestos C.A	0212- 7629153	Bello Monte
94 Frio Star	0212- 2347478	Montecristo
95 Frio System 202020 C.A	0212- 9597070	Chuao
96 Friocars, C.A	0212- 2636052	Bello Campo
97 Friocón	0212- 4629055	Artigas
98 Friolectric Los Marchenas	0212- 8722263	Catia
99 Friogenia C.A	0212- 7621090	Sabana Grande
100 Frios Paraíso S.R.L	0212- 4612434	El Paraíso
101 Gloaire, C.A	0212- 4838509	Santa Teresa
102 Goldner H. Miguel J	0212- 5729610	La Candelaria
103 Grupo BOIA-SD C.A	0212- 6321576	Prados de María
104 Hogar Repuestos Pitijoc	0212- 8709120	Catia
105 Ind. De Refreg. Sandrin C.A	0212- 2371275	Boleita
106 Indugas C.	0212- 2650992	Chacao
107 Industrial Metal C.A	0212- 2564368	Macaracuay
108 Industrias Compesa C.A	0212- 2383665	Boleita Sur
109 Industrias Nutal C.A	0212- 2577370	La California
110 Inoxstahl C.A	0212- 9512782	Chacaito
111 Inversiones Dikisa C.A	0212- 7818421	Sabana Grande

112 Inversiones Olfre C.A	0212- 5712311	La Candelaria
113 Inversiones Redominguez	0212- 4842234	San Juan
114 Inversiones Repanova C.A	0212- 2718690	Av Andrés Belo
115 Ircega Industrial	0212- 2425975	Petare
116 Jah & Chin Tecnical C.A	0212- 9435379	Las Minas de Baruta
117 La Estrella Azul	0212- 5633826	San José
118 Los Morochos Wilson y Wilmer	0212- 5459808	Catedral
119 Mabotécnica	0212- 2856668	Los Palos Grandes
120 Mansilla y Mansilla S.R.L	0212- 8721701	Catia
121 Mant. Y Equipos Yany C.A	0212- 4825276	San Juan
122 Mant. Y Serv. Ramarsa C.A	0212- 9454068	Baruta
123 Manten. 384 CA	0212- 9613005	El Hatillo
124 Manufact. De aparatos Domést.	0212- 9452711	La Trinidad
125 Máster Audio La Torre	0212- 5750613	La Candelaria
126 Mazar C.A	0212- 6823330	Los Jardines
127 Mercantil Caricuao CA	0212- 4316710	Ruiz Pineda
128 Micro Electronic Speak	0212- 2714659	Petare
129 Miguel Palumbo C.A	0212- 8629966	Catia
130 Multiserv. Jorge Arellano M.	0212- 9431939	Baruta
131 Multiserv. Técnicos Galoz	0212- 5762690	San Agustin del Nte.
132 Neva Auto, S.R.L	0212- 9440904	Baruta
133 Nevefrío C.A	0212- 9417115	Baruta
134 Oliveira y Martins C.A	0212- 2440128	Av. Principal
135 ORM Taller de Precisión CA	0212- 4312122	Ruiz Pineda
136 Panavisión	0212- 5636117	La Candelaria
137 Parador Eléctrico CA	0212- 9924613	Las Mercedes
138 Pejotaele Electrónica CA	0212- 4817192	El Paraíso
139 Pepuestos Caroni C.A	0212- 4843225	El Silencio
140 Pinova S.A	0212- 3727322	San Antonio
141 Power Full	0212- 6313783	Prado de Maria
142 Proima C.A	0212- 2645451	Bello Campo
143 Radio Varela	0212- 4729450	Antímano
144 Ranke C.A	0212- 9435518	La Trinidad
145 Refif. Urdaneta	0212- 8708801	Catia
146 Refig. Polo Norte C.A	0212- 4617302	Artigas
147 Refig. Tuy	0212- 6824316	El Valle
148 Refrigeración Gemasu	0212- 4728568	Bella Vista
149 Refrgeración Country C.A	0212- 2654474	La Castellana
150 Refri Aguilar C.A	0212- 2353301	Boleita Sur
151 Refri- Faveca C.A	0212- 5752449	Santa Rosa
152 Refrialex S.R.L	0212- 6318855	Prados de María
153 Refrideca C.A	0212- 4819608	San Juan
154 Refrif. Los Jabillos C.A	0212- 6312681	El Cementerio
155 Refrig. Bello Campo	0212- 2669203	Bello Campo
156 Refrig. Central S.R.L	0212- 5423602	Santa Rosalia
157 Refrig. Colfri	0212- 5619812	San José

158 Refrig. Del Este	0212- 2667776	Chacao
159 Refrig. Denis	0212- 8720691	Catia
160 Refrig. El Páram C.A	0212- 6330971	Los Rosales
161 Refrig. Flor de Caracas	0212- 5736310	Guaicaipuro Norte
162 Refrig. Harlen S.R.L	0212- 5768416	La Candelaria
163 Refrig. Héctor	0212- 4722789	Antímano
164 Refrig. Hermanos Arzola C.A	0212- 5511047	Puente Hierro
165 Refrig. Ind. Hermanos Andolfatto	0212- 6326032	Las Acacias
166 Refrig. Infrigo T I C.A	0212- 4720277	Bella Vista
167 Refrig. JJ SRL	0212- 8730351	Catia
168 Refrig. Kelly	0212- 8706976	Catia
169 Refrig. La Sultana	0212- 5783560	Guaicaipuro
170 Refrig. Los Primos S.R.L	0212- 5626676	San José
171 Refrig. Mariperez	0212- 7815191	Maripérez
172 Refrig. Neptali C.A	0212- 4433360	Antimano
173 Refrig. Oliviera C.A	0212- 2619147	Chacao
174 Refrig. Osalich C.A	0212- 6320437	El Cementerio
175 Refrig. P & D C.A	0212- 6310935	El Cementerio
176 Refrig. Serven C.A	0212- 5742531	Maripérez
177 Refrig. Técnica Guswall C.A	0212- 8720763	Propatria
178 Refrig. Tranzas C.A	0212- 8609147	Catia
179 Refrig. Univalco Caracas C.A	0212- 5420129	Sta. Rosalía
180 Refrig. Universo 740	0212- 7826830	Catia
181 Refrig. La Castellana	0212- 2653533	Chacao
182 Refriger Amèrica C.A	0212- 7610513	Sabana Grande
183 Refrigeración ADY C.A	0212- 6324313	Prados de María
184 Refrigeración Altamira	0212- 2616660	Chacao
185 Refrigeración Alvares y Bravo	0212- 5320207	El Limoncito
186 Refrigeración Ambar	0212- 8627128	San José del Avila
187 Refrigeración Ambiental Gustavo	0212- 4329666	Caricuao
188 Refrigeración Baruta	0212- 9453608	Baruta
189 Refrigeración Bello y Rodriguez	0212- 9417751	Baruta
190 Refrigeración Bolivar González	0212- 9535696	Bello Monte
191 Refrigeración Canaima S.R.L	0212- 4434316	La Vega
192 Refrigeración el Metro S.R.L	0212- 8718601	El Junquito
193 Refrigeración Everest	0212- 5625838	La Candelaria
194 Refrigeración FM Noventa y Siete	0212- 6330131	Las Acacias
195 Refrigeración Foca	0212- 5531180	San Bernardino
196 Refrigeración Guarimba	0212- 2398602	La Carlota
197 Refrigeración Hermanos Santos	0212- 2386114	Los Ruices
198 Refrigeración La Solución	0212- 8720891	Los Magallanes
199 Refrigeración La Sultana SRL	0212- 5734742	Guaicaipuro
200 Refrigeración Laneveca Caracas	0212- 6328089	Los Rosales
201 Refrigeración Las Flores	0212- 8603184	Las Flores
202 Refrigeración Lider S.R.L	0212- 8726830	Catia
203 Refrigeración Llano Claro	0212- 2387009	Llano Claro
204 Refrigeración Los Chorros	0212- 2618942	Chacao

S.R.L

205 Refrigeración Nacional	0212- 4614050	San Martín
206 Refrigeración Ortiz	0212- 8605068	Las Flores
207 Refrigeración Oviedo	0212- 5776730	San Bernardino
208 Refrigeración Palacios	0212- 6310744	El Cementerio
209 Refrigeración Para Venus S.R.L	0212- 6324134	Los Rosales
210 Refrigeración Refcold S.A	0212- 4431013	Antimano
211 Refrigeración Refcold S.A	0212- 4435489	El Algodonal
212 Refrigeración Sosa	0212- 4711169	La Vega
213 Refrigeraciones Nicoll	0212- 9435767	La Trinidad
214 Refri-Repuestos C.A	0212- 7936804	Maripérez
215 Reodica	0212- 8716473	Catia
216 Rep. y Servicios Salvatierra	0212- 9521020	El Llanito
217 Repa. Y Venta Friotex	0212- 5771143	Guaicaipuro
218 Repar. Lider Aire C.A	0212- 6324589	El Cementerio
219 Reparaciones El Sotano	0212- 2836708	Los Palos Grandes
220 Repres. Ivomar	0212- 5423934	Pte. Hierro
221 Represent. Willcarm C.A	0212- 6932856	Los Chaguaramos
222 Repuestos Bal C.A	0212- 9433245	Baruta
223 Repuestos Candelaria	0212- 5629680	La Candelaria
224 Repuestos del Hogar El Llanito	0212- 2574672	El Llanito
225 Repuestos Domésticos Monroy	0212- 5730073	Guaicaipuro
226 Repuestos Laneco	0212- 2351534	Campo Claro
227 Repuestos Parque Carabobo C.A	0212- 5775245	La Candelaria
228 Rivelecca Electronic C.A	0212- 9632759	La Boyera
229 ROA Ingenieros C.A	0212- 7816431	Plaza Venezuela
230 Rotceh Electrónica C.A	0212- 8628158	Altigracia
231 RVAC Suplidores C.A	0212- 2630013	Chacao
232 Saerv. Técnico Bolaños	0212- 4510552	San Juan
233 Ser. Técnicos Norvic	0212- 3834587	Carrizal
234 Serv. Julio Martínez SRL	0212- 6332968	Las Acacias
235 Serv. Ramarsa C.A	0212- 9442566	Baruta
236 Serv. Téc. Esp. Hnos. Pernía	0212- 9865487	San Luis
237 Serv. Téc. Junkar C.A	0212- 5611195	Altigracia
238 Serv. Téc. Persy	0212- 4849764	San Juan
239 Serv. Técnico Norvic	0212- 3834587	Carrizal
240 Servi Electric La Pica SRL	0212- 6314782	Prados de María
241 Servi Frío S.R.L	0212- 2711574	El Llanito
242 Servi Repuestos Nueva Caracas	0212- 4826332	San Juan
243 Servicio de Refrig. Coche	0212- 6825384	Coche
244 Servicio Electrónico Europa SRL	0212- 2412070	La Urbina
245 Servicios Big-10	0212- 7532049	Bello Monte
246 Servicios del Hogar Villafate Ruiz	0212- 2832308	Los Palos Grandes
247 Servicios Técnico La CA	0212- 6826546	El Valle
248 Sirca C.A	0212- 953918	Chacaito
249 Suplidora Sertec C.A	0212- 5775518	San Agustín del Nte.
250 Suplidores Comerfrio C.A	0212- 5723280	San Agustín del

		Nte.
251 Taller Bruzual	0212- 2663224	Chacao
252 Taller de Refrig. Jefran	0212- 8727326	23 de Enero
253 Taller de Refrig. Tuy	0212- 6824316	El Valle
254 Taller de Reparación de Nevera	0212- 8642239	El Manicomio
255 Taller Edison	0212- 5773761	San Agustín del Nte.
256 Taller Isco C.A	0212- 6611808	Los Chaguaramos
257 Taller Isco, C.A	0212- 6611808	Los Chaguaramos
258 Taller Kasy Kasy C.A	0212- 5779990	Guaicaipuro
259 Taller Saie	0212- 6334201	Las Acacias
260 Taller Salandra	0212- 6317110	El Cementerio
261 Taller V de Oro	0212- 4310226	Caricuao
262 Taller Verlino SRL	0212- 8702872	El Amparo
263 Tecni Express Baruta	0212- 9458662	Baruta
264 Tecni Refrig. Herrera	0212- 9637114	El Hatillo
265 Técnica CD C.A	0212- 9594855	Chuao
266 Técnica Robin Gas	0212- 2356993	Boleíta Sur
267 Técnicos del Oeste	0212- 8605965	Cútira
268 Técnicos Moscote S.R.L	0212- 9435549	Baruta
269 Tecniservicios Ropain SRL	0212- 8700521	Propatria
270 Tecno Hogar Palo Verde	0212- 2518501	Palo Verde
271 Tecno Refrig. MC	0212- 2722542	La California
272 Tecno Refrig. Valdez S.R.L	0212- 4814177	El Silencio
273 Tecnomarket	0212- 2417255	La Urbina
274 Tecnonorte C.A	0212- 4711545	La Urbina
275 Tecnorefrigeración A y B C.A	0212- 4815594	Qta. Crespo
276 Tecnoher Hnos. Osorio SRL	0212- 7513833	Bello Monte
277 TK Suplidores C.A	0212- 4711545	La Yaguara
278 Torre Servic Jaca	0212- 5647712	Altigracia
279 Turbo Electrónica	0212- 2714775	California Norte
280 Vensabor S.A	0212- 2633755	Chacao
281 Vilmatic Electrónica	0212- 5712642	El Conde
282 Wer Electronics C.A	0212- 6932989	Los Chaguaramos

ANNEX E:

***LIST OF NATIONAL SURVEY AIR
CONDITIONING AND REFRIGERATION
STORES***

Store General List

City	Name Store	Phone Number
Barcelona	Refrigeración Casll, C.A.	0281 2776735, 014 8040925
	Re - Recca	0281 2747624
	REFRI COOL	081-2867820
	Distribuidora Rivas	0281 2775812
	REFRIGERACION HNOS. RODRIGUEZ	081-2771457
Barquisimeto	Yolitoy	0281 2759546
	REFRICOL	051-454945
	Expoaire Barquisimeto	016-7515851
	GRUPO REFRIGERACION NACIONAL	051-375172
	REDOESTE C.A.	051-467085
	FRIO Y REFRIGERACION 92 C.A.	051-450952
	REFRIPARTES LARA S.R.L.	051-311146
Bolívar	REFRIGERACION EL NECTAR C.A.	051-466697
	Refinca Ciudad Bolívar	014-8547150
	Re.Recca Bolívar	085 44945 46611
	Frioven Bolívar	085-42363
	REFRIGERACION CITY C.A.	085-27261
	Tecni Frio c.a Bolívar	21504
	Ar.t.lco Bolívar ventas	014-85530717
Cabimas	Exclusivas Jupiter 2000 c.a Bolívar	085 25442
	Refrigeracion Cabimas C.A Cabimas	064-512761
	Remeca C.A Cabimas	064-717982
	Distribuidora 511060 Cabimas	511060
	REFRI - ELECTRIC, C.A.	064-511005
	Importadora Nueva Cabimas II	064-712201
	Marconi Cabimas	713227
	FRIOCA S.R.L.	064-510634
Cagua	REFRIZULCA	064-511466
	Refrigeración Laneveca C.A.	0244 954101
	Casa Electric J.B.	0244 956196
	Clidair, C.A.	016 5423002
Caracas	Arconsol construccion y Soldaduras, C.A.	0212 6328718, 016 6288841
	Repuestos Filduct 2006 C.A.	014 9123317
	Uniclíma C.A.	0212 7540910
	REFRI MARKET	0212-2424474
	Distribuidora Jimenez	0212 6326853, 6331480, 63214
	Daptaire	0212 2396679
	Comerfrío	0212 572 32 80
	Neve-Aire C. A.	0212 9524124, 9524205, 95287
	Distribuidora Dinifica C.A.	0212 8727929
	Repuestos el Key s.r.l	0212 8720219

<i>City</i>	<i>Name Store</i>	<i>Phone Number</i>
Caracas	Mansilla & Mansilla s.r.l.	0212 8721701, 8720542
	Internacional Trading C.A.	0212 7524969
	Refrigeración J&F Milenio	0212-8720522
	Euro Multirepuesto	0212 5777323
	Redoica	02128722013, 8718473
	FRIO REPUESTOS C.A.	0212-7629153
Coro	GONAIRI SERVICIOS	016-7689304
	IMPORTADORA GRAN OFERTA	014-9690196
Guayana	Refrigeracion Nacional Guayana	086-511126 515636 515637
	Contruendo Guayana Ventas	624732
Maracaibo	Marvin Haon C.A.	061-516847
	IMPORTADORA EL GRAN REMATE	061-353302
	EL NEVERAZO C.A.	061-571922
	REDOLANDIA CA	061-978484
	Conexiones Rodriguez JM c.a.	061-544004
	MAX AIRE C.A.	061-979709
	Auto Refrigeracion El Diamante	061-213208
	REDOMECA	061-594737
	AIR CA (Ventas)	061-220311
	Los Angeles Import C.A.	061-358201
	MAQUIMPOR C.A.	061-367904
	REDOMARSA	061-212634
	MUCARSEL	061-235277
	LA FERIA DE LAS NEVERAS	061-570726
	COLDVENCA	061-360798
	REFRI-SANCHEZ DE MARACAIBO C.A.	061-830938
	flash motors ventas	971737
	REFRIOCA C.A.	061-539714
	REMEZUCA	061-591674
	TOTO Refrigeracion	061-980462
RED LAGO C.A. Ventas	016-8677274	
Maracay	Cayrca	016 4477336
	Ferre Medic C.A.	012 4415140
	Interfrigo	0243 3542413
	Proyectos Pestana	0243 3473073
	Climaven Aragua	0243 3340032
	Tecno Refrigeración M.C.	0243 3463244
	Refridi, C.A.	0243 470274, 014 4945050
	Comercial Frio Madeirense c.a. Maracay	043-690631
	Frio Madeirense C.A.	0243 3694579
	ExpoAire Maracay	0243 3513780
MATURIN	AUTO REFRIGERACIO EL CLIMA	091-410342
	OMEGA TERMICA	091-423207
	VITRINAS JUPITER C.A.	091-420222

<i>City</i>	<i>Name Store</i>	<i>Phone Number</i>
MATURIN	REFRI PRONTO S.A.	091-413883
MORON	COMERCIALIZADORA LA LINDA	0242-8720206
PTO CABELLO	REFRIGERACION COMERCIAL SALVADOR C.A.	0242-614118
	DISTRIBUIDORA NUNES ABREU	0242-611321
Pto Fijo	Electro-frio Novoa C.A Pto Fijo	016-6694093
	MAN INDUS	069-456298
	Distribuidora El Paramo Guayana C.A.	086 518560
	MULTI-PARTS 92 S.R.L.	069-454159
	Distribuidora Ronalca Pto Ordaz	086-525859
Pto La Cruz	El Ojo Electronico	0281 2688147
	Refricenter	0281 2869869
	INVERSORA SATELITE 2000	0281-2686453
	Reymond Compañía	0281 2685164
	Refrigeración EPA, C.A.	0281 2664672
	Rfrigeración Hermanos Rodriguez	0281 2771457
	Multi Royal	0281 268 5852
	Comersa Pto La Cruz	0281 2652417
	Refrimaster Ventas	02814 2664150
	La Fortuna 2 S.A.	0281 2652084
	Inversiones Kaguas	0281 2661160
	Muebles El Condor	0281 2685014
	Electro Mania C.A.	0281 2687760
	Sonido del Centro	0281 2657127
	Refrigeración Univalco Oriente C.A.	0212 2653509
	DISTRIBUIDORA EL PARAMO (VENTAS)	081-2674681
	Insoca de Ventas	0281 2696190
	Distribuidora La Preciosa	0281 2650459
	Distribuidora B.B.B. c.a.	0281 2685589
	J.J. Perez Aleman	0281 2651415
Pto Ordaz	Refrigeracion Arichuna C.A Pto. Ordaz	237265
	Refrigeracion Barbosa c.a Pto Ordaz	233360
	Distribuidora El Paramo Guayana C.A. Pto Ordaz	518560
San Cristobal	MERCANTIL ESPECA	076-472216
	AQUÍ ME QUEDO S.R.L.	076479663
	FIRO ANDES (VENTAS)	076-473949
	SERGIO MORENO C.A.	076-433192
	Nevetachira	076- 446412
	Refri-Aire	076- 422773
	EL MUNDO DEL REGALO C.A.	076-464919
	Comersa San Cristobal	079 475854
	MERCANTIL ZAMBRANO C.A. (VENTAS=	076-479314 473025
	REFRISOL C.A.	076-473392
	Lacor	076- 415125
	Que Frio (VENTAS)	076- 415382 cel 014- 7196611

<i>City</i>	<i>Name Store</i>	<i>Phone Number</i>
San Cristobal	ANTONIO MAGOLLON	076-447001 447004
	LIMASA (SAN CRISTOBAL)	076-476178
	Comercial Primavera	076- 449748
San Felix	RE-RECA San Felix	088-315378 314303
	Imgeve c.a. San Felix	44775
	Re-Reca Sucursal San Felix	5886-315376
Valencia	CONGEL CARS C.A.	0241-8586028
	ELECTROMUEBLES 2000	0241-8317813
	Inverfrio C.A. Ventas	014 4227660, 016 6485972
	Galeria Hogar Import C.A.	0241 8483971
	REFRI - COBAS C.A.	0241-8574831
	Refritecnicos Valencia	0241 8471001
	REFER C.A.	0241-8590261
	VALIMPORT	0241-593595
	Refri Alaska Carabobo	
	Comercial R.F. C.A. Ventas	014 5811537
	AUTOREFRIGERACION MICHELENA	0241-8571497
	REFRICO	0241-590445
Villa de Cura	Reidi, C.A.	0244 863040

ANNEX F:

***LIST OF NATIONAL SURVEY AIR
CONDITIONING AND REFRIGERATION
SERVICE WORKSHOPS***

Refrigeration Shop Service General List

City	Name	Phone Number
Barcelona	Multiservicios Kansas	016 8874172
	Refrí - Cool	0281 2887820
	Suply Frios de Oriente, C.A.	0281 2749422
	Refrigeración Pino	0281 2771797
Barquisimeto	FRIO Y REFRIGERACION 92 C.A. (Taller)	051-450952
	FRIGILAGO	051-317787
	REFRIBAR C.A.	051-463176
	MANTENIMIENTOS MARIO	014-5091307
	SERVIPLUS	051-327669
	ECRO COLL	051-621348
	TECNICA DE ELECTRODOMESTICOS	051-462980
	MULTISERVICIOS S.R.L.	051-523934
	REFRIPARTES LARA S.R.L. (TALLER)	051-456298
	ELECTRONICA EL ORIGINAL	051-468582
	INVERSIONES CLIMALARA	051-420025
	JORMACH C.A.	051-466961
	REFRIGERACION AMERICA C.A.	051-456434
	REFRIGERACION LA GARANTIA	518209
	CLEAN CENTER SUPPLY	051-460127
	INTER FRIO MOLINA	051-321349
	REFRI PORTELES	014-5020048
	MABE	051-457747
	SERVI EQUIPOS	016-8508687
	MANTENIMIENTOS Z HERNANDEZ (TALLER)	051-312124
	REFRITORCA	051-416878
	COMERCIAL RAMIAL S.R.L.	051-329870
	INVERFRIGO	051-331170 - 331731 - 333905
	REFRIPARTES LARA	051-456298
	TALLER DE MANTENIMIENTO DE LA UNIVERSIDAD A	051-420022
	ISMARE S.R.L.	051-458608
	INSTALACIONES J. ALVARADO	014-9509316
	TALLER MECANICO LUCIFER	
	SERVIGLOO	016-7509925
	REFRICOMA IMPORT	051-454487
	REPRESENTACIONES GENESIS	051-523960
	MANTENIMIENTOS CHIRINOS C.A.	051-532653
	REFRINACA C.A.	051 327723
	REFRIGERACION CARLOS TORREALBA	051-424802
REFRIGERACION COMERCIAL	06-4560355	
TALLER ELECTRICO CLAROS	014-5069143	
CORPORACA (TALLER) Oeste C.A.	051-460791	

<i>City</i>	<i>Name</i>	<i>Phone Number</i>
Barquisimeto	IMAVROCA	051-453643
	ANEL C.A. (TALLER)	051-456891
	DISTRIBUDORA REIS NETO	453797
	AIRES DE OCCIDENTE C.A.	051-465980
	SERDECOINCA	051-421711
	REDULAR Y COINSA	051-520458
	REFRIGERACION LA 25	051 514749
	DIVENRE S.R.L.	051-334182
	J.J. ESCALONA E.	014-5340161
	CORPORACA (Ventas)	051 467072
	MANTENIMIENTOS Z HERNANDEZ	016-8510703
	TECOBAR C.A.	051-323755
	COMERCIAL EL TROPICO	051-465262
	TERMO MECANICA LARA	456298
	COMARCA	051-461393
	TTI WANNASUDHI C.A.	051-463607
	KAMURA ELECTRONICS C.A.	051-329160 - 322825
	REFRIGERACION LOPEZ	051-459867
	AIRE CENTRO OCCIDENTAL	051-455021
Bolívar	La Casa de las Lavadoras (equipos)	
	Refrigeración el Guayanes Bolívar	014-8513941
	Servicios Electrodomesticos Bolívar	085-20361
	Refrigeracion Angostura Bolívar	014-9852295
	Inversiones Fawilca Bolívar	085 516922
	REFRIGERACION SERVI-FRIO	085-511551
	Frioven Taller	085-42363
	Refri-Bran s.r.l. Bolívar	
	Paca c.a Bolívar	016-6854967
	ARTICO REFRIGERACION Taller	085-23605
Cabimas	FERRESUCA	016-8613215
	Marconi c.a Cabimas	064-713909
	Taller de Refrigeración CHARRIS	014-6543630
	Taller Refrigeracion FRIO LUZ	064-717773
	Tecool Cabimas	064 714989
	Importadora EL PIOJO Cabimas	064-717347
	Redulco S.A Cabimas	064-710384
	REFRIGERACION EL PRIMO CABIMAS	014-6715048
	O.R.T Venezuela Cabimas	708037
	REFRICENTER C.A.	064-612805
	RINGO C.A. (taller)	016-8650362
	REFRI ELIO	064-613604
	Taller refrialex Cabimas	
	SERVI-GARCIA	064-712962
	Refriger Gerardo	713011

<i>City</i>	<i>Name</i>	<i>Phone Number</i>
Cagua	Taller Wilmer	014 9473299
	Inversiones HP C.A.	016 7484879
	El Refugio	014 4916440
	Refri Ruiz	0244 70921
	Refrigeraciones JR. Cagua	014 4901845
	Servicamp	0244 74245
Caracas	DEL CENTRO	044-70826
	Refrigeracion Bolivar Gonzalez	0212 9536696
	Frlase C.A	0212 2841087
	Acoma Ingenieria S. A.	0212 2390215
	Refrigeración del Este C.A.	0212 2667778
	Oasis L. A.	014 2386705
	AA Saver Gulnand C.A.	0212 2435627
	V.P.S. Refrigeración Industrial	0212 2633273
	Virgilio Hernández	0212 6324131
	Refrigeracion Deniss	0212 8711168
	Servicios Artic Cold C.A.	0212 2329326
	Frio Electric S.R.L.	0168126103
	Confort Aire A.C., C.A.	0212 2862196
	Los Jabillos	0212 6312681, 6317466
	La Boutique del Sonido Taller	0212 7616611
	Yany, C.A.	0212 4825276
	Aquacomputer 2609 C.A.	0212 9363908
	IA Vemar C.A.	0212 2349208, 2374653
	Repuesto Electrodomesticos J y K	0212 6334397
	Servi - Electric La Pica s.r.l.	0212 6314782, 6317043
	Marfaca C.A.	0212 633 12 89
	Rosuca	0212 2724146
	Refrigeración Kelly	0212 8706976
	Refrigeración Jorai	0212 4611022
	Nueva Caracas	0212 4826332 016 277942
	NIZZA S.R.L.	0212-7511664
	Comercial Menpe	0212 4843195
	Refrimaq C.A.	0212 2712367
Colservicios escovar	014 2168724	
Plyma Oficina Técnica C.A.	0212 2630013, 26321002	
Refrigeracion Jose Luis	0212 4613665 016 8115313	
Patrigu		
Friotecnica s.r.l	0212 2340103	
Osalich	0212 6315121, 6317634	
Tecno Refrigeración Valdez	0212 4814177, 4819803, 32446	
Refrigeración Escobar	0212 3636197	
Electrodomesticos San Juan	021248197992	
Refrigeracion Oliveira C.A.	0212 264 91 47	

<i>City</i>	<i>Name</i>	<i>Phone Number</i>
Caracas	Refrigeración la Castellana	0212 2653533
Ciudad Alianza	Multiservicios e Inversiones Tormar	014 4976031 014 5804604
Ciudad Ojeda	PROSER	061-974550
Coro	CENTRAL DE REFRIGERACION	069-525252
	TALLER FALCON COOL	069-518552
	GONAIRI Taller	016-7689304
	TALLER JANIO	069-524221
	VIDAIRE	069-529378
	HAC SERVICIOS C.A. (CORO)	069-525162
Guacara	Hector Rodríguez	0245 5388997
	Refrigeración Libertad	0245 641573
	Tecno - Refrigeración El Prado	016 8458673
	Refrigeración 1° de Mayo	0245 640090
	Gerardo Hernandez	014 4060891
	Multiservicios Tolmar	0245 5718375
	Refrigeración Diaz	0245 643044
Guarenas	Refrigeración Rcjás	0212 363 45 17
	Refrigeración Crifi s.r.l.	0212 3635942
	Taller Cardenas	014 3121693
	Proyectos Publicitarios	0212 3623316
	Fetta	0212 3622520
	Manuel Escalona	014 2711289
	Malca Acuña	0212 3630814
	Sumi Gases Barlovento	0212 362 67 83
	Fabrica Inventaire C.A.	014 2026508
	Ferretería y Refrigeración Helimar	0212 3628728
Guatire	Refrío Refrigeración Comercial Guarenas	0212 3633753
	Suministros Eléctricos Zamora L.	
	Guatifrio C.A.	014 2848547
	Corporación Sami II, C.A.	0212 3440332
	Instal Park	014 3655510
Guayana	GENSEMU	086-231085 223696
	Contruendo Guayana	086-621210
	DEICAM C.A	086-227087
La Esmeralda	Arnoldo Torrenso	014 9411521
La Victoria	TITO REFRIGERACION	
	REFRI-SERVICE	
	ALFONZO	014 4903257
	REFRIAIR ARAGUA	044-212281
	LUIS TORTOLERO	014 4213992
	REFRI-HER	014-4931734
Los Guayos	taller Oscar	
	Mantenimiento Cortez	014 4048051
	refrigeración Soto	014 5852033

<i>City</i>	<i>Name</i>	<i>Phone Number</i>
Los Teques	Frifera de Refrigeración C.A.	0212 3212122
	Dureca Refrigeración C.A.	0212 322 59 98
	Inverstone Alamo 2000 s.r.l.	014 2166905
	Refrigeración Oliveira II C.A.	0212 3232320
	Vimaly, C.A.	0212 3235812
	Contreras 741 Refrigeración S.R.L.	0212 38377997
	Ferre2000 El Pueblo C.A.	0212 3224450
Maracaibo	Taller Refrigeracion NEVE FRIO	014-9666309
	luis guillermo pardo	061-866585
	A.R.C. Refrigeracion	014-6482455
	Calculos Proyectos	061-316947
	COMERCIAL AMERICAS C.A.	018-6177615
	INVERSIONES NANFEL C.A.	061-832264
	HISUZU COOL SYSTEM C.A.	061-833811
	Escuela Artesanal Cristo Rey	061-523686
	VIULANS C.A.	016 4606034
	INVERLINCA	014-6143488
	Motores santa Teresita	016-6603595
	Sertegseca Maracaibo	061-364532
	OSWALDO VALERO	016 627957
	CONTROL AIRE C.A.	061-989782
	Los Angeles IMPORT	061-358201
	REFRI AUTO OSCAR	
	DENIS PRIETO BROOS	014-6130552
	Multi Servicios BORJAS	014-6102394
	FLASH MOTOR C.A.	061-971737
	INORSURCA	061-832220
	Capri	061-576170
	Taller de Refrigeracion Cordero	061-923221
	Serv. Tecnico de AA Los Cesares	061-483384
	EL ADVOCATUS C.A.	061-977586
	Miami Compressors C.A.	061-561355
	Servicios Tecnicos MANUEL Maracaibo	014-655257
	MAQUIMPOR C.A. Taller	061-367904
	Taller La Facultad	014-6055141
	Frioven Maracaibo	061-982901
	Electri frio C.A.	061-522180
	Refrigeracion Industrial KING AIR C.A.	061-534695
	MULTI SERVICIOS MACHADO	061-228343
	Importadora El Gran Remate taller	061-353302
RED LAGO C.A. Taller	014-6545092	
AUTO FRIO EL MOROCHO C.A. (Taller)	061-349560	
EL PORTON	061-420683	
Importadora El Neverazo	061-571922	

<i>City</i>	<i>Name</i>	<i>Phone Number</i>
Maracaibo	Refrigeraciones VARGAS C.A.	061-641065
	Ramon Sanchez	061 645971
	Taller Refrigreracion BRISTOL s.r.l.	016-8665773
	La Feria de la Nevera	061-576131
	Servicios Tecnicos EDISSON C.A.	061-922527
	REFRISERMA s.r.l.	061-924667
Maracay	Refrivemeca	014 4501093
	Electrodomesticos El Marino	
	Taller Cabeza	014 5872759
	SERVICIOS INTEGRALES MPH	014 4499364
	Jesus Rossell	0243 3341454
	TORRES C.A	712330
	Tecni Meca	
	REFRIA PINZON	
	Servicios Industriales s.r.l	0243 3356655
	MULTISERVICIOS POLO	014-9435185
	MULTISERVICIOS JP	0243-675801 675401
	SULBARAN	014-9146100
	REF. INDUSTRIAL	014 3515497
	SERVI COOL C.A. MARACAY	014-5866671
	REFRIGERACIONES FARRERAS	014 3335797
	Servicios Naval	0244 9457974
	CLIMATIZACIONES	014 3457598
	SAN RAMON	713650
	NARVAEZ	
	Refrigeración Scroll, C.A.	016 4434177
	Repuestos y Taller Franco s.r.l.	0243 3460854
	INSTAIRE C.A	014 3456863
	REFRITEC	014 3457602
	Taller Johan Manuel Maracay	
	Clima Ambiente C.A.	016 433599
	INVERSIONES ARANA MARACAY	
	REPRESENTACIONES RM	043-670990
	SERVICIO MECANICO	014 4496649
	REFRIG COMERCIAL SALVADOR	043-327496
	ERNESTO	014-4605439
	SERVI COOL	014-5866671
	Inversiones Maip	0243 3530376
REFRIGERACION GUILLEN	014 3691395	
REFRIGERACION YUSMIL	014 4475835	
Taller La Solucion	014 9435832	
Refrigeración O & P, s.r.l.	014 4603742	
Grupo Brimor, C.A.		
COMERCIAL VICTORIA	014 3334412	

<i>City</i>	<i>Name</i>	<i>Phone Number</i>	
Maracay	PROYECTO INTEGRAL	014 3545195	
	COCINGAS	014 4469034	
	INGEVENCA	014 4434592	
	Refrí Repuestos del Centro C.A.	014 4545960	
	IM REFRIGERACION	0243-473630	
Marlara	SERVICIO TECNICO	0243 713735	
	Refrigeración Tabofo	0243 6633242	
MATURIN	Refrigeración Veroes	0243 6631460	
	INTERFRIO C.A.	091-433813	
	HC INTERNACIONAL C.A.	091-432006	
	MULTI SERVICIOS PLAZA	0291-425176	
	GRAPICA ORIENTE C.A.	091-422370	
	TECNI - HOGAR C.A.	091-413372	
	AUTO REFRIGERACION EL CLIMA C.A.	091-410342	
	AMERICAN REFRIGERATION SERVICE C.A.	091-426210	
	COMHECA	091-425414	
	REFRIGERACION EL CENTRO	016-8917195	
MORON	MULTISERVICIOS HERMANOS DA COSTA	014-7659288	
	INVERSIONES PEREZ	016-7422628	
PTO CABELLO	FRIGO ELECTRICO	0242-3612095	
	REFRI-CAR	014-9431709	
	REFRITEC (TALLER)	0242-613979	
	MULTISERVICIOS PTO. MARIEL	016-8423468	
	ACENCA	0242-3619492	
	SERVINDUSTRIA		
	DON SEGUNDO	014-4823073	
	REFRI ALEX	016 4429778	
	COMERCIAL VILLALONGA	014-4809979	
	REFRIGE CRISTIAN	0242-610659	
	BRILINCA	0242-3612253	
	TALLER REFRITEC SRL	042-613979	
	Pto Fijo	RAAVENCA	069-465764
		OTEAIRE	014-6914914
HAC SERVICIOS C.A.		069-480449	
FRIO LAN		014-6926952	
AIRE SUR, C.A.		086-228845	
REFRI ELE C.A.		014-6916272	
RAMON VARGAS		069-459415	
SERVI COOL C.A. Punto fijo		014-6932350	
ELECTRO JAP		086-522922	
REBOBINADOS PEROZO		014-6904667	
COOLING		086-618073	
INGENIERIAS JANSEN S.A		016-8866750	
INGENIOS C.A.		016-8865819	

City	Name	Phone Number
Pto La Cruz	Insoca Talleres	0281 2696190
	Refrimaster taller	0281 2664150
	Mantening C.A.	0281 266343
	Multiservicios Jale, C.A.	0281 2687268
	AutoAires Anzoategui	0281 2656932
	Refrigeracion Dinamic	0281 2652115
	Distribuidora El Paramo, C.A.	0281 663752 674681
	Corporación Mercantil Venezolana S.A.	0281 2662417
Pto Ordaz	Taller de Refrigeración King C.A.	014 8064061, 0281 2655042
	AMS REMY'S C.A.	086-220963
	REFRIGERACION IVO	086-220019
	REFRIVICA	014-9875496
San Cristobal	UNITED REFRIGERACION, C.A.	234854
	SERTEE (San Cristobal)	076-446294
	MERCANTIL ZAMBRANO C.A. (TALLER)	076-479314 473025
	TECNI REFRIGERACION ORTEGA (SAN CRISTOBAL)	076-438152
	Lucar's Frin S.R.L.	076- 443320 cel 014- 7051362
	AUTO FRENOS MENDOZA (SAN CRISTOBAL)	076-444606
	TALLER Y REPUESTOS ACEVEDO	076-465422
	Imagen Sonido y Refrigeracion DIGITAL	076-561355
	Que Frio (Taller)	079 412103
	FRIO ANDES TALLER	076-473949
	REFRIJAIR SAN CRISTOBAL	076-448275
	Refrigeracion Industrial IMPERIO	076-438829
	Maquimport	076- 479145 cel 014-9763418
	ROJAS TECNI REFRIGERACION	014-7055182
	REFRIANDES (SAN CRISTOBAL)	076-436352
	Taller de Refrigeracion PRIMAVERA	076- 472623 cel 014- 7030023
	NELSON NIEVES	014-7033881
	FRIOS OCCIDENTES C.A. SAN CRISTOBAL	076-477455
Taller Electrodomestico PICO (San Cristobal)	076-414913	
COMERCIAL Y MULTISERVICIOS LOS ANDES (SAN C	076-422357	
San Diego	Cosas del Pueblo San Diego	811583
San Felix	Tecniservicios Piarcar c.a Sucursal 1	014-8771767
	Refritotal c.a	014-3860271
San Joaquin	Tecno Refrigeracion Rangel San Joaquin	0545-5521957
	Servicio Tecnico de Refrigeracion San Joaquin	0245 51514
	Refri-Arenas C.A. San Joaquin	0245 55221316
	Servifrio J.J.C.A.	014 9429077
Valencia	Refrigeracion Gutierrez	014 4965342
	Taller de Refrigeracion Universal Valencia	0241-8474878
	LIBERTADOR	014 4099046
	H.S. REFRIGERACION	016 4496531
	REFRITEC (VALENCIA)	0241-8667831

<i>City</i>	<i>Name</i>	<i>Phone Number</i>
Valencia	REFRITEC VALENCIA	0241-8667831
	REFRICAR	0241-8597386
	COMBATE	014 4243774
	AG. REFRIGERACION	0241-8314470
	Comercial R.F. C.A. Taller	014 5811537
	TALLER DE REFRIGERACION DON JOSE	0241-8484069
	R.G AIRES C.A.	0241-230187
	SERVICIO DE REFRIGERACION ANTONIO	
	Inverfrio C.A. Taller	014 4232438
	REFRIDEL	014 4015843
	REFRICAFFE S.R.L.	0241-8587819
	Refrigeracion ENFRI	016-7415079
	ELECTRO SUR	
	REFRIGERACION TRINY	014-4855720
	AR Tovar	0241 8474843
	Refrigeracion Malave	014 5843385
	RUBIO	014-5826924
	REFRIGERACION LUIS	0241-823804
	LA GRAN FAMILIA	0241-8582362
	Seiva s.r.l.	0241 8477268
	BRISAS DE VALENCIA	0241-8482928
	Importaciones A.J.M.M.	0241-8324491
	TRINY	014-4855720
	Washinton 220	0241-787159
	REFRI-CLIMA	0241-8664446
	Refrigeracion F.R.	016 4477562, 014 4204552
	FRIVENCA S.R.L.	0241-8316514
H.R. Compafia	0241 8486201	
Refrigeración Genesis	014 4003470	
Refrigeracion Tecnica Industrial S.R.L.	016 4493161, 0241 8472661	
Villa de Cura	Tecno Frigo	0244 863590
	Refrigeracion La Villa	0244 862524

ANNEX G:

***LIST OF NATIONAL SURVEY VEHICLE AIR
CONDITIONING SERVICE WORKSHOPS***

Vehicle AC Shop Service General List

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Barcelona	Auto Aire Barcelona	014 8016995
	Autoaireanzocategui AAV	2656932
	Auto Aire J&D	014 8076086
	Multiservicios AMG	0281 9820221
	Refrigeración Luis	0281 2769821
Barquisimeto	MEGA TUNAL C.A.	051-471311
	REFRIGAS C.A.	051-453812
	MULTI FRIO	051-525616
	DUCT AIRE DE VENEZUELA	014-5071612
	TALLER CENTRO ALFA	014-5010448
	MULTISERVICIO HILDA	051-465911
	MOPARCA	014-5196533
	EL VENEZOLANO	016-8595249
	MOTO PUS NOGUERA	014-9521958
	AIRE ACONDICIONADO AUTOMOTRIZ (Barquisimeto)	051-511826
	FITTING AIRES S.R.L.	051-321954
	ELECTRO AIRE VENEZUELA	014-5056664
	FRIO MAX	014-5073305
	AUTO SERVICIO ALGARA	014-5211738
	ELECTRO FRIO BARQUISIMETO	051-376235
	SERVICIOS SENDI AUTO	051-431981
	AUTOSERVICIO LAGO C.A.	051-523310
	FRIO LARA	051-451645 - 454096
	FRIO MOVIL C.A.	051-329705
	QUIN LAR C.A.	051-510213
	SAIN S.R.L.	051-329066
	SERVI CENTRO	016 4504886
	AUTO REFRIGERACION LA 30	051-331569
	REDOLARCA C.A.	014-5646423
	TOYO REPUESTOS	051-462838
	AUTO REFRIGERACIO YANEZ	014-5089443
	AUTO REFRIGERACION EL NEGRO	014-9500276
	TALLER LASER	014-5072021
	CLIMALARA DE BARQUISIMETO	051-456891
	TALLER AUTOMOTRIZ MANUEL ALVARADO	016-8586993
	TECNIMOTRIZ ATLANTA	
	MULTI-SERVICIOS GARCICARS S.R.L.	014-5197725
	MULTISERVICIOS JJ	014-5068830
TAPIOCCIDENTE	014-5215767	

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Barquisimeto	INVERSIONES CLIMALARA (TALLER)	051-420024
	ELECTRO AIRE PINEDA	016 4526672
	AIREVEN	051-326054
	REFRILLOTTI	016-8517073
	SALAZAIRE	051-324275
	PROYECCION DIESEL (LUIS REYES)	
	FRIO CARS C.A. (TALLER)	051-330868
	AUTO LIMITED	051-515480
	DIGENCA C-A-	051-451323
AUTO AIRE EL REY	014-9524491	
Bolivar	STEREO COOL	
	REFRIGERACION Y ELECTROAUTO UNIVERSO	016-7855248
	REFRIGERACION AUTOMOTRIZ UNIVERSIDAD	085 29696
	LA CASA DE LAS LAVADORAS	
	ELECTRO MOTRIZ OSCAR	
Refrigeración para autos Corona	085-25902	
Cabimas	Electro auto Morillo Cabimas	014-6108666
	Talleres Cars Kool Cabimas	014-61175716
	Auto Frio El Propio Beto Cabimas	014-6082966
	Comercial Arguelles C.A Cabimas	064-510880
	Auto Frio Beto Cabimas	064-717322
	Tecni Auto Cabimas	064-511506
	Servi Refrigeracion y Servicios Denni. Cabimas	014-6781188
	Tamecl Cabimas	064-717282
	Auto Refrigeración San Antonio	018-6453500
	Auto Frio Santa Barbara	014-6019905
	Auto Refrigeracion Los Angeles c.a.	064-611061
	Servicios COSTA ORIENTAL	016-7647303
	RINGO C.A. (taller tipo 3)	016-8650362
	Auto Refrigeracion MIGUEL	064-710175
	AUTO FRIO ANDE	
	Renny Cabimas	016-7620313
	Grupo Lemar C.A Cabimas	064-711018
	Electro Refrigeracion, C.A Cabimas	064-415837
	Angel J. Quintanilla P Cabimas	064-510951
	Cagua	Refri-Electro Cagua
Inversiones Emi Baly C.A.		016 4440556
A.S.D.		016 4437874
Refri Auto El Indio II, S.R.L.		014 9455769
MAC Air C.A.		016 8442395
Auto Refrigeracion Bolivar		014 4934965
Electro Auto Turbo Movil s.r.l.	014 4609477	

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Caracas	ALL HONDA	014 2888251
	BELLO MONTE MOTORS C.A	0212-9514168
	Electronica Caroni	0212 2417172
	GARCIA TUÑON C.A	0212-2374928
	Taller Mecanico Varela & Carolo, C.A.	0212 2380377
	Blokea	0212 4828397
	El Gordo y el Flaco	0212 4811353
	Grandi Sport, S.R.L.	0212 2344147, 2358792
	Servicios Mecánicos Noel C.A.	0212 2390791
	TALLER RECOSUR R.F. C.A	0212-7618480
	Auto Trukyn, C.A.	0212 2387316, 0168126160
	C.A. Cars	0212 6932513
	Electroauto Lamborghini	0212 6900412
	Nagashi Motors A.A, C.A.	0212 6935706, 6611426
	Frenos Morell	0212 2412169
	Electroauto Maykel	0212 3226478
	Electroauto Giuliano	0212-2635878
	Taller Nunes e Iglesias	0212 5527232
	TOURING YP	0212-6613859
	FRANCO MOTOR	0212-6931337
	Electro Auto El Rapido	0212 8720943
	TURBO JET	0212-2414612
	Centro Automotriz Gianni Cars, C.A.	0212 9596850
	Electro Auto POTENZA	0212-7539697
	A PUNTO C.A.	0212-7510878
	SOROCAIMA	0212-9528491
	Auto Partes C.W.G., C.a.	0212 2510355
	TALLERES BELDIA s.r.l.	0212-8705275
	Yokomuro Caracas, C.A.	0212 2641465
	VIGEPE s.r.l.	0212-6327219
	Autoservicio Perez y Cafizales	0212 4517403
	Silfren	0212 2661743
	BF Electronic C. A.	0212 6626217
	Electro - Auto Montemar s.r.l.	0212 2327020
	Bay Side Electronics Alfa	0212 6627681
	Inversiones Frio Automotriz, C.A.	0212 6613429, 6931697
	Auto Mecanica Paralso	02124513659
	Auto Servicio Dino C.A.	0212 2344951
	EL EJECUTIVO	0212-8702844
	Automotriz Pingüino	0212 6329729
Auto Frio Alaska	0212 6321740	
Taller CH.BC, C.A.	0212 2655772	

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Caracas	Auto Refrigeración Bello Campo C.A.	0212 2653939
	Frio Sistem	0212 9693825
	Electro Auto Bolivar	0212 8713004
	Yanca 2005 C.A.	
	Electromecanica "Moroni"	0212 2394378
	SJC	0212-7631585
	VEN POR	0212-2340734
	Auto Servicios Hermanos Tucci s.r.l.	0212 2719952
	LA LAGUNA s.r.l.	0212-8726434
	ELECTRO AUTO BELLO MONTE	014 2444208
	BUTICAR	0212-6614050
	Multiservicios Etieca C.A.	0212 4518749
	TEMFI	0212-9635928
	TALLER AUTOPISTA CA	0212-9513341
	GIOMAR S.R.L	0212-6311054
	AGUILA FENIX	0212-2422406
	ANDRADE GUEVARA	
	Taller Obelisco	0212 2635671
	Friovan s.r.l.	016 6381723
	GONGAR	0212-2383660
	TALLER MORENA	0212-2665179
	Auto Radio Hnos Ramirez, s.r.l.	0212 6930410
	Electro Frio Alaska, s.r.l	0212 6333558
	Turismo de Lujo	0212 6938011
	Talleres Capital Motor	0212 5777909
	LAVUATIR C.A.	0212-2510367
	231 SRL	0212-5771776
	AUTO LAVADO 23 SRL	0212-5764242
	LA VIBRADORA	0212-8714927
	FINE C.A.	012 7274540
	La Van S.R.L.	0212 8719237
	Voltron C.A.	0212 7620055
	El Paraiso de las Alarmas C.A.	0212 4616914
	PINGUINO CARS	0212-7613912
	Toyoca Motors C.A.	
	TOYORA MOTORS C.A	0212-5781428
	Refrigeracion Pramar	016 8270324, 0212 6314989
	Multiservicios Olegario, C.A.	0212 6937221
	DM Car's 1234 C.A.	0212 6320231
	Taller Giovanni, s.r.l.	0212 8702434
electro auto totore C.A.	0212 2510571	
Merola Motors	0212 2511559	

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Caracas	ALBERTOSKY	0212-57487669
	TRES JS	014-9325650
	FRENOS CARFESA	0212-6629830
	He-Loy C.A.	0212 8724307
	DON JOSE	0212-8711532
	Autoservicios Bomarca	0212 2436726
	Tecni Auto	0212 2349918, 2342689
	Auto-Servicios FJC	0212 6937481
	ELECTROAUTO J.P. S.R.L.	0212 4615282
	DI MAGGIO	0212-6328709
	Mark IV de Venezuela C.A.	0212 2651407
	Electroauto Cartesa	012 7306217, 0212 6626085
	Busven C.A.	0212 9538441
	Electroauto Duncan	0212 6616617
	Multl Servicios Paez Cars C.A.	0212 44839055, 0127316500
	Electro Auto Parababi	0212 4518423
	Frio Cars C.A. Caracas	0212-2635542
	DAYTONA	0212-6330460
	Autoservicios Carsiel C.A.	0212 4847570
	Multiservicios AF Super 2006	0212 4819920
	LOS INTOCABLES	0212-6617667
	AUTOMOTRIZ URCOVEN	0212-9510613
	Roen C.A.	0212 4611568
	SPARKER	
	INYECTPLUSH	0212-7532257
	BPR	0212-7511021
	MIGUEL Y MANUEL	012 2348417
	Start & Finish	0212 7537990
	JORELV FORD S.R.L	0212-5774745
	ACUHONDA	0212-7628028
	El Pulpo	0212 4720470
	Turbo Móvil	0212 4615564
	Auto Mecanica Aquiles C.A.	0212 2675255
	Multiservicios Planet Cars	0212 6616687
	Centro Automotriz El Ingles	016 6303175, 0212 2661074
	R.V.A. s.r.l	0212 6934126
	ELECTROAUTO HABANA 99	0212-6336295
	Electroauto Omar C.S.	0212 2670586
	Power Full	0212 6310444
	TALLERES EL DRAGO	0212-5746853
Electro Auto Jean Carlos	0212 4813883	
ADELMAR	0212-2355290	

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Caracas	Autoservicios Las 5 Estrellas	0212 2388749
	NAGASHI	0212-6935706
	Chrysler	014 9380737
	Chefcars	0212 6628404
	Auto Accesorios La Estrella	0212 5524865
	Auto Sonido La Castellana, C.A.	0212 2657261, 2620962
	Automotriz Salobo C.A.	0212 6328761, 0142299620
	Priority Car Care C.A.	0212 2350018 0166189164
	S.P	0212-9540783
	Automecanica Marina 89 C.A.	0212 6901112
	TALLERES ROCAUTO c.a.	0212-2377540
	PIÑANGO 2000	0212-5743015
	ALARCAR, ANACAR	0212-6311284
	Distribuidora turbo electric C.A.	012 7306819, 0212 6622654
	Auto Boutique Las Fuentes	0212 4627097
	Inversiones Auto Luiswui C.A.	0212 2517634
	AUTO TALLERES MARRERO	0212-616241
	Frios Paraiso S.R.L.	0212 4612434, 4515572
	Multiservicios Sport Car's	0212 4816528
	LiderAuto uno C.A.	0212 4835244
	Auto loi C.A.	02 2639935
	ELECTRO AUTO GALILEO	0212-2655829
	G. D' Alessandro, G.A.	0212 4511910
	Pedro Nel Benz s.r.l.	0212 2657466
	REPRESENTACIONES JRCARS s.r.l.	0212-7633992
	Friolectric Los Marchena	0212 8722263
	Silenciadores Sogosil C.A.	0212 2419714
	Electroauto	0212 2345491
	MAURY	0212-8720071
	HONDANIS	0212-9528926
	ARAUCA	0212-9523720
	Automecanica Sarcos	014 9227290, 0212 2394464
	Electro Cars Los Naranjos C.A.	0212 9852803
	automecanica Las Palmas, s.r.l.	0212 2343143
	Multi Servicios Genaro s.r.l.	0212 6319666
	NUEVA GRANADA	0212-6320490
	Articars	0212 2673492
	Auto Cam, C.A.	0212 6331189
	Gover S.A.	0212 6332711, 6330011
	Autos Reyca's C.A.	0212 2673637, 2667784, 26657
	AIRE ACONDICIONADO AUTOMOTRIZ caracas	0212-7940130
	GASTELLANA MOTORS	0212-2681530

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Caracas	AFY universal de Refrigeracion	014 2202625, 014 2168017
	Electro Auto ASPAS s.r.l.	0212-6614860
	Cars Padron	0212 2438146
	VITOPI s.r.l.	0212-6336131
	Auto Servicio Estadium	0212 6931880
	AUTOMOTRIZ A&G	0212-711023
	Refrigeracion Automotriz Caracas	012 2382348
	MERCEDES-BENZ	0212-2382282
	Ceda C.A.	0212 2662777, 2664770
	Rotaria	0212 4725849
	ROYAL CROWN MOTORS	014 2499113
	EDUSVE	0212-8705431
	AUTO FRESCO	0212-6828053
	ELECTRO AUTO CHIZPA	0212-2668086
	El Rey del Silenciador	0212 2636252
	Mecanica Country Inyeccion 2000, C.A.	0212 2341478
	Electro Frio Garcia	0212 6323206
	EDAF MUFICARS C.A	0212-6334623
ANDMARJOS	0212-9514978	
Caracas1	Mecanica FELIX DOMINGUEZ	0212-7610319
Churuguara	ELECTRO AUTO PIMPO T.V.	014-5203347
Coro	CLIMA CORD	069-518770
Guacara	Airca	0245 5645972
	Auto Refrigeración "Giuse Car's	014 4082948
	Todo Auto	
Guarenas	Multiservicio EMIL s.r.l.	014 917 8763
	Auto Frio CECI s.r.l.	014 9259629
Guatire	Capitan Frio 2000	014 2129159
	Servi- Auto Ulloa, C.A.	0212 3414849
	Serviteca Industrial	0212 3411823
	R Frio 2620 C.A.	014 9101995
Guayana	TECNO AIRE CENTER	322593
	AUTOFRIO VASQUEZ	014-8625259
	RODRIGUEZ CRUZ	086-235008
	RESERGEN UNARE	086-514734 521002
	ALFA GUAYANA C.A	016-8897325
	FRIGYCAR	086-220366
	FRIOCAR'S MORA	014-8637649
	REFRICENTER ALDINI	086-237582
	REFRICOLD C.A	086-232415
La Victoria	INVERSIONES FRIO CAR	
	SUPER AIRE C.A	012 7548920

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
La Victoria	MECANICA TTELIA	
	Inversora Frio Cars S.R.L.	0244 2222427
	Electro Auto y Aire Acondicionado "Arlana"	014 9474454
Los Guayos	Multiservicio Williams, C.A.	014 421244
Los Teques	Multiservicios Fryicars, C.A.	0212 3215691
	Electro Auto Pepe	0212 3214186
	Refrimóvil Los Teques	0212 3228212
	Refritoco	0212 3236113
	Multiservicios Lino Car's	0212 3211864
	Radiadores Hec - Car s.r.l.	0212 3225551
Maracaibo	SAMERCA	
	SERFRIO CAR	014-6121046
	auto refrigeracion ITALFRIO	061-833434
	WILMER AUTO Refrigeracion	018-6172431
	Multiservicio KIKO	016 4604493
	MAXICOOL	061-496970
	S&D refrigeracion	018-6170502
	RED LAGO C.A.	016-8610357
	INVERSIONES KIKOS	061-560266
	Auto Refrigeracion Alonso	014-6144669
	Cauchos Autolandia	061-348843
	Auto Frio FREDDY	061-536256
	Auto Aire EL MOCHO	014-9873207
	GERFRIO C.A.	061-367835
	REFRI - LEC	061-650759
	Auto Aires El Pintao	061-591608
	Representaciones E.L.P.A.	018-6173637
	Auto Frio La LIMPIA	061-565022
	CORDERO PRIETO C.A.	014-6071642
	AUTO FRIO EL MOROCHO C.A.	061-349560
	Auto Aire Heberto	014-9621530
	GT ALARM Auto Moto Casa	061-516167
	AUTOLAVADO SERVICE	061-550971
	Auto Refrigeración El Diamante (Taller)	061 213208
	REFRI AUTO OSCAR S.R.L.	014-9662127
	C.I.R.A. Ca	018-6054241
	Autoservicios Occidentales C.A.	061-590387
	Auto Aire Hernan	
	Recars C.A.	061-593485
	AUTO REFRIGERACION ALFRYNEL	061-517648
	Auto Servicio GUANIPA Y ANGEL	016-8657501
	Multiservicios EL ESPACIALISTA	061-594690

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Maracaibo	Auto Aire El triunfo	016-8635075
	Multiservicio GREIS MAR	061-496070
	Auto Aire Europa	014-6073007
	Refri Auto UNION	014-9658999
	Talleres Parra s.r.l.	061 976650, 016 8646588
	Auto Refrigeración MV	014 9677049
	Auto Aire Jose	061-525820
	FRIOTED taller	061-591905 864487
	Centro Servicio El Carmen	061-528051
	Auto Aires El Coreano	
	AUTO AIRE MARACAIBO S.R.L.	016 4614659
	MECANICA 2000 C.A.	061-575147
	Taller Renasa	061-987810
	TALLER AUTOMOTRIZ FULL CAR	014-6136257
	FRIOTED	061-864487
	Electro Auto AMAG c.a.	061-984125
	CAR'S LIGHT	016-760596
	Auto Aire RAUL	061-984752
	Auto Refrigeracion RICHARD	061-236720
	AUTO AIRE FREDDY	018-6160256
	AIRCA Maracaibo c.a.	061-220311
	Inversiones Araque Maracaibo	061-652430
	Frio Edgar CA	061-869571
Maracay	LARRY J.V.S.	014 4430165
	AUTOAIRE NEVADA S.R.L.	0244 474874
	Auto - Frio Glaciar Artico s.r.l.	016 8496176
	SU AUTO FRIO	014-9478724
	AMERICAN TOYO	674555
	TODO CARS	462314
	TALLER RAMIREZ 2000	014 3545375
	PERFEC-FRIO	346998
	Maxcold	0243 3633860, 012 7524591
	ESCALONA C.A	014 4603592 (043) 463234
	AUTO AIRE NINO	043-720115
	MIYACAR'S C.A	014-5900918
	ALVIS MOTORS	014-5866740
	SERVICIO GLACIAR S.R.L	331220
	AUTO AIRES MG	
	Frlomar	016 8430978
	AUTO SERVICIO W.R.L	012 7534200
	ELECTRO AUTO MI DINAMO	043-543519
	Auto Aire Hermes	0243 3351363

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Maracay	Clinicold 2	043-359045
	Su Aire Nevada S.R.L.	0243 3474874
	Inversiones Eris	0243 3514922
	LA CHISPA	461460
	AUTO FRIO GOMEZ	014 4619669
	Euro Aire	0243 3358969
	AUTOMESIS	
	REFRIGERACION BRANCO	014 3677347
	PARAMACONI 2000	339319
	R.R	014 4454180
	ARTICAR C.A	014 3451131
	ELECTRO MEC BARUCH	014-5903424
	Clinicold	0243 3467395
	FRIO AUTO	
	ELECTRO AUTO FRANCO	044-356714
Mariara	Refrigeración Automotriz Mariara	
MATURIN	SUPER FRIO A1 C.A.	091-427711
	VIENTO COLAO	091-414532
	HAPPY COLD S.R.L.	091411847
	TALLER SAN BENITO C.A.	091-414151
	AUTO RUSTICO EL PICHON C.A.	091-439120
	AUTO REFRIGERACION EL CLIMA C.A. (TALLER)	091-410342
	AMERICO C.A.	091-427216
	MULTIFRIOS CARUPANO	091-433594
	MULTIGUARA C.A.	091-438380
	NICOLA C.A.	091-429563
	AUTO REFRIGERACION VENEZUELA	
	JULIO CLIMA C.A.	091-426404
	AUTO REFRIGERACION WILL C.A.	091-435019
	MORON	YAGUARA CAR'S
Naguanagua	Auto Refrigeración	0241 8664412
PTO CABELLO	TECNO ELECTRIC 2000	0242-3644951
	ELECTROAUTO CHISPAZO	016-6420622
	REFRIGERACION CRISTIAN	0242-610659
	REFRIGERACION MARTINEZ	0242-3615554
Pto Fijo	REFRIAUTO C.A. Sucursal I	086-511682
	REFRIAUTO C.A. Sucursal II	229047
	ELECTRO FRIO ORI-VEN C.A.	069-467871
	AIRE CENTER CORPORATION	086-524392
	LA ESCARCHA	
	ED-ROGA C.A.	014-6915188
	AUTO COOL S.R.L.	069-468633

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Pto Fijo	AUTO REFRIGERACIO FERNANDO	014-6916085
	AUTO REFRIGERACION EL PUNTO	069-459381
	AUTO FRIO SAN LUIS	016-7695127
	AUTO SERVICIO ROMERO	069-457165
	TALLER FRIO NAV	069-450468
	AUTO FRIO CENTER	069-459891
Pto La Cruz	Refrigeración Alejandro	014 8048908
	Frio Pullman	016 8806268
	Rebobinadores Bahía	0281 2663759
	Servicios y Mantenimiento Gustavo	0281 2866915
	Radiadores Vistamar	016 4815377
	Electroauto Stop	0281 2868485
	Refrigeracion Automotriz Fuenher	0281 2656077
	Refrimovil Pto la Cruz	0281 2698635
Pto Ordaz	Automotriz y Corporación MC Cord, s.r.l	0281-661765
	REFRIAUTO ZANINI	233760
	Electro Refrigeración Automotriz TOVAR, C.A	086-230730
	RESERGEN c.a.	231669
San Cristobal	SOLUTIONS C.A.	014-7870228
	REFRIGERACION AUTOMOTRIZ, C.A.	518336
	PROIMAT (SAN CRISTOBAL)	076-445229
	AIRECA (SAN CRISTOBAL)	076-436014
	TALLER ELECTRO AUTO PROFESIONAL S.R.L. (SAN C	076-558724
	LA QUINCE (SAN CRISTOBAL)	076-431718
	Multiservicios Arbieter	076- 464236
	Electro auto El Caballero s.r.l.	076 416908
	ELECTRO AUTO CUMANA (SAN CRISTOBAL)	076-448214
	MULTISERVICIOS INDIANAPOLIS (TALLER)	076-420844
	Auto Frio Los Andes	014 7001905
	ELECTRO AUTO RANGEL (SAN CRISTOBAL)	076-560467
	Gabi - Aire	079 478373
	ELECTRO MECANICA VALERO (SAN CRISTOBAL)	014-7210014
	REFRIGERACION VISAC (SAN CRISTOBAL)	076-554538
Leo Naire	076- 477156	
La Casa del Radiador	076- 468594	
MULTISERVICIOS COLLAZO	016-8766734	
Multiservicios LA 8VA	cel 014- 7071886	
Servi Car	079 419472	
San Cristobal.	Electro Auto Don Jorge	076- 464465
San Felix	REFRIGERACION BOLIVAR surcursal 1	
	Inversiones Frio auto	086-40397
	TECNISERVICIOS PIARCAR C. A. Sucursal 2	014-8771767

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
San Felix	TECNO AIRE EL PAVO	014-8898139
	Refrigeracion Bolivar Sucursal 2	
	Refriauto Alaska San Felix	066-711927
San Joaquin	Auto Refrigeración Los Paramos	0245 5521056
Valencia	Electro Mecanica La Clancia	012-7412499
	MULTISERVICIOS MICHEL	0241-8246246
	BENAVIDEZ Y ALVAREZ C.A.	0241-8367494
	Taller Abraham s.r.l.	0241 8710309
	Auto Servicios F. I. Valencia	0241-8780105
	Auto Frenos Michel	0241-8246246
	Multiservicio Ojeda 1	
	AUTO REFRIGERACION RAMY VALENCIA	014 4208316
	AIRE MAR	0241-8471310
	REFRI AIRE S.R.L. (TALLER)	014 4715890
	Automotriz Fox C.A.	0241 8224441
	Taller Los Amigos C.A.	0241 8710513
	AUTO REFRIGERACION NAGUANAGUA S.R.L	014 4086132
	Multiservicios 404	014 9418951
	AUTO AIRE ARANZAZU	0241-8533725
	Radiadores Vera Luna	0241 8338765
	Auto Refrigeración Tecnifrio Valencia	016 7672944
	Francis Motors S.R.L.	0241 8714384, 014 4085472
	Mister Frio	0241-8226268
	TALLER ELECTROMECHANICO CESAR S.R.L.	0241-8572929
	TECNO CLIMA S.R.L.	014 4296945
	Multi Servicios y Radiadores 2000 s.r.l. Valencia	014-4228654
	MULTISERVICIOS LOS GUAYABITOS	0241-8674179
	Taller RADAIRE C.A.	0241-784728
	RADIADORES LA COLMENA	0241-8332401
	Distribuciones Edmundo Moreno S.R.L.	016 7447054
	FRIO CARS C.A.	0241-5356667
	Refriauto Luis	014 4256848
	AUTO REFRI NAGUANAGUA	0241-8672095
	Electro Mecanica MAVI s.r.l.	0241-357280
	Multi Servicios Valencia	014 5850775
	AUTO REFRIGERACION ALEX	0241-8586250
	MULTISERVICIO OJEDA 2	0241-8320592
	EFRI CARLOS	014 4289873
	multiservicio Gardet	014 5853533
	AUTO REFRIGERACION J. CALDERON	016-8414623
	H Díaz Motor's, C.A.	016 6484918
	M.T. Accesorios C.A.	0241 8574916

<i>City</i>	<i>Name Shop Service</i>	<i>Phone</i>
Valencia	PALPHA MOTOR	0241-8662283
	Serteauto La Trinidad C.A.	016 4418491
	RANSY	014 4208316
	AUTO REFRIGERACION MICHELENA C.A.	0241-8571497
	TECNO SERVICIO NORTE	016481719
	AUTO REFRIGERACIO JOSE ANIBAL	0241-8592831
	Refri Alre s.r.l.	014 4715890
	Wal Cars	012 7408369
	RETRACAM	0241-8329340
	Taller Burgos	014 45441045
	Vip Car's	0241 8240061
	Centro Automotriz Hectorcars	0241 8212027
	AIRE ACONDICIONADO LAS MERCEDES	0241-8660748
	Le Mans	0241 8589123, 0167448480
	Motor Car's	
	Freites s.r.l.	0241 8250669
	TRONCOMOVIL S.R.L.	0241-8660607
	AIRE ACONDICIONADO AUTOMOTRIZ (Valencia)	016 4412630
	SERVI. TEC. UNIDOS	0241-8587825
	8'A MOTORS	0241-8356341
	AUTO FRIO EL NEGRO	014 4261911
	Auto Refrigeración Falcon	016 7311320
	Auto Refrigeracion Frank	014 4416814
	ACCEL C.A	0241-8593229
CLIMATEC C.A.	0241-8580103 - 8580260	
Villa de Cura	Clinicar's S.R.L.	016 4408876

APPENDIX 2:

COUNTRY PROGRAM OF VENEZUELA

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**United Nations
Environment
Programme**

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**Executive Committee of
the Multilateral Fund for the
Implementation of the Montreal Protocol**

**Seventeenth Meeting
Montreal, 26-28 July 1995**

COUNTRY PROGRAMME: VENEZUELA

This document consists of:

- **Comments and Recommendations of the Fund Secretariat**
- **Country Programme Evaluation Sheet (prepared by the Fund Secretariat)**
- **Project proposals submitted with the Country Programme**

COMMENTS AND RECOMMENDATIONS OF THE FUND SECRETARIAT**COMMENTS**

1. **The Country Programme conforms to the format of the approved guidelines.**
2. **In 1994, the total consumption of controlled substances in Venezuela was 3,273 ODP tonnes. In the same year, Venezuela produced 6,150 tonnes of controlled substances at Produven, distributed as follows: 919.1 tonnes of CFC-11, 3,700.8 tonnes of CFC-12, and 1,530.4 tonnes of HCFC-22. Of the total production, Venezuela exported 1,817.5 tonnes.**
3. **About 80 per cent of the total consumption of ODS is in the refrigeration sector, 10.3 per cent in foams and 9.5 per cent in solvents.**
4. **The proposed strategy by the Government is based on: (i) proceeding with an early technological and industrial conversion to prevent any problem with supplies of controlled substances and to ensure an early assimilation of new alternative technologies; (ii) giving priority to the conversion of the refrigeration sector; and (iii) producing and exporting ODS replacement chemicals, preferably with zero ODP potential, and for use in the refrigeration sector.**
5. **Based on the Montreal Protocol's principles that during the grace period there are no restrictions to export CFCs and HCFCs to other Article 5 countries, Venezuela will continue to produce these chemicals. The production volume will depend on the national consumption and on the demand of other Article 5 countries.**
6. **A project for the conversion of the CFCs production plant to HFC-134a is under preparation. The incremental cost for the conversion has been estimated in the country programme at US \$57.5 million.**
7. **The country programme contains detailed lists with projects already implemented, projects being implemented, projects to be presented for consideration by the Executive Committee; projects under preparation; projects identified; and projects pre-identified. The total incremental costs associated with these projects are estimated at US \$84.46 million.**
8. **The Country Programme includes the following project proposals for which funding is requested:**
 - **Institutional strengthening (US \$326,028):** The project relates to the renewal of the support provided to FONDOIN for the period 1996-1998. In October 1992, the Committee allocated US \$100,000, through UNDP, for institutional strengthening and additional US \$229,192 in March 1993. Due to the special nature of this type of proposal, the Secretariat is requesting Executive Committee guidance on the treatment of such proposals.

- Workshop for identification and preparation of project proposals in the foam and solvent sectors (US \$36,390). The country programme indicates that conversion to non-ODS technologies in these two sectors will start in 1996-1998.
- National workshop on the implementation of ODS replacement technologies (US \$10,790): Taking into consideration the national workshops and technical assistance programmes under implementation in the halon and refrigeration sectors which represent nearly 80 per cent of the total ODS consumption in the country; the investment projects approved for the conversion to alternative technologies in the refrigeration and foam industries in Venezuela; and the other regional workshops and training programmes already approved, eligibility of this activity is in doubt.
- Pilot project on recovery and recycling in central air conditioning systems (US \$285,120). The Secretariat discussed the proposal with UNDP as the agency selected by the Government to implement the project. UNDP agreed to defer the proposal and develop a full scale project, with emphasis being placed on negative pressure chillers, and taking into account activities already approved in the country.

RECOMMENDATIONS

9. The Fund Secretariat recommends as follows:

10. To approve the Venezuela Country Programme. Approval of the Country Programme does not denote approval of the projects identified therein or their funding levels.

11. In accordance with the Executive Committee decision on implementation of country programmes (UNEP/OzL.Pro/ExCom/10/40, para 135), to request the Government of Venezuela to provide information on the progress of implementation of the country programme within one year of its approval, and annually each subsequent year. Using the approved format, the initial report, covering the period 1 August 1995 to 31 December 1996, should be submitted to the Fund Secretariat not later than 31 March 1997.

12. The Secretariat further recommends as follows:

- To defer approval of the renewal of the institutional strengthening project pending a decision by the Committee on procedures on how to treat such proposals and to determine the basis of their funding levels;
- To disapprove the workshop for identification and preparation of project proposals in the foam and solvent sectors since the identification must have taken place during the preparation of the Country Programme;
- Not to approve the request for the national workshop on the implementation of ODS replacement technologies; and
- To defer the proposal on the pilot project on recovery and recycling in central air conditioning systems and to request UNDP to develop a full scale project, with emphasis being placed on negative pressure chillers, and taking into account activities already approved in the country.

VENEZUELA COUNTRY PROGRAMME EVALUATION SHEET

National Implementing Agency: Venezuelan Fund for Industrial and Technology Conversion (FONDOIN)

Status of ratification of the Vienna Convention and the Montreal Protocol

	Signature	Ratification	Entry Force
Vienna Convention (1985)		01/Sep/88	29/Nov/88
Montreal Protocol (1987)	16/Sep/87	06/Fev/89	07/May/89
London Amendment (1990)		29/Jul/93	27/Oct/93
Copenhagen Amendment (1992)			

Production of controlled substances: 6,150 metric tonnes (mt)

*Consumption of controlled substances (1994): 3,567.8 metric tonnes
(excluding methyl bromide) 3,194.1 weighted tonnes (ODP)*

Substance (ton)	CFC						Halon			Solvents		M-Br
	11	12	113	114	115	Total	1211	1301	Total	CTC	MCF	Total
ODS	379.9	2,577.0	59.1	17.6	118.6	3,152.2		4.0	4.0	20.0	391.6	411.6
ODP	379.9	2,577.0	47.3	17.6	71.2	3,092.9		40.0	40.0	22.0	39.2	61.2

Source: Country Programme (1995)

Distribution of ODP by substance:

CFC: 96.8% Halon: 1.3% CTC, MCF: 1.9%

Distribution of ODP by sector:

Sector:	Aerosol	Foam	Halon	Refrig.	Solvent
Consumption (tonnes):	25.2	512.3	40.0	2,508.2	108.5
Percent of total:	0.8%	16.0%	1.3%	78.5%	1.9%

Note: 6,036 tonnes of CTC were used as raw material for the CFC production

Country Programme

Duration of country programme: 4 years (1995-1998)

ODS phase-out target:

Complete phase out by 2000

Phase-out priority area:

Refrigeration sector

Cost of activities in country programme: \$84,456,738

Strategy:

The strategy proposed by the Govt. is to have an organized conversion process, giving precedence to specific sectors, striving to convert all companies simultaneously. The strategy is based on proceeding with an early industrial conversion, avoiding problems with supplies of ODS, ensuring an early assimilation of alternative technologies; giving priority to the refrigeration sector; and producing and exporting ODS replacement substances.

COUNTRY PROGRAM COVER SHEET

COUNTRY:

VENEZUELA

LEAD NATIONAL AGENCY:

Fondo Venezolano de Reconversión
Industrial y Tecnológica (FONDOIN)

PERIOD COVERED:

1995-1998

1. Phase Out Schedule.

Substances	Current Consumption (Tonnes x ODP in 1994)	Planned total consumption till phase-out (Tonnes x ODP)	Planned year phase-out
CFC-11	379.9	2,013	2010
CFC-12	2,577.0	16,992	2010
CFC-113	47.3	94	2010
CFC-114	17.6	82	2010
CFC-115	71.2	449	2010
Halon 1211	0.0	0	2010
Halon 1301	40.0	0	2010
MCF	39.2	290	2015
CTC	22.0	72	2010
Total	3,194.2	19,992	

EXECUTIVE SUMMARY

1. Venezuela ratified the Montreal Protocol on February 6th, 1989 and the London Amendments on July 29th, 1993. Venezuela is a country operating under Article 5, paragraph 1 of the Protocol. In 1994 the ODS per capita consumption was 146 grams.
2. The Program of Venezuela is for the period 1995-1998 and reflects the compromise of the Government and the Private Sector, represented in the Board of Directors of FONDOIN, to implement the actions contained in the Program oriented to the acceleration in the ODS phase-out in the country with MPMF and implementing agencies technical and financial cooperation.
3. The Program of Venezuela was prepared by FONDOIN with the MPMF financial support.
4. The ODS consumption in Venezuela in 1994 was 4,973.8 MT, broken down as follows:

Venezuela: ODS consumption in 1994 by substances and source

(In tonnes and ODP tonnes)

Substances	Production	Imports	Exports	Consumption	Consumption in ODS tonnes
Annex A. Group 1					
CFC-11	919.1	0.0	539.2	379.9	379.9
CFC-12	3,700.8	0.0	1,123.8	2,577.0	2,577.0
CFC-113	0.0	59.1	0.0	59.1	47.3
CFC-114	0.0	17.6	0.0	17.6	17.6
CFC-115	0.0	138.0	19.4	118.6	71.2
Annex A. Group 2					
Halon 1301	0.0	4.0	0.0	4.0	40.0
Annex B. Group 2					
Carbon Tetrachloride	0.0	6,056.0	0.0	20.0	22.0
Annex B. Group 3					
Methyl chloroform	0.0	391.6	0.0	391.6	39.2
Annex C					
HCFC-22	1,530.4	0.0	135.1	1,395.3	78.7
HCFC-123	0.0	48.8	0.0	7.2	0.2
HCFC-141b	0.0	0.1	0.0	0.1	0.0
Annex E					
Methyl bromide	0.0	3.4	0.0	3.4	2.4
Total	8,150.3	682.6	1,817.5	4,973.8	3,273.5

¹6,036.0 MT were used as raw material for the CFCs production.

5. The consumption by sectors, including HCFCs and methyl bromide, was as follows: Refrigeration and Air Conditioning 79.58%; Foams 10.3%; Solvents 9.46%; Aerosols 0.51%; Other Uses 0.15%.

6. Venezuela also is a ODS producer. In 1994 production amounted for 919.1 MT of CFC-11, 3,700.8 MT of CFC-12 and 1,530.4 MT of HCFC-22. The only ODS producer is PRODUVEN, a joint-venture owned 50% by the Government and 50% by Elf-Atochem from France.

7. The ODS unrestricted consumption would amount 9,465.7 MT in the year 2.010, while production would reach in year 2.000 its total capacity of 10,000 MT per year.

8. FONDOIN is the institution created by the Government of Venezuela to coordinate the ODS production and consumption phase-out process in the country. FONDOIN is the official link with the MPMF. MRE retains its functions regarding external representation, but usually delegates in FONDOIN, after consultations and depending on the case, the conduction of negotiations in the Montreal Protocol bodies. MARNR is responsible for environmental regulations and controls, but usually acts, in ODS matters, under request of FONDOIN. The link with the Ozone Secretariat corresponds to MRE and MARNR.

9. The Government general policy framework is the following:

- The government, through FONDOIN, provides ODS producers and users with all the information they need to make decisions, or the means to acquire it, particularly regarding the legal, institutional, technologic and economic framework of the ODS in which they must perform.
- The decisions on how and when to convert are, in principle, the responsibility of ODS producers and users. If the companies require technical and financial assistance to prepare and carry out their projects, FONDOIN channels them through the implementing agencies.
- FONDOIN promotes an accelerated conversion to substitute through motivation campaigns directed to ODS producers and users. However, the terms and schedules in force are those established in the Montreal Protocol and in the Protocol Amendments ratified by the laws of the Republic, so early conversion is voluntary.
- The government, through MARNR, monitors ODS production, imports, exports and consumption through foreign trade compulsory records and through information provided by ODS producers and distributors. Annual imports are limited to an equivalent of the previous year's amounts, except in fully justified cases.
- Bans on the use of ODS are only issued once the sectors of sub-sectors concerned have totally or mostly converted to substitutes.

10. The strategy is based on three lines of action:

- It is necessary to proceed with an early technological and industrial conversion to prevent supply problems in the different sectors that use ODS, and to ensure an early assimilation of new technologies, all of this at a lower cost for the country and for the MPMF.
- Give priority to conversion in refrigeration and air conditioning.
- It is convenient to produce and export ODS replacements, preferably final zero ODP replacements, that are commercially available, and are used as refrigerants.

11. The basic element of the strategy is to have a conversion process that is as organized as possible. This implies giving precedence to specific sectors at a particular moment or period, striving to convert all companies simultaneously, to avoid as much as possible a noticeable change in their relative position in the market, due to the implementation of the Montreal Protocol. Once most of the companies phase out ODS, regulations that restrict the use of ODS in the sector would be established, whether in products manufactured locally or in imported products, which will force the lagging companies to convert. In order to choose which will be given precedence, FONDOIN has taken into account the presence of all or some of the following factors:

- A high ODS consumption, so that cost-effectiveness is relatively high at the sector or subsector level.
- Availability of proven replacements in the market, particularly those with no ODP, to avoid intermediate conversions.
- The presence of factors that cannot be controlled which force an early conversion, for example a lack of foreign supplies or the effect of corporative policies enforced by multinational companies worldwide.

12. Up to now, the following sectors or subsectors have been given precedence:

- ◆ Air conditioning, particularly:
 - Conversion and replacement of chillers.
 - Conversion of plants that manufacture mobile air conditioning equipment and their components.
 - Recovery and recycling of refrigerants in mobile air conditioning and chillers.
- ◆ Fire protection, particularly recovery, recycling and halon bank.

- ◆ **Domestic and commercial refrigeration, particularly:**
 - **Conversion of plants that manufacture domestic and commercial refrigerators.**
 - **Recovery, recycling and reclamation of refrigerants in domestic and commercial refrigeration.**
- ◆ **Foams, particularly conversion of plants that manufacture sheets and packaging of expanded polystyrene.**

13. As the previous sectors and subsectors, which concentrate almost all the present ODS consumption in Venezuela, have advanced satisfactorily, more efforts will focus on the following areas:

- **Other air conditioners.**
- **Other foams.**
- **Solvents.**
- **Sterilants.**
- **Miscellaneous.**
- **ODS production.**
- **ODS destruction.**

In the solvents and aerosols sectors there has been a spontaneous replacement of ODS, which implies that conversion could go on without a significant support from FONDOIN and the MPMF, therefore it is not foreseen giving precedence to those sectors, except if special situations are identified which deserve it.

14. The Government prepared an Action Plan, included in the Program Cover Sheet, that essentially has been completed. Its priorities have been the following:

- **Preparation of a national study on ODS production and consumption.**
- **Creation of a national entity to coordinate and facilitate the ODS phase out process.**
- **Establishment of a system to monitor ODS production, imports, exports and consumption.**

- Adaptation of national laws to the terms and demands of the Montreal Protocol, the Amendments ratified by the Congress of the Republic and the decisions of the Parties.
- Adoption of strategic guidelines for technological and industrial conversion.
- Preparation of programs for priority sectors.
- Promotion of early conversion in priority sectors.

15. It is noteworthy that although this strategy has been implemented without setbacks, at present we face serious obstacles due to the financial problems of the MPMF and the resulting restrictions imposed by its Executive Committee in considering and approving the new projects. Given the diversity of companies, particularly in refrigeration and foams, some of them may not reach the cost-effectiveness ratio to qualify, which would hamper the simultaneous conversion of the sector and would introduce significant distortions in the market. Given this situation, FONDOIN is analyzing the possibility of postponing conversions until these restrictions are over, as well as the possibility of using other financial mechanisms.

16. The Program does not have formal phase out goals that are different from those agreed to in the Protocol and in the Amendments ratified by the law, because that is the jurisdiction of the Congress of the Republic. Nevertheless, Government action will translate into a faster reduction of ODS consumption. Likewise, it is expected that the spontaneous reduction of ODS consumption will persist, due to economic and market reasons. Regarding production, the Government of Venezuela interprets the Montreal Protocol in the sense that during the grace period, there are no restrictions to export CFCs and HCFCs to other Article 5 countries. Therefore, production levels will depend not only on the reduction of internal consumption, but also on the demand of other Article 5 countries. In this sense, it must be noted that between 1986 and 1994, Venezuela's ODS exports, mostly to Article 5 countries, have increased at an average interannual rate of 14.4%, and that there has been an acceleration in the 90's.

17. If the technical and financial cooperation of the MPMF continues, the Government considers that the progressive phase out goals will be reached much sooner than the term establish by the Protocol and its Amendments. Regarding this, it is expected that in 1998 the use of CFCs will be completely replaced in new air conditioning units, using it only to serve the existing park, where a significant proportion will be recycled refrigerants. If the financial assistance of the MPMF continues, by that year the use of CFCs will have stopped in new domestic refrigerators, and decreased by 70% in commercial refrigerators. The use of recycled CFCs is foreseen to service units, but in a smaller proportion than in air conditioning. In foams, it is expected to eliminate the use of CFC-12 by 1998. Regarding CFC-11, it will be eliminated in domestic refrigerators and reduced by 70% in commercial refrigerators. The reduction cannot be estimated for others uses, nor for the solvent sector. However, in the latter case it is possible that the spontaneous reduction in use of the last

years will continue. Finally, aerosols reduction will depend on the development of replacements for the remaining uses, for which there are no acceptable replacements yet.

18. The Board of Directors of FONDOIN considered that, regardless of the Government's commitment to accelerate the reduction of ODS consumption in the country, it was not appropriate to formalize in the Program of Venezuela different terms from those established in the London Amendment, because that would imply invading the jurisdiction of the Legislative Power. It is not appropriate either to present charts or graphs based on the preceding paragraphs.

19. The total costs of the Program for the period 1995-1998 will be US\$ 149.7 millions, of which it is expected that 55% will be provided by the MPMF. The list of specific projects is included in the Program Cover Sheet.

20. FONDOIN's follow up of projects will continue the same as now. In this respect, the Administration prepares bimonthly reports for the Board of Directors, as well as an Annual Report to be presented to the Assembly the first quarter of each fiscal year. These reports are sent also to the implementing agencies and the MPMF Secretariat. The evaluation of Program implementation will be initiated by FONDOIN at the end of each fiscal year. An comprehensive report, including data provided by MARNR and PRODUVEN, will be able the second quarter of each fiscal year. These reports will consolidate data on ODS production, imports, exports and consumption presented by MRE and MARNR to the Ozone Secretariat and data on ODS phase out and recycling obtained by FONDOIN through project monitoring.

Country: VENEZUELA

Implementation Agency: UNDP

Project Title: Renewal of the Institutional Strengthening under the Montreal Protocol – Phase 5

In current business plan: Yes

ODS use in country:

Baseline (1995-1997)	3,350 ODP tonnes (Annex A, Group 1)
Current (1999)	2,215 ODP tonnes (Annex A, Group I)

Project duration: 2 years (July 2000 – July 2002)

Total project cost: US\$ 219,000

Requested grant: US\$ 219,000

National Coordinating Agency: FONDOIN

PROJECT SUMMARY

This project is submitted for the extension of the Institutional Strengthening Support of FONDOIN for two additional years of operation. The Venezuelan Government will continue in its effort to comply with the obligations of the Montreal Protocol and totally eliminate the ODS production and consumption. The renewal of this project will allow FONDOIN to continue with the activities, to accomplish the country's programme goals and to comply with the Montreal Protocol.

Venezuela ratified the Montreal Protocol in 1998, the London Amendment in 1996 and the Copenhagen Amendment in 1997. Venezuela is currently in the process of ratifying the Montreal Amendment. The national regulations have come forward faster in relation to the policies to be adopted to control ODS consumption. The first national regulation in conformity with the Montreal Protocol Amendment entered into force in 1991. In 1992 this Decree was reviewed and adjusted to the London Amendment. Then in 1999, it was one more reviewed and adjusted to the Copenhagen and Montreal Amendments, establishing the baseline for CFCs of Group I, Annex A. With this Decree the import and consumption of the Methyl Bromide was banned in anticipation.

During these last years FONDOIN has mainly worked towards the refrigeration, air conditioning and foam sectors; however, last year after FONDOIN's restructuring, our engineers have contacted 18 new firms mainly from the foam sector, which are located outside the capital, and which have never been contacted before.

Prepared by: National Ozone Unit/FONDOIN

Date: 14 March 2000

FONDOIN

During these last years FONDOIN has mainly worked towards the refrigeration, air conditioning and foam sectors; however, last year after FONDOIN's restructuring, our engineers have contacted 18 new firms mainly from the foam sector, which are located outside the capital, and which have never been contacted before.

The Halon Bank is functioning regularly since 1997. The CFC12 recuperation in automobile air conditioning repair shops have continued successfully since 1994. Last year the Center for Refrigerant Regeneration together with 6 Regional Centers for Recuperation and Recycling have started operations. The goal of the program is to train at least 300 technicians on refrigerant recuperation.

At the same time this year, FONDOIN has satisfactorily verify that CFC 11 and 12 consumption decreased from 3212 tons in 1998 to 2240 tons in 1999, that is a 30% drop. This result can be attributed to the culmination of a series of projects initiated in previous years and also to the application of the new Decree, which establishes the maximum levels of production and import. Despite these positive results, we feel that we still have some aspects to work on, such as the training of customs agents and the evaluation of the import market related to smuggling and fraudulent imports. This year our efforts will be directed towards the identification of these consumers. If this year trend continues and contraband is effectively controlled, Venezuela will have no problems in fully complying with the Montreal Protocol and will probably achieve levels under the limits.

The following two years will be crucial in reducing consumption. We know we have to make our best efforts to this respect, and it is our goal that the industrial sector will be converted for 2005, so that there will only be consumption for reposition, which should be supplied in part by the recycled CFC.

Impact of the Project on the Country's Obligations with the Montreal Protocol

The institutional strengthening is necessary to help Venezuela meet the country's obligations with the Montreal Protocol and progress in the elimination of ODS consumption.

PROGRESS OF IMPLEMENTATION OF COUNTRY PROGRAMMES

A. Data on Controlled Substances (in METRIC TONNES)

COUNTRY: Venezuela YEAR: January to December of the year 2000

Substance	Aerosol	Foam	Fire fighting	Refrigeration manufact. service	Solvent	Process agent	Fumigant non-QPS	Tobacco fluffing	Sterilant	Total	Imports	Exports	Production	Explanations
Annex A, Group I														
CFC-11	11,20	505,00	—	3,20	0,00	—	—	0,00	0,00	610,30	285,60	136,00	460,00	
CFC-12	15,00	16,00	—	39,40	2.007,00	—	—	—	0,00	2.078,40	1.038,06	780,66	1821,00	
CFC-113	—	—	—	—	20,34	0,00	—	—	—	20,34	20,34	0,00	0,00	
CFC-114	—	—	—	0,00	0,00	—	—	—	—	0,00	0,00	0,00	0,00	
CFC-115	—	—	—	0,00	0,32	—	—	—	—	0,32	0,32	0,00	0,00	
Sub-Total	26,20	523,00	—	41,60	2.038,28	20,34	0,00	0,00	0,00	2.709,43	1.344,32	915,66	2.281,00	
Annex A, Group II														
Halon 1211	—	—	0,00	—	—	—	—	—	—	0,00	0,00	0,00	0,00	
Halon 1301	—	—	0,00	—	—	—	—	—	—	0,00	0,00	0,00	0,00	
Halon 2402	—	—	0,00	—	—	—	—	—	—	0,00	0,00	0,00	0,00	
Sub-Total	—	—	0,00	—	—	—	—	—	—	0,00	0,00	0,00	0,00	
Annex B, Group II														
Carbon tetrachloride	—	—	—	—	0,00	0,00	—	—	—	0,00	3.074,76	0,00	0,00	
Sub-Total	—	—	—	—	0,00	0,00	—	—	—	0,00	3.074,76	0,00	0,00	
Annex B, Group III														
Methyl chloroform	—	—	—	—	69,67	0,00	—	—	—	69,67	69,67	0,00	0,00	
Sub-Total	—	—	—	—	69,67	0,00	—	—	—	69,67	69,67	0,00	0,00	
Annex C, Group I														
HCFC-22	—	0,00	—	10,16	1.586,73	—	—	—	—	1.596,89	1.155,21	127,32	589,00	
HCFC-123	—	0,00	—	0,00	0,00	—	—	—	—	0,00	0,00	0,00	0,00	
HCFC-124	—	0,00	0,00	0,00	0,00	—	—	—	—	0,00	0,00	0,00	0,00	
HCFC-141b	—	68,22	—	0,00	—	—	—	—	—	68,22	68,22	0,00	0,00	
HCFC-142b	—	0,00	—	0,00	—	—	—	—	—	0,00	0,00	0,00	0,00	
Sub-Total	—	68,22	0,00	10,16	1.586,73	0,00	—	—	—	1.694,97	1.252,69	127,32	589,00	
Annex E, Group I														
Methyl bromide	—	—	—	—	—	—	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
Sub-Total	—	—	—	—	—	—	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
TOTAL	26,20	611,22	0,00	51,76	3.694,58	90,01	0,00	0,00	0,00	4.473,77	-407,71	1.042,68	2.660,00	

PROGRESS OF IMPLEMENTATION OF COUNTRY PROGRAMMES

B. Administrative and Supportive Actions

COUNTRY: Venezuela

YEAR: January to December of the year 2000

TYPE OF ACTION / LEGISLATION	Action was proposed in country programme	Status of action	Date of completion or entry into force
1.			
REGULATIONS			
1.1	Si	Planned	
1.2	Si	Implemented	Abr-1992
1.3	Si	Planned	
1.4	Si	Implemented	Ene-1999
1.5	Si	Implemented	Ene-1999
1.6	Si	Implemented	Ene-1999
1.7	Si	Implemented	Ene-1999
1.8	Si	Implemented	Ene-1999
1.9	Si	Implemented	Abr-1992
1.10	Si	Implemented	Ene-1999
1.11	Si	Implemented	Ene-1999
1.12	No	Planned	
1.13	No	Planned	
1.14	No	Implemented	Ene-1999
1.15	No	Planned	
2.	No	Planned	
3.	No	Planned	

TYPE OF ACTION / LEGISLATION		Action was proposed in country programme	Status of action	Date of completion or entry into force
4.	ESTABLISHMENT OF CHANNELS FOR PUBLIC INFORMATION ON ODS CONTROL ACTIONS	No		
5.	MONITORING ACTIVITIES			
5.1	Establishment of a system for monitoring of import, (production, export) and use of ODS	Sí	Planned	Sep-1999
5.2	Establishment of monitoring and evaluation system for implementation of MLF projects	Sí	Implemented	
5.3	Establishment of procedures for ODS data collection/update and transmission/dissemination	Sí	Implemented	
5.4	Annual collection/update and transmission/dissemination of ODS data	Sí	Implemented	
5.5	Monitoring of recovery and recycling of ODS	No	Implemented	
5.6	Monitoring and evaluation of training activities	No	Implemented	
5.7	Establishment and enforcement of product quality standards ³ , e.g.: 'Ozone Seal', 'Green Label', etc.	No	Planned	
6.	OTHER	No		

APPENDIX 2:
LIST OF APPROVED PROJECTS

Approved Venezuela projects (all agencies)

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	IMPACT	ODS PHASED OUT	TOTAL FUND APPROVED	DATE COMPLETION	DATE ACTUAL STATUS
VENREF09/TAS/16	UNDP	Technical assistance/support	Workshops on conversion and installation of new central air conditioning systems using non-ODS	0.0	0.0	\$13,200.00	Mar-1994	Jun-1994 FIN
VENREF09/TAS/17	UNDP	Recovery/recycling	Pilot programme in recovery and recycling of CFC-12 in domestic refrigeration	8.0	8.0	\$100,000.00	Mar-1994	Dec-1996 FIN
VENREF11/INV/19	IBRD	MAC	MAC factory conversion for fabrication of HFC-134a heat exchangers at Fábrica de Aparatos de Aire Acondicionado, S.A. (Fasaca)	0.0	124.0	\$3,100,000.00	Nov-1995	FIN
VENREF11/INV/20	IBRD	MAC	MAC factory conversion for fabrication of HFC-134a compressors and heat exchangers at Aire Acondicionado Integral, S.A. (Auisa)	11.0	90.0	\$4,420,000.00	Sep-1996	FIN
VENFOA07/INV/05	IBRD	Polystyrene/polystyrene	Conversion of a CFC-12 polystyrene foam production facility to use hydrocarbons as blowing agent at Plásticos Molanca	259.0	259.0	\$1,261,678.00	Jun-1993	Dec-1995 FIN
VENFOA21/PRP/51	UNIDO	Preparation of project proposal	Project formulation of investment projects in the foam sector	0.0	0.0	\$29,028.00	Aug-1997	COM
VENFOA22/INV/54	UNIDO	Rigid	Phasing out ODS at Decocar C.A.	16.2	16.2	\$126,614.00	Nov-1998	COM

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	IMPAC	ODS	PHASED OUT	TOTAL FUND APPROVED	DATE COMPLETION	DATE ACTUAL STATUS
VEN/FOA/22/INV/56	UNIDO	Rigid	Phasing out ODS at Veniber C.A.	21.6	21.6		\$164,592.00	Nov-1998	COM
VEN/FOA/22/INV/57	UNIDO	Rigid	Phasing out ODS at Dantven C.A.	18.0	18.0		\$103,905.00	Nov-1998	COM
VEN/FOA/23/INV/61	UNIDO	Rigid	Phasing out ODS at Industrias Todos C.A., Caracas	17.8	17.8		\$137,520.00	Jun-1999	COM
VEN/FOA/24/PRP/62	UNIDO	Preparation of project proposal	Preparation of investment project in the foam sector (rigid polyurethane) for Fanesi Barquisimeto	0.0	0.0		\$9,928.00	Apr-1999	COM
VEN/FOA/25/INV/64	UNIDO	Rigid	Phasing out CFC-11 with HCFC-141b at Tecnofrigo in the production of rigid PU panels	9.0	0.0		\$71,946.00	Aug-1999	ONG
VEN/FOA/26/INV/65	UNIDO	Rigid	Phasing out CFC-11 with HCFC-141b at Lickerfrío in the production of rigid polyurethane panels	13.9	0.0		\$107,850.00	Apr-2000	ONG
VEN/FOA/27/INV/73	UNIDO	Rigid (insulation refrigeration)	Phasing out CFC-11 with HCFC-141b in the production of rigid polyurethane panels at Fricava, C.A.	15.3	0.0		\$115,382.00	Aug-2000	ONG
VEN/FOA/27/INV/74	UNIDO	Integral skin	Phasing out of CFC-11 by 100% water blown system in the production of moulded integral skin flexible polyurethane foam at Fanesi	11.4	0.0		\$157,882.00	Aug-2000	ONG
VEN/FOA/27/PRP/68	UNIDO	Preparation of project proposal	Preparation of investment project in the foam sector (rigid polyurethane)	0.0	0.0		\$10,000.00	Dec-1999	ONG
VEN/FOA/27/PRP/70	UNIDO	Preparation of project proposal	Preparation of investment project in the foam sector (integral skin)	0.0	0.0		\$20,000.00	Dec-1999	ONG

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	IMPACT	ODS	PHASED OUT	TOTAL FUND APPROVED	DATE COMPLETION	ACTUAL STATUS
VENFOA21/PRP/72	UNIDO	Preparation of project proposal	Preparation of investment project in the foam sector (polystyrene/polyethylene)	0.0	0.0		\$20,000.00	Dec-1989	ONG
VENFOA28/INV/82	UNIDO	Polystyrene/polyethylene	Phasing out CFC-12 at Fardec C.A. (EPSR Foam)	45.0	0.0		\$290,481.00	Aug-2001	ONG
VENFOA29/INV/77	UNIDO	Rigid	Phasing out CFC-11 with HCFC-141b in the production of rigid polyurethane panels at Novameca	16.2	0.0		\$69,886.00	Jun-2001	ONG
VENFOA29/INV/78	UNIDO	Rigid	Phasing out CFC-11 with HCFC-141b in the production of rigid polyurethane panels at Amerito Industrial, S.A.	11.8	0.0		\$88,039.00	Jun-2001	ONG
VENFOA30/PRP/80	UNIDO	Preparation of project proposal	Preparation of investment project in the rigid foam sector	0.0	0.0		\$25,000.00	Apr-2001	ONG
VENFOA31/INV/83	UNIDO	Rigid	Phasing out CFC-11 with HCFC-141b at Friibox in the production of rigid P.U. panels	16.5	0.0		\$128,367.00	Jan-2002	ONG
VENFOA31/INV/84	UNIDO	Rigid	Phasing out CFC-11 with HCFC-141b at Nevecor in the production of rigid P.U. panels	36.4	0.0		\$198,374.00	Jan-2002	ONG
VENFUM27/TRA/67	UNIDO	Training programme/workshop	Workshops on alternatives to methyl bromide in tobacco cultivation	0.0	0.0		\$40,000.00	Dec-1989	COM
VENHAL09/TAS/12	UNDP	Technical assistance/support	Workshops for the recycling and banking of halons	0.0	0.0		\$23,100.00	Mar-1994	FIN
VENHAL11/TAS/18	Canada	Technical assistance/support	Technical assistance in halon sector	0.0	0.0		\$304,500.00	Nov-1997	FIN
VENHAL13/DEM/27	USA	Technical assistance/support	Technical assistance in halon-1211 management	2.0	0.0		\$31,000.00	Jul-1995	FIN

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	IMPAC	ODS	PHASEDOUT	TOTAL FUND APPROVED	DATE COMPLETION	DATE ACTUAL STATUS
VEN/HAL/19/TAS/47	Canada	Technical assistance/support	Halon recycling and bank management (Phase II)	0.0	0.0		\$332,189.00	May-1998	FIN
VEN/REF/04/TRA/03	UNDP	Training programme/workshop	Technical assistance and training of servicing technicians in the refrigeration sector	0.0	0.0		\$19,020.00	Jun-1992	Jun-1992 FIN
VEN/REF/08/DE/M/05	USA	MAC recovery/recycling	Technical assistance and demonstration project in CFC recycling in MAC	0.0	0.0		\$115,000.00	Oct-1993	Jul-1995 FIN
VEN/REF/08/INV/08	IBRD	Chiller	Replacement of CFC by HFC-134a as a refrigerant in central air conditioning units at Instituto Venezolano de los Seguros Sociales	0.0	0.0		\$0.00	Apr-1994	CLO
VEN/REF/08/INV/09	IBRD	Chiller	Replacement of CFC by HFC-134a as a refrigerant in central air conditioning units at Clinica Abbas, Hospitalización y Servicios	4.0	4.0		\$115,000.00	Apr-1994	FIN
VEN/REF/08/INV/10	IBRD	Chiller	Replacement of CFC by HFC-134a as a refrigerant in central air conditioning units at Instituto de Prevención Social del Médico	2.0	2.0		\$69,000.00	Apr-1994	Sep-1995 FIN
VEN/REF/08/INV/11	IBRD	Chiller	Replacement of CFC by HFC-134a as a refrigerant in central air conditioning units at Congreso de la Republica	0.0	1.4		\$0.00	Apr-1994	Dec-1995 CLO

Approved Venezuela projects (all agencies)

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	IMPACT	ODS PHASED OUT	TOTAL FUND APPROVED	DATE COMPLETION	DATE ACTUAL STATUS
VEN/REF/03/PRP/15	UNDP	Preparation of project proposal	Workshops for identification of projects in the refrigeration and air conditioning sector	0.0	0.0	\$19,800.00	Mar-1994	Dec-1994 FIN
VEN/REF/12/DEM/26	UNDP	MAC recovery/recycling	Pilot programme in recovery and recycling of CFC-12 in MAC	0.0	0.0	\$13,400.00	Mar-1995	Mar-1995 FIN
VEN/REF/13/DEM/28	USA	MAC recovery/recycling	Demonstration project in MAC	25.0	0.0	\$53,000.00	Jul-1995	Jul-1995 FIN
VEN/REF/15/DEM/30	USA	MAC recovery/recycling	Demonstration project in the refrigeration sector	0.0	0.0	\$67,000.00	Dec-1995	Dec-1995 FIN
VEN/REF/15/PRP/31	UNDP	Preparation of project proposal	Preparatory assistance for the domestic and commercial refrigeration manufacturing sector	0.0	0.0	\$45,445.00	Jun-1996	Jun-1996 FIN
VEN/REF/15/TAS/32	UNDP	MAC recovery/recycling	Pilot project for recovery and recycling of CFC-12 in MAC (Phase II)	75.0	16.0	\$206,794.00	Dec-1995	Dec-1996 COM
VEN/REF/17/INV/38	UNDP	Commercial	Elimination of CFCs 11 and 12 in the manufacture of commercial refrigeration equipment at Pinova, S.A.	25.1	25.0	\$381,060.00	Jan-1997	Jan-1997 COM

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	IMPACT	IDS	PHASED OUT	TOTAL FUND	APPROVED	DATE	COMPLETION DATE	ACTUAL STATUS
VEN/REF/17/INV/39	UNDP	Compressor	Conversion of CFC-12 to compressor production facilities at Vecomeasa, S.A. to manufacture HFC-134a compressors	0.7	0.0		\$362,000.00		Jan-1997		COM
VEN/REF/17/INV/40	UNDP	Commercial	Elimination of CFCs 11 and 12 in the manufacture of commercial refrigeration equipment at Industrias Nutal, C.A.	14.5	0.0		\$123,623.00		Jan-1997		ONG
VEN/REF/17/PRP/37	UNDP	Preparation of project proposal	Preparatory assistance for the domestic and commercial refrigeration manufacturing sector	0.0	0.0		\$30,000.00		Jun-1996	Mar-1996	FIN
VEN/REF/18/INV/42	UNDP	Domestic	Elimination of CFCs 11 and 12 in the manufacture of domestic refrigerators at Grupo Frigilux, C.A.	46.0	46.0		\$633,460.00		May-1997		COM
VEN/REF/18/INV/43	UNDP	Domestic	Elimination of CFCs 11 and 12 in the manufacture of domestic refrigerators at Coresmat Valencia, C.A.	65.5	0.0		\$685,330.00		May-1997		ONG
VEN/REF/18/INV/44	UNDP	Domestic	Elimination of CFC-11 and CFC-12 in the manufacture of domestic refrigerators at Manufacturera de Aparatos Domésticos, S.A. (Madosa)	0.0	0.0		\$230,274.00		May-1997		CLO
VEN/REF/19/INV/46	UNDP	Commercial	Elimination of CFC-11 and CFC-12 in the manufacture of refrigerated display cases and bottle coolers at Neve Industrial, C.A.	7.5	8.0		\$112,100.00		Nov-1997		COM

Approved Venezuela projects (all agencies)

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	IMPAC	ODS	PHASEOUT	TOTAL FUND APPROVED	DATE COMPLETION	ACTUAL STATUS
VENREF19/INV/48	UNDP	Commercial	Elimination of CFC-11 and CFC-12 in the manufacture of bottle coolers, freezers and water coolers at Tecnocompañias Venezolanas (Tecovent), C.A.	13.2	13.0		\$190,000.00	Nov-1997	COM
VENREF19/INV/49	UNDP	Commercial	Elimination of CFC-11 and CFC-12 in the manufacture of bottle coolers, freezers and water coolers at Hiomatic, C.A.	11.1	0.0		\$162,375.00	Nov-1997	ONG
VENREF22/TAS/65	Canada	Recovery/recycling	Implementation of a centralized reclamation plant for recovered refrigerants in the commercial refrigeration and air-conditioning sector	0.0	0.0		\$488,600.00	Jun-1999	FIN
VENREF22/TAS/68	UNDP	Recovery/recycling	Implementation of a recovery and reclamation of refrigerants	172.0	0.0		\$931,622.00	Jun-1999	ONG
VENREF25/INV/63	UNIDO	Commercial	Phasing out CFC-11 and CFC-12 with HCFC-141b and HFC-134a at Invitel in the manufacture of commercial refrigeration equipment	46.4	46.4		\$419,094.00	Feb-2000	COM
VENREF27/PRP/69	UNDP	Preparation of project proposal	Preparation of one project in refrigeration MAC & compressors subsector	0.0	0.0		\$30,000.00	Apr-2000	CLO
VENREF27/PRP/71	UNIDO	Preparation of project proposal	Preparation of investment projects in the commercial refrigeration sector	0.0	0.0		\$25,000.00	Dec-1999	ONG
VENREF27/PRP/75	UNIDO	Preparation of project proposal	Preparation of investment projects in the refrigeration/MACS and compressors sector	0.0	0.0		\$20,000.00	Dec-1999	ONG

Approved Venezuela projects (all agencies)

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	IMPAC	ODS	PHASED OUT	TOTAL FUND APPROVED	DATE COMPLETION	DATE ACTUAL STATUS
VEN/REF/29/INV/76	UNIDO	Commercial	Umbrella project for phasing out CFC-12 with HFC-134a and CFC-11 with HCFC-141b at 5 commercial refrigeration companies: Unidas, Infrifesa, Cold Front, Refrinvencia and Europa	30.9	0.0		\$469,140.00	Dec-2001	ONG
VEN/REF/29/INV/79	UNIDO	Domestic	Umbrella project for phasing out CFC-12 with HFC-134a and CFC-11 with HCFC-141b at 3 domestic refrigeration companies: Nordpol, Friscoon and Tecobar	27.0	0.0		\$371,706.00	Dec-2001	ONG
VEN/REF/30/PRP/81	UNIDO	Preparation of project proposal	Preparation of investment project in the commercial refrigeration sector	0.0	0.0		\$20,000.00	Apr-2001	ONG
VEN/REF/31/PRP/85	UNIDO	Preparation of project proposal	Preparation of investment project in the refrigeration sector (domestic/commercial)	0.0	0.0		\$30,000.00	May-2002	ONG
VEN/REF/31/TAS/86	UNIDO	Technical assistance/support	Strategy for the preparation of an RMP	0.0	0.0		\$70,000.00	Jul-2001	ONG
VEN/REF/32/INV/88	UNIDO	Commercial	Phasing out CFC-12 with HFC-134a and CFC-11 with HCFC-141b at 7 commercial refrigeration companies (Vikingo, Elerna, Indarela, J.R. Refrigeración, Ineltem, Coultentye and Refrimaza)	32.3			\$403,560.00	Jan-2002	NEW
VEN/SEV/04/PRP/02	IBRD	Project preparation/supervision	Preparation of investment projects (1991)	0.0	0.0		\$70,419.00	Jun-1992	FIN
VEN/SEV/04/PRP/59	IBRD	Project preparation/supervision	Country programme preparation	0.0	0.0		\$30,313.00	Dec-1991	FIN
VEN/SEV/06/CPG/03	IBRD	Country programme/country survey	Country programme preparation	0.0	0.0		\$101,631.00	Dec-1994	FIN
VEN/SEV/06/PRP/04	IBRD	Project preparation/supervision	Preparation of investment projects (1992)	0.0	0.0		\$120,943.00	Feb-1993	FIN
VEN/SEV/08/CPG/07	USA	Country programme/country survey	Assistance in country programme preparation	0.0	0.0		\$43,000.00	Oct-1993	FIN

Approved Venezuela projects (all agencies)

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	FONDOIN	IMPAC	ODS	PHASEDOUT	TOTAL FUND APPROVED	DATE COMPLETION	DATE ACTUAL STATUS
VENSEV09/INS/13	UNDP	Ozone unit support	Institutional strengthening of FONDOIN		0.0	0.0		\$329,192.00	Dec-1995	Dec-1995 FIN
VENSEV09/PRP/14	IBRD	Project preparation/supervision	Preparation of investment projects (1993)		0.0	0.0		\$113,532.00	Mar-1994	Dec-1993 FIN
VENSEV11/CPG/21	UNDP	Country programme/country survey	Finalization of the country programme		0.0	0.0		\$12,000.00	May-1994	Jun-1996 FIN
VENSEV12/PRP/22	IBRD	Project preparation/supervision	Supervision of Faeca project implementation (1994)		0.0	0.0		\$20,345.00	Mar-1995	Dec-1994 FIN
VENSEV12/PRP/23	IBRD	Project preparation/supervision	Supervision of Aaisa project implementation (1994)		0.0	0.0		\$18,418.00	Mar-1995	Dec-1994 FIN
VENSEV12/PRP/24	IBRD	Project preparation/supervision	Supervision of Plásticos Molanca project implementation (1994)		0.0	0.0		\$106,541.00	Mar-1995	Dec-1994 FIN
VENSEV12/PRP/25	IBRD	Project preparation/supervision	Supervision of air conditioners project implementation (1994)		0.0	0.0		\$5,873.00	Mar-1995	Dec-1994 FIN
VENSEV15/TRA/29	USA	Training programme/workshop	Training in all ODS sectors in Venezuelan Military		0.0	0.0		\$40,000.00	Dec-1995	Dec-1995 FIN
VENSEV16/PRP/33	IBRD	Project preparation/supervision	Preparation/supervision of investment projects ODS V (Aaisa) (1995)		0.0	0.0		\$22,455.00	Mar-1996	Dec-1995 FIN
VENSEV16/PRP/34	IBRD	Project preparation/supervision	Preparation/supervision of investment projects ODS IV (Faeca) (1995)		0.0	0.0		\$19,121.00	Mar-1996	Dec-1995 FIN
VENSEV16/PRP/35	IBRD	Project preparation/supervision	Preparation/supervision of investment projects ODS I and II (1995)		0.0	0.0		\$36,430.00	Mar-1996	Dec-1995 FIN
VENSEV16/PRP/36	IBRD	Project preparation/supervision	Preparation/supervision of investment projects (central air chillers) (1995)		0.0	0.0		\$23,966.00	Mar-1996	Dec-1995 FIN
VENSEV17/INS/60	UNDP	Ozone unit support	Institutional strengthening of FONDOIN (renewal)		0.0	0.0		\$109,800.00	Dec-1996	Dec-1996 FIN
VENSEV18/PRP/41	IBRD	Project preparation/supervision	Project preparation		0.0	0.0		\$40,000.00	Dec-1996	Dec-1996 FIN
VENSEV18/PRP/45	UNDP	Project preparation/supervision	Project preparation assistance		0.0	0.0		\$43,000.00	Nov-1996	Dec-1996 FIN
VENSEV20/INS/50	UNDP	Ozone unit support	Renewal of institutional strengthening		0.0	0.0		\$219,600.00	Oct-1998	Dec-1996 FIN
VENSEV21/PRP/52	UNDP	Project preparation/supervision	Project preparation in commercial refrigeration recovery and recycling and in the production sector		0.0	0.0		\$155,000.00	Dec-1997	Dec-1997 COM
VENSEV21/PRP/53	IBRD	Project preparation/supervision	Project preparation		0.0	0.0		\$10,000.00	Dec-1997	Dec-1997 FIN

Approved Venezuela projects (all agencies)

CODE	AGENCY	SUBSECTOR	PROJECT TITLE	IMPAC	ODS	PHASEDOUT	TOTAL FUND APPROVED	DATE COMPLETION	DATE ACTUAL STATUS
VEN/SEV/25/INS/65	UNDP	Ozone unit support	Renewal of institutional strengthening	0.0	0.0		\$219,600.00	Jul-2000	ONG
VEN/SEV/31/INS/87	UNDP	Ozone Unit Support	Renewal of institutional strengthening (Phase IV)	0.0	0.0		\$219,600.00	Aug-2002	ONG

APPENDIX 3:

***VALIDATION OF CURRENT CUSTOMS
PROCEDURES FOR IMPORTING ODS***

F A X

PARA : Manuel Valencia Astudillo
Presidente de Fondoln

DE: Jefe de la División de Arancel de la
Intendencia Nacional de Aduanas.

FECHA:

Atención: Ing. Alberto Cadena.

Me es grato dirigirme a Usted, en la oportunidad de acusar recibo de su comunicación, fechada y recibida en esta División el 06-04-01, mediante la cual requiere conocer eventuales observaciones al esquema de procedimiento para exportación/importación de O.D.S. (sustancias agotadoras de la capa de ozono), mismo que ha hecho llegar a esta División en anexo a la citada comunicación.

Sobre el particular, le señalamos a continuación nuestras observaciones:

- A) Donde dice: Declaración de Aduanas debe decir: Declaración de mercancías por cuanto ésta comprende la Declaración de Aduanas, copia de la factura comercial definitiva, el original del documento de transporte (B.I, guía aérea o guía de encomienda), el original de los documentos exigibles según el Arancel de Aduanas (permisos, licencias, certificados, etc.), y Poder Notariado o autorización del consignatario al Agente de Aduanas para tramitar en su nombre. Asimismo, la Declaración de Aduanas está compuesta por 4 formularios:
- 1) Manifiesto de Importación (forma A)
 - 2) Declaración de Valor (forma B)
 - 3) Declaración de Derechos de Importación, Impuesto al Valor Agregado y Pago (forma C-80)
 - 4) Pago de la tasa aduanera (forma 84)
- B) En el párrafo donde dice: Confrontación de Declaración de Aduanas, debe decir: Confrontación y Recepción de Documentos, ya que no solamente se confronta y recibe la Declaración de Aduanas sino también el resto de los documentos.
- C) Además creemos necesario aclarar que el oficio de clasificación arancelaria, el cual es otorgado por la División de Arancel de la Intendencia de Aduanas del Seniat, no es un "certificado" y además su presentación ante la Aduana no es obligatoria.
- D) En cuanto al reconocimiento de la mercancía si es obligatorio, sólo que de acuerdo con los aspectos que abarque la verificación fiscal, puede ser documental o documental y físico.
- E) En lo referente al articulado de la Ley Orgánica de Aduanas se recuerda que, la citada Ley fue modificada en el año 1.999 (Gaceta Oficial N° 5.353 Extraordinario, del 17 de junio de 1.999) de allí la divergencia con los artículos señalados en el esquema.

Sin más a que hacer referencia se despide de Usted.

Atentamente,


SANTOS SANCLER GUEVARA

Para cualquier información:
DIVISIÓN DE ARANCEL, INTENDENCIA DE ADUANAS
fax: 709.25.65.

THE CURRENT PROCEDURE FOR IMPORTING ODS.

The step by step procedure currently applied by customs in Venezuela for the imports of ODS is the following:

a) REGISTRATION AS IMPORT COMPANY OF CFC

According to, Art. 4 and 5 of the Decree 3220, only those companies authorized by the Ministry of Environment to import CFC during 1995, 1996 and 1997 or those producing CFC before 25-01-1999, could register to import CFC beginning from 13- 01-1999. The period of Registration was a period of 90 calendar days from this last date.

b) THE LICENSE FOR IMPORTING CFC

The authorization to import CFC, which should be done on a half-yearly basis, requires of three elements (Art 13 and 14, Decree 3220) :

To complete an Application for the Import of CFC signed by an authorized representative of the Import Company.

An official Certificate of the Customs Office, at the entry points of CFC, declaring the amount of CFC imported in the previous semester by the applicant.

The Export License of the country, exporting the CFC, according to the Terms of the Montreal Protocol.

The Office of the Ministry of Environment dealing with Imports Licenses, controls that the total amount of CFC authorized to each company fulfills the limits imposed by Art 9 of the Decree and that the total imports of Venezuela for the semester does not exceed the limits imposed by Montreal Protocol (Art. 7 and 8, Decree 3220).

c) DECLARATION OF THE IMPORT OF CFC

Once the import takes place, it is necessary to complete a Custom Declaration Officially this Customs Declaration requires four documents: The Import Manifest (Form A), the Andean Value Declaration (Form B), The Acceptance of Customs Regime with the Import Duties and Sales Tax (Form C80) and the Auto-Liquidation of Customs Rates and Duties (Form 84).

The Merchandise Declaration includes the Customs Declaration and additionally the Import Permit from the Ministry of Environment, The Original Product Certification, the Invoice with the sale of CFC, the Bill of Lading or Air Way Bill or similar for land transportation and a Public Notary authorization of the consignee for his Customs Agent. This declaration should

be completed during the five working days after the arrival of the merchandise (Art. 30 LOA).

d) ARRIVAL OF MERCHANDISE

Once the goods arrive to the entry port, the transport Company should notify the consignee (Art 28, LOA) and the Manager of the Customs Office assigns this import to the Unit of Technical Inspection.

e) CONFRONTATION AND RECEPTION OF DOCUMENTS

According to Art 96 of RLOA, the Customs Officers verify that all needed documents of the Merchandise Declaration for the import are complete and fulfill all the required conditions.

f) THE INSPECTION OF MERCHANDISE

Two working days after the confrontation of the documents, the goods should be inspected to verify that they correspond to those declared in three different ways: the correct classification of the Customs Duty Code, the financial value of the product according to international market value and the amount imported according to the Customs Declaration. (Art 49 to 58 of LOA and Art. 156-160 of RLOA). The inspection is obligatory but could be either a documentary one or a physical and documentary inspection.

This is the opportunity to verify that the CFC container complies with the standards related to appropriate color, valve, capacity and label identification but it should be noticed that the physical inspection is not always done.

There is an optional document called Customs Duty Classification Letter issued by the Duty Division of the Custom Superintendent, which is used under the request of the Customs Duty Officer doing the inspection, when there are doubts about the classification of the goods or that which be requested by the importer or his custom agent in order to avoid any delay during the inspection. In this case this Duty Division Office will perform all technical tests or analysis necessary to identify the product.

When the inspection of the goods does not conform with the customs declaration a summons process begin which in some cases could lead to a confiscation of the goods.

g) LIQUIDATIONS OF THE DUTIES

After the inspection, the total duties on the import is calculated. This calculation could be done by the importer or his Agent by a process called Auto-Liquidation or computed directly by the Customs Offices. The Official

Liquidation (Art 59 to 62 LOA and 176 RLOA), includes apart from the duties many other taxes and storage charges.

h) PAYMENT OF DUTIES AND WITHDRAWAL OF GOODS

The payments of all the duties and other services should be done in the following five working days (Art 183 RLOA). With the proof of those payments and with all the other documents the importer or his Agent can withdraw the merchandise from the Customs Offices.

APPENDIX 4:

REPORTS ABOUT SERVICE FROM DATA BASE

- 1.- Number of Technicians
- 2.- Ecology Report
- 3.- Instrument Used for Charge Control
- 4.- Amount of Refrigerant Purchases in last year
- 5.- Total Repairs Report and Average Charge
- 6.- Container Information

Number of Technician

<i>City</i>	<i>Total Academical Technician</i>	<i>Total Empirical Technician</i>
Barcelona	13	3
Barquisimeto	115	59
Bolivar	24	12
Cabimas	40	24
Cagua	13	2
Caracas	234	134
Coro	16	7
Guacara	8	5
Guarenas	12	8
Guatire	11	7
Guayana	12	16
Los Guayos	7	1
Los Teques	15	13
Maracaibo	118	87
Maracay	107	12
MATURIN	54	16
PTO CABELLO	17	8
Pto Fijo	36	19
Pto La Cruz	21	14
Pto Ordaz	18	7
San Cristobal	43	23
San Felix	15	4
San Joaquin	5	8
Valencia	99	66
Villa de Cura	3	1
<i>National Total</i>	<i>1056</i>	<i>556</i>

Ecology Report

ODS Awareness

	Si	795
Percentage		87,94%
	No	109
Percentage		12,06%
Total		904

Refrigerant Recovery

	Si	115
Percentage		12,72%
	No	789
Percentage		87,28%
Total		904

Fondoin Curse

	Si	31
Percentage		3,43%
	No	873
Percentage		96,57%
Total		904

Instrument Used for Charge Control

Wattmeter

	Si	133
Percentage		14,71%
	No	771
Percentage		85,29%
Total		904

Balance

	Si	72
Percentage		7,96%
	No	832
Percentage		92,04%
Total		904

Pressure Gauge

	Si	860
Percentage		95,13%
	No	44
Percentage		4,87%
Total		904

Amount of Refrigerant Purchases in last year

<i>Refrigerant</i>	<i>Total Purchases Kg</i>	<i>Service Shop Average Kg</i>
R11	7889	167,851
R12	606034	712,981
R134A	241351	391,804
R22	254098	754,000
<i>National Total</i>	<i>1109372</i>	

Total Repairs Report and amount of Charge

<i>Equipment</i>	<i>1998</i>	<i>1999</i>	<i>2000</i>	<i>Repairs Total</i>	<i>Average charge Kg Refrigerant</i>
AC 10 to 100 ton	38152	46296	146122	230570	16,353
AC 3 to 10 ton	91460	125768	320536	537764	4,404
AC more of 100 ton	23816	26982	68446	119244	59,798
Bus AC	30508	39016	105070	174594	3,371
Cold Room	33309	46223	133238	212770	7,665
Domestic Air C	54353	74260	237871	366484	1,436
Freezer	37420	51431	155173	244024	1,736
Ice Cream Machine	2408	3351	46108	51867	1,977
Industrial Chiller	16087	27108	98131	141326	4,578
Refrigerated Vehicle	7567	6668	20712	34947	1,804
Refrigerator	88402	129196	456960	674558	0,516
Show-Case Refrigerator	24254	51366	245424	321044	2,087
Truck AC	33176	42700	95002	170878	2,078
Vehicle AC	73794	87787	370249	531830	1,136
Water Cooler	41778	68634	283660	394072	0,451
<i>Total National</i>	<i>596484</i>	<i>826786</i>	<i>2782702</i>		

Container Information

Container Recharge

	Si	965
Percentage		67,81%
	No	458
Percentage		32,19%
Total		1423

Standard Container

	Si	526
Percentage		36,96%
	No	897
Percentage		63,04%
Total		1423

Standard Color

	Si	492
Percentage		34,57%
	No	931
Percentage		65,43%
Total		1423

APPENDIX 5:

SUPPLIERS OF SERVICE WORKSHOPS

Service Shop Suppliers

City	Name
Barcelona	Distribuidora Classic
	Divemencia
	Fricosa
	Pracsay
	Praxair
	Refricenter
	Refrigeración Primo
	Refrimaster
	Refristema Fumosa
	Rereca
	Barquisimeto
Comersa	
CRL	
DIRECTO DE PLANTA	
DIST. RR	
DISTRIBUIDORA CHADAIT	
DISTRIBUIDORA RR	
EL NECTAR	
Expo Aire	
FITIN AIRE	
Frigalo	
FRIGE-HERVE	
FRIO 92	
FRIO Y REFRIGERACION 92	
IBRACA	
Interfrigo	
INVE RICO	
INVER FRIGO	
NESTOR PERECHE	
No Disponible	
Praxair	
REDO CAR	
REDO CENTRO	
REDO ESTE	
REDO LARCA	
REDOX OESTE	
REFRI 92	
Refr partes lara	
REFRICOLD	
REFRICOMA	
REFRIGAS	

<i>City</i>	<i>Name</i>
Barquisimeto	REFRIGERACION 92
	Refrigeración Nacional
	REFRIGERANTES 92
	Refrimaster
	REFRINICOLD
	REFRIPARTES LARA
	REFRIVENCA
	REFRIX
	REPRESENTACIONES RR
	RODOINCA
	RR 26
	SERVECA
	SERVIFRIO
	SHADAI
	TECOBAR
Bolivar	Coverca
	COVERSA
	Dupont
	FAACA
	Frioven
	Gases Industriales
	GUAYANDINA
	Re-reca
	Refinca
	Refrimaster
Cabimas	Auto Frio Yanez
	Costa Oriente
	Lombardo
	LyM
	Praxair
	Praxar
	Proxair
	Refri Electric c.a.
	Refricenter
	Refrielectric
	Refrig. Cabimas
	Refrizulca
	Refrizulia
	Remeca
	Serv. Costa Oriental
	Serv. Costa Oriente
yanez	
Cagua	Comercial Jhony
	Comercial Pepe

<i>City</i>	<i>Name</i>
Cagua	Neveca
	No Disponible
	Pestana
	Refrigeración Delta
	Refrigeracion Jhonny
	REFRIGERACION SUR
	Refrimaster
	Rehogar
Caracas	Air Glaccis
	AIR GLASSES
	Aire Classic
	Aire Spring
	AIRE-FINE
	AIRFEST
	AIRFRICA
	AIRGLASS
	Alaska
	ARCONSOL
	AUFRIAL
	Auto Frio
	Automoviles Chacao
	Autorefrigeración 200
	Bello Monte
	Bocagases
	Boleita Norte
	Bullimport
	Calarzi
	Caroni
	Casa Azul
	Casa Grande
	Casita
	Caven - Aire
	Chysler
	COLANE
	COMEFRIO
	COMER FRIO
	Comercial Galarza
	Comerfrio
	Comersa
	Coolten (134A)
	CORMEISA
	Corporación R4
CPR	
Danifica	

<i>City</i>	<i>Name</i>
Caracas	DANIFRICA
	DENIFRIA
	Derifrice
	DERMIFICE
	DIRAIRE
	Dircure
	DIRECFRIA
	Direfica
	DIREFRICA
	Distraire
	Dupont
	EFRIOTER
	El Paramo
	Electrofrio Alaska
	Euro
	Feemark
	Fetta
	Fracmax
	Frio Alaska
	FRIO MASTER
	FRIO REPUESTO
	Gasitarco
	Hipercars
	INDUGAS
	Indugas (Produven)
	INDUJES
	Ingarsice
	Interfrio
	Inv. Capelo Valiente
	Inversión Bersan
	Itarco
	KEY
	La Galanza
	La Larse
	La Rotaria
	LIQUIDO CARBONICO
	Llano Bravo
	Los Jabillos
	Mansi Mansilla
	Marcafeca
	Marface
	Marfaga
	Mark N
	MAT 4

<i>City</i>	<i>Name</i>
Caracas	Menpe
	MER4
	METALDOCART
	NEVE AIRE
	NEVEAIR
	Neveca
	No Disponible
	Osalich
	Osla
	Oxia
	Oxiac
	Oxicar
	P4
	Percal C.A.
	Percars
	Peter's Cars
	Pingüino Cars
	PIST CENTURY
	Plaxen
	Potoria
	Praxair
	PROCLIMA
	Produven
	R.F. Nacional
	R4
	R4 REP. DE GAS
	Ranke (134A)
	REANTONI
	Recarl
	Redoica
	Refri Alaska
	Refrigeración I
	Refrigeración Inter
	Refrigeración Nacional
	Refrigerante Meri P.
	Refrileca
	REFRIMARKET
	Refrimaster
	Refrimenal
	Refrinet
	RefriRepuestos Moví Perez
	Repuestos Angelitos
	Repuestos FP
	Repuestos Kay

City**Name**

Caracas	Repuestos Zaca
	Rey Antony
	Ripiflair
	Rotaria
	Ryplyai
	SAPICAS
	SERCLIMA
	Super Gas
	Super Gas 2000
	Super Gas 2001
	Tecnocar
	Tormar
	VEIN NARCA
	VELMACA
Vosage	
Caracas1	FRIO REPUESTO
Churuguara	MAN INDUS
Ciudad Alianza	El Gigante
Ciudad Ojeda	Toto Refrigeracion
Coro	BETANIA
	COMERCIAL GALIVEN
	Comersa
	DISLUBA
	FERREMACO
	FERRETERIA BATISTA
	GALIVEN
	GAVIVEN
	No Disponible
Guacara	El Gigante
	El Gigante Soldocentro
	Frio Luz
	Interfrio
	La Torre
Guarenas	Euro
	Fetta
	Grifi
	Helimar
	Percal C.A.
	Refrimaster
	Refrio C.A.
Guatire	Fetta
	Guatifrio
	Refrimaster
	Refrio C.A.

<i>City</i>	<i>Name</i>
Guatire	Sumigas
Guayana	BARBOSA
	DIOXI GUAJ
	GUZACA
	Ivo
	Praxair
	RE-RECA
	REANTONI
	Refrimaster
	REPRESENTACIONES MORA
	UNIVALCO
La Esmeralda	Expo Aire
	Interfrigo
La Victoria	Dist. Rean Tony
	Neve Victoria
	Oxigeno Cedralito
	REFRI AIR
	Refri Aire
	REFRIAIR
	REFRIARE
	SAN ANTONIO
Los Guayos	ALF
	El Gigante
	Interfrío
	Refritécnico Valencia
Los Teques	Casa de Repuesto
	Casa Gramele
	Casa Grande
	Dureka
	Frifersa
	Ingus
	JJ
	No Disponible
	Peter's Cars
	Pureka
	Refrimóvil
	Refrinet
	Rey Antony
	Super Gas 2000
Maracaibo	A.G. R Componente
	Air C.A.
	Asociados Car
	Carlos Suarez
	Colvenca

<i>City</i>	<i>Name</i>
Maracaibo	Comercial Rodriguez
	Conexiones Rodriguez
	DIRECA
	Disjaica
	El Pingüino
	FG Refrigeracion
	Golvenca
	Gustavo
	JM el Mundo y Repuesto
	L&M
	LIM Refrigeraciones
	Liss Refrigeracion
	Lombaldo
	Mahonca
	Oxilago
	Praxair
	RAMKE
	Redolandia
	Redomarsa
	Redomec
	Redomeca
	Reficenter
	Refr Electric c.a.
	Refr Repuesto
	Refr Repuesto JM
	Refr Repuestos NINO
	Refr Sur
	Refr Zulia
	Refr-Repuesto
	REFRIDA
	Refrig. Federal
	Refrig. Pingüino
	Refrigeracion NINO
	Refrio C.A.
	Refriso
	Refrisur
	Refrizulia
	Remesuca
	Repuestos NINO
	Ronarca
	Sr. Rodriguez
Toto Refrigeracion	
Maracay	AM TIENDAS
	Distribuidor Reantola

<i>City</i>	<i>Name</i>
Maracay	Dupont
	EN MARACAIBO
	Esposire
	Expo Aire
	linterfrigo
	Interfrigo
	Interfrio
	IPERFRIO
	NARVAEZ
	OTROS PROVEEDORES
	Oxicar
	Pestana
	PROVEED
	PROVEED MARACAY
	PROVEEDORES
	REANTONI
	Redomac
	Refri F.P.
	REFRIDA
	Refridica
	Refrimaster
	REFRINA
	SAN ANTONIO
	SAN ROMAN
	TORRES
	VENTA DE REPARACION RAMON
Mariara	No Disponible
	Pestana
	Redomac
MATURIN	Comercial San Antonio
	Comersa
	COMPRA DIRECTAMENTE
	Expo Aire
	FRIO ORIENTE
	FRIO ORIENTE 200
	GAS MACA
	GAS NACIONALES
	LOMERCA
	MERCANTIL ROMAN
	P.C.D. GUAYANDINA C.A.
	Praxair
	REFRI LAY
	REFRIGERACIO WILL
	REFRIGERACION EL CLIMA

<i>City</i>	<i>Name</i>
MATURIN	REFRIGERACION INTERNACIONA
	Refrimaster
	Refrinter
	REPUESTO ELIAS
	REY DEL MAR
	SAGO
	TECNI HOGAR
	TROMAN
MORON	MERCATODO
	SALVADOR
Naguanagua	Comercial Salvador
	Motogan Alaxon
	Repuestos Alfredo
	Repuestos Electrodomésticos Mendo
PTO CABELLO	NUNES ABREU
	NUÑES ABREU
	SALVADOR
Pto Fijo	BARBOSA
	BETANIA
	COMERCIAL BARBOSA
	COMERCIAL IVO
	CONAIRE
	DELUSES
	DIOXICAR
	ELECTRO FRIO NOVOA
	FAACA
	GALIVEN
	GOZACA
	ITALVENTA
	IVO
	IVO REFRIGERACIONES
	LENIVEN
	MAILU
	MAN INDUS
	NOVOA
	RE-RECA
	REFRIGERACION BARBOZA
REFRIGERACION IVO	
SAN ANTONIO	
SOLVENSA	
UNIVALCO	
VIASERO	
Pto La Cruz	Aguayaquil
	Clink Alaska

<i>City</i>	<i>Name</i>
Pto La Cruz	D.I.V.
	Distribuidora 5 Estrellas
	Distribuidora Alaska
	Pracsay
	Praxair
	Produven
	Refricenter
	Refrigeración Rivas
	Refrimar
	Refrimaster
	Suplidora de Gas
	Thomas Distribuidor
	UNIVALCO
Pto Ordaz	AIRE CLASIC
	ANTONIO
	BARBOSA
	BARBOSA PTO. ORDAZ
	COMERCIAL SAN
	Dupont
	EDINTEL
	IVO
	Praxair
	PUY IMPORT
	RE-RECA
	REANTONI
	REFRIGERACION IVO
	UNIVALCO
San Cristobal	COMERCIAL PRIMAVERA
	Comersa
	COMPRESORES Y SERVICIOS
	Compresores y Servicios
	Confrio
	DIST. REANTONI
	DUPOMT (VALENCIA)
	Off que Frio
	PRAXAIR
	QUE FRIO
	REFRI HOGAR
	Refrisol
	San Cristobal.
San Diego	AM Tiendas
	El Gigante
	Expoaire
	Interfrigo

<i>City</i>	<i>Name</i>
San Felix	AUFRIAL
	Barbosa
	MULTISERVICIO MARIÑO
	OXIGENOS GUAYANA
	RE-RECA
	Refreca
	Refrigeracion Barbosa
	Refrigeración Barbosa
	Refrigeracion Ivo
	REFRIGERACION LA CARINOSA
	REFRIGERACION PARIS
	Refrigerantes Mara
	Representaciones Mora
	San Joaquin
El Gigante de Los Repuesto	
El Gigante de los Repuestos	
El Gigante de los Repuestos Guacara	
El Gigante de los Respuestos	
Frioluz	
Valencia	Gigante de Guacara
	C. SALVADOR
	COM ELAIRE
	Comercial Salvador
	Comersa
	Conelaire
	Conelame
	CONGELAIRE
	CORE AIRE
	Corrisel
	Espor Aire
	Expo Aire
	FORANE C.A.
	Interfrigo
	INTER FRIO
	Interfrigo
	Interfrio
	INVER FRIO
	MC
	MENDOZA
Motor Gas	
No Disponible	
O2 CABRIALES	
OSOLCA	
Praxair	

<i>City</i>	<i>Name</i>
Valencia	PRECASI DE VZLA
	R.P. ALFREDOS
	RANQUE
	REAUTO
	REDO LARA
	REFER CA
	REFER CA.
	Refri Alaska
	REFRI COBAS
	Refri Técnico Valencia
	REFRICA
	Refrigeración Iris
	Refrimaster
	REFRIMILAY
	REFRIOMILAY
	REFRITEC
	REFRITECNICO
	Refritécnico Valencia
	Repuestos Alfredo
	RESP. MENDOZA
	Roca
	SALVADOR
	SUPLI TECNICA
	TECNI COCINA
VALIMPORT	
VENDEDOR PARTICULAR MIGUEL	
Villa de Cura	Refridica
	Reidi C.A.

APPENDIX 6:

***TRAINING CENTERS FOR THE
REFRIGERANT MANAGEMENT PLAN***

- 1.- THE TRAINING CENTERS FOR RMP**
- 2.- SUMMARY OF TRAINING CENTERS
OF VENEZUELA**

TABLE OF CONTENT

	Page
The training centers for the refrigerant management plan.....	1
Summary of training centers of Venezuela.....	2

THE TRAINING CENTERS FOR THE REFRIGERANT MANAGEMENT PLAN

Information was collected in all educational institutions from Venezuela in order to identify those with the capability to provide technical training to refrigeration technicians or in order to cooperate with their facilities in the training of customs officers.

The survey was conducted in Universities, Community Colleges (IUT), Technical or Vocational Schools and Training Centers, both Public and private looking for those that includes courses in Refrigeration and Air Conditioning in their syllabus.

A total of 34 institutes with capability to participate in the training Program for the Refrigerant Management Plan were selected according to the courses of refrigeration which they offered, laboratory facilities, teaching personnel and geographical location. They have 76 campuses throughout the country which could be training centers for the RMP of Venezuela. In addition to these 76 campuses, there are 12 INCE centers with the capability of teaching refrigeration in different places of the country, reaching a total of 88 centers for training.

Fifty Nine percent of these institutes are public and 41% of them are private, they are located in all major states of the country, particularly in those with more population (54,5% of them are located in the Capital District of Caracas, Carabobo, Zulia and Anzoátegui), but on the other hand there are seven States (Trujillo, Portuguesa, Cojedes, Apure, Sucre, Amazonas and Delta Amacuro) without training centers.

The Instituto Nacional de Cooperación Educativa INCE, is an Institution fully dedicated to provide vocational courses including Refrigeration and Air Conditioning. It has 12 locations in different cities of Venezuela and 8 Mobile Training Units with facilities to teach refrigeration in remote areas or small towns.

A summary of the total 88 training centers indicating the location or city of each one is shown in Figure Nr. 1, and the complete list of them is shown in Figure Nr. 2. In these lists the type of Institution is referred by indicating if it is public or private and the level is used to indicate if it is: a University, Community College (IUT), The National Vocational School INCE or Training Centers.

All these centers are currently teaching either Refrigeration or Air Conditioning or both courses, and all of them are interested in participating in the National Training Program for the Refrigerant Management Plan.

Attached is the whole list of institutes included in the data base.

Table Nr. 1. Summary Of Training Centers Of Venezuela

STATE	LOCATIONS AND NUMBER OF CENTERS				Total	%
Cap. Distr.	Caracas, 12	L Teques, 1	L Guaira, 1	Charallave, 1	15	17.0
Anzoátegui	Barcelona, 5	Anaco, 2	P. LaCruz, 1	E Tigre, Arag 2	11	12.5
Carabobo	Valencia, 6	P Cabello ,2	Guacara, 2	Yagua, 1	11	12.5
Zulia	Maracaibo, 6	Cabimas, 5			11	12.5
Bolívar	C Bolivar, 1	P Ordaz, 3	San Felix, 2		06	6.8
Falcón	Coro, 3	P. Fijo 3			06	6.8
Aragua	Maracay, 3	L Victoria, 1	Cagua, 1		05	5.7
Lara	Barquisim,3	Carora, 1	Cabudare, 1		05	5.7
Merida	Merida, 3	Tovar,1			04	4.5
Tachira	S Cristóbal,3				03	3.4
N. Esparta	Porlamar, 3				03	3.4
Monagas	Maturin, 2	Caripito, 1			03	3.4
Barinas	Barinas, 3				03	3.4
Yaracuy	S Felipe, 1				01	1.2
Guarico	San Juan, 1				01	1.2
					TOTALS	88 100

LIST OF TRAINING INSTITUTIONS

City Phone Fax Type Level Address

Name Centro de Entrenamiento Tecnico Anaco C.A.

Anaco	082-22673	22673	Private	Training Cent	Calle caballero Sarmiento c/c Delicias
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E-Mail

Name Centro de Entrenamiento Tecnico Industrial C.A

Caracas	0212-2412197	2415889	Private	Training Cent	Calle 3-A Edif. Centro Profesional la Urbina piso 3 ofic. 3-3 la Urbina
---------	--------------	---------	---------	---------------	-------------------------------------------------------------------------

E-Mail ceti@caracas.c.com.net

Name Consultores en Computacion e informatica CICA

Valencia	0241-8238812	8221121	Private	Training Cent	Calle 148 Centro Profesional Norte Ofic. 9-2 Urb Carabobo Valencia
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E-Mail cadena@telcel.net.ve

Name INCE, Instituto Nacional de Cooperacion Educativa

Caracas	0212-6031874	6031875	Public	Ince	Edif. INCE Nueva Granada
---------	--------------	---------	--------	------	--------------------------

E-Mail

Name ITU Santiago Mariño Pto. Ordaz

Pto. Ordaz	086-237940		Private	College	Av. Principal Castillito Edif. Monagas
------------	------------	--	---------	---------	----------------------------------------

E-Mail

Name IUT Alonzo Gamero

Coro	068-512164	515165	519556	Public	College	Av Libertador Parque los Orumos
------	------------	--------	--------	--------	---------	---------------------------------

E-Mail cidutag@funFLC.or.ve

City Phone Fax Type Level Address

Name IUT Antonio Jose de Sucre Aragua de Barcelona

Aragua de Barcelo	082-81356	81356	Private	College	Calle Bolivar #63
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E-Mail

Name IUT Antonio Jose de Sucre Barinas

Barinas	073-27311		Private	College	Av Industrial Edif Rox
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E-Mail

Name IUT Antonio Jose de Sucre Barquisimeto

Barquisimeto	051-524982 517165	524982	Private	College	Calle 11 Quinta Pia
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E-Mail

Name IUT Antonio Jose de Sucre Caracas

Caracas	0212-2497016 2425179	2419625	Private	College	Calle 09 La Urbina
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E-Mail

Name IUT Antonio Jose de Sucre Maracaibo

Maracaibo	061-530026 530821	530110	Private	College	Av La Limpia cc Los Olivos
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E-Mail

Name IUT Antonio Jose De Sucre Porlamar

Porlamar	095-631071	631071	Private	College	Calle El Progreso Sector el Poblado
----------	------------	--------	---------	---------	-------------------------------------

E-Mail

Name IUT Antonio Jose de Sucre Pto Ordaz

Pto Ordaz	086-221409		Private	College	Av Principal Castillito Edif. La Surtidora
-----------	------------	--	---------	---------	--------------------------------------------

E-Mail

City Phone Fax Type Level Address

Name IUT Antonio Jose de Sucre Punto Fijo

Punto Fijo	069-473551	473178	Private	College	Av Tachira cc Casa Blanca
------------	------------	--------	---------	---------	---------------------------

E-Mail

Name IUT Antonio Jose de Sucre San Felipe

San Felipe	054-44598		Private	College	Av Libertador frente al Terminal
------------	-----------	--	---------	---------	----------------------------------

E-Mail

Name IUT Antonio Jose de Sucre Valencia

Valencia	0241-212508		Private	College	Av San Jose de Tarbes con Av Bolivar
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E-Mail

Name IUT Antonio Jose des Sucre Barcelona

Barcelona	0281-2867541	2866667	Private	College	Av Andres Bello Colinas de Neveri.
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E-Mail

Name IUT Carlos Soublette Maracay

Maracay	043-532233	5231651	Private	College	Av Bolivar Oeste #182 Edif Alianza
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E-Mail

Name IUT Carlos Soublette Cagua

Cagua	044-74564		Private	College	Av Bolivar cruce Calle Boyaca
-------	-----------	--	---------	---------	-------------------------------

E-Mail

Name IUT de Cabimas

Cabimas	064-43013	45005	413125	Public	College	Calle la Estrella Sector el Amparo
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E-Mail

City Phone Fax Type Level Address

Name IUT de Caripito

Caripito, Monagas	091-71345 71378	71717	Public	College	Sector Bello Monte La Sabana
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E-Mail

Name IUT de Puerto Cabello

Pto Cabello	0242-3613611 3618760	3648612	Public	College	Urb. La Elvira
-------------	----------------------	---------	--------	---------	----------------

E-Mail

Name IUT del Mar

San Felix	086-311111 311105		Private	College	Calle Alfonso de Herrera vd. 104 El Roble
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E-Mail

Name IUT del Tigre Jose Antonio Anzoategui

El Tigre	0283-2353901 2353903		Public	College	Carretera salida el Tigre Ciudad Bolivar km 8
----------	----------------------	--	--------	---------	-----------------------------------------------

E-Mail

Name IUT Federico Rivero Palacios

Caracas	0212-6829477 6812467		Public	College	Kilometro 8 Carretera Paramericana Los Teques
---------	----------------------	--	--------	---------	-----------------------------------------------

E-Mail

Name IUT Industrial

Valencia	0241-2428050 2429075	2424918	Private	College	Urb. Trigal Sur
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E-Mail www@iuti.tec.ve

Name IUT Industrial Caracas

Caracas	0212-5526245 5526809	5519921	Private	College	
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E-Mail

Address

City Type Level

Name **IL**

Guacara	99	647108	Private	College
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E-Mail

Name **IL**

Maracaibo		528895	Private	College
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E-Mail

Name **ILs**

Punto Fijo	†	480433	Private	College	Av Poma Rosa Urb. Santa Fe.
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E-Mail

Name **IL**

La Victoria	?		Public	College	Av Universidad al Lado del Peaje
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E-Mail

Name **ILcas**

Caracas		2436343	Private	College	Calle #10 Edif. Raymo La Urbina
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E-Mail

Name **ILlona**

Barcelona	21		Private	College	Calle Malave Andres Bellofrenta a la Pasarela de Boyaca
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E-Mail

Name **ILus**

Barinas	3		Private	College	Av. 23 de Enero C.C Forum
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E-Mail

City Phone Fax Type Level Address

Name IUT Santiago Mariño Cabimas

Cabimas	064-718350 718351		Private	College	Calle Cumana con Carabobo Urb. Miraflores
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E-Mail

Name IUT Santiago Mariño Maracaibo

Maracaibo	061-530405		Private	College	Av. 28 La Limpia con Calle 77 Av 65
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E-Mail

Name IUT Santiago Mariño Maracay

Maracay	043-351961		Private	College	Zona Industrial San Jacinto Sector C Edif: Marpire
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E-Mail

Name IUT Santiago Mariño Maturín

Maturín	091-429211		Private	College	Av. Libertador Centro Comercial Fiorca
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E-Mail

Name IUT Santiago Mariño Merida

Merida	076-439195		Private	College	Av Los Proceres Zona Rental La Pedregosa
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E-Mail

Name IUT Santiago Mariño Portlamar

Portlamar	095-639914		Private	College	Calle Malave Villaiba Sector Genovez
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E-Mail

Name IUT Santiago Mariño Tovar

Tovar	075-733375 732372 733		Private	College	Av. Tachira Frente Al Coliseo
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E-Mail

City Phone Fax Type Level Address

Name IUT Santiago Manifo Valencia

Valencia	0241-8570810		Private	College	C.C Lomas Del Este
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E-Mail

Name IUTI Del Oeste Mariscal Sucre

Caracas	0212-4812510,4811839,	4811839	Public	College	Calle Sur Esquina San Francisquito Edif. Vitrolux San Juan
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E-Mail

Name PDVSA CIED Anaco

Anaco	082-21254	23375 23781	203214	Public	Training Cent
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E-Mail

Name PDVSA CIED Barinas

Barinas	073-306950		306960	Public	Training Cent
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E-Mail

Name PDVSA CIED Cabimas

Cabimas	065-310322		310676	Public	Training Cent
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E-Mail

Name PDVSA CIED Caracas

Caracas	0212-9064311	Informaci	0212-90	Public	Training Cent
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E-Mail eventos@cied.pdv.com

Name PDVSA CIED Maracaibo

Maracaibo	061-907671	907674 907	907666	Public	Training Cent
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E-Mail

City Phone Fax Type Level Address

Name PDVSA CIED Maturin

Maturin	091-424472 427474	402123	Public	Training Cent	
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E-Mail

Name PDVSA CIED Pto Fijo

Pto Fijo	069-509616 al 20	509694	Public	Training Cent	
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E-Mail

Name PDVSA CIED Pto La Cruz

Pto La Cruz	081-607600 607611	607700	Public	Training Cent	
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E-Mail

Name PDVSA CIED San Tome

San Tome	083-302184 302177	302230	Public	Training Cent	
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E-Mail

Name PDVSA CIED Yagua

Yagua	0241-8506130	8506150	Public	Training Cent	Variante Barbula San Diego
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E-Mail

Name Universidad Central de Venezuela

Caracas	0212-6054050 ext. 2044		Public	University	Ciudad Universitaria Urb los Chaguaramos
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E-Mail

Name Universidad de Carabobo

Valencia	0241-8668415	8674844	Public	University	Av Universidad Barbula Facultad de Ingenieria
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E-Mail

Address

Fax Type Level

City Phone

Name Universidad de los Andes

Merida	074-401111		Public	University	Edif. Del Rectorado Frenta a la Plaza Bolivar Av N°3
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E-Mail

Name Universidad de Oriente

Barcelona	0281-2681262	2623410	Public	University	Via Alterna Edif. Decanato
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E-Mail

Name Universidad del Zulia Cabimas

Cabimas	064-41113		Public	University	Av Mira Flores Frente al Palacio Episcopal
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E-Mail

Name Universidad del Zulia Maracaibo

Maracaibo	061-598586	596000	598903	Public	University	Edif. Del Rectorado carretera Zinuma
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E-Mail

Name Universidad Experimental del Tachira

San Cristobal	076-530422		Public	University	Av Universidad Paramillo.
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E-Mail

Name Universidad Fermin Toro

Cabudare	051-612454	611930	613555	Private	University	Centro Comercial Briceño Cabudare
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E-Mail

Name Universidad Francisco de Miranda

Coro	068-502506	502433	502	Public	University	Edif. Del Rectorado Calle Norte
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E-Mail

<i>Name</i>	<i>City</i>	<i>Phone</i>	<i>Fax</i>	<i>Type</i>	<i>Level</i>	<i>Address</i>
<i>Name</i>	Caracas	Universidad Metropolitana		Private	University	0212-2436437 2436129
<i>E-Mail</i>		dfr-admi@unimet.edu.ve				
<i>Name</i>	Pto Cabello	Universidad Nacional Experimental Politecnica de la Fuerza Armada Nacional		Public	University	Valle de Santa Lucia Edif. Dianca via Borburata
<i>E-Mail</i>		0242-613315 613566				
<i>Name</i>	Barquisimeto	Universidad Nacional Politecnica Antonio Jose de Sucre Barquisimeto		Public	University	Av Corpohuaico entre la Salle y Rotaria
<i>E-Mail</i>		051-411714 423932	423180			
<i>Name</i>	Caracas	Universidad Nacional Politecnica Antonio Jose de Sucre Caracas		Public	University	Kilometro 1 el Junquito
<i>E-Mail</i>		0212-4713762 472663				
<i>Name</i>	Carora	Universidad Nacional Politecnica Antonio Jose de Sucre Carora		Public	University	Calle Comercio Entre Contreras y Calvario
<i>E-Mail</i>		052-341762				
<i>Name</i>	Charallave	Universidad Nacional Politecnica Antonio Jose de Sucre Charallave		Public	University	Kilometro 1 Carretera Ocumare del Tuy
<i>E-Mail</i>		039-986545 986527				
<i>Name</i>	Pto Ordaz	Universidad Nacional Politecnica Antonio Jose de Sucre Pto Ordaz		Public	University	Urb. Villa Asia
<i>E-Mail</i>		086-222178 221893				

City Phone Fax Type Level Address

Name Universidad Nacional Rafael Maria Baralt

Cabimas	064-510172	413776	417	Public	University	Av El Rosario Antiguo Hospital
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E-Mail

Name Universidad Nororiental Gran Mariscal De Ayacucho

Barcelona	0281-2753526	2741133	2753526	Private	University	Av. Cajigal Edif. Anzoategui
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E-Mail

Name Universidad Nororiental Gran Mariscal de Ayacucho San Felix

San Felix	086-3211593	322508	32	Private	University	Av. Dalla Costa Edif. Kharma
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E-Mail

Name Universidad Nororiental Gran Mariscal de Ayacucho C. Bolivar

Ciudad Bolivar	085-29143	20618	25207	Private	University	Av. Bolivar Edif. Angelina
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E-Mail

Name Universidad Simon Bolivar Caracas

Caracas	0212-9063340	9063345	9063346	Public	University	Valle de Sartenejas Baruta
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E-Mail

Name Universidad Simon Bolivar Nanguata

Nanguata	0212-9063340	9063345		Public	University	Valle Camuni Grande de Nanguata Edo Vargas.
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E-Mail

Name Universidad Tecnologica del Centro

Guacara	0545-646677	645866	640258	Private	University	Via Araguata Carretera Nacional Guacara
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E-Mail

APPENDIX 7:

DATA BASE OF USED CHILLERS

Chillers Report

Owner	City	Model	Brand	Capacity Ton	CFC Charge Kg	Years
AEROPUERTO LA CHINITA	MARACAIBO		Westinghouse	225	R12	225
	MARACAIBO		Westinghouse	225	R12	225
	MARACAIBO		Westinghouse	225	R12	225
	MARACAIBO		Westinghouse	225	R12	225
AMPLIACION TORRE EUROPEA	CARACAS		Westinghouse	190	R12	190
BANCO CENTRAL	CARACAS		Westinghouse	460	R12	460
	CARACAS		Westinghouse	460	R12	460
	CARACAS		Westinghouse	460	R12	460
BANCO HIPOTECARIO DEL CENTRO CONS	BARQUISIMETO	CE063	Westinghouse	180	R12	313
	BARQUISIMETO	CE063	Westinghouse	180	R12	313
BANCO INTERBANK	CARACAS	CE063	Westinghouse	180	R12	313
	CARACAS	CE063	Westinghouse	180	R12	313
BANCO LARA	BARQUISIMETO	CE063	Westinghouse	180	R12	313
	BARQUISIMETO	CE063	Westinghouse	180	R12	313
BANCO MARACAIBO	MARACAIBO		WESTINGHOUSE	70	R12	70
	MARACAIBO		WESTINGHOUSE	70	R12	70
BANCO NACIONAL DE DESCUENTO	CARACAS		Westinghouse	150	R12	150
	CARACAS		Westinghouse	115	R12	115
	CARACAS		Westinghouse	115	R12	115
BARQUISIMETO HILTON	BARQUISIMETO		Westinghouse	200	R12	200
	BARQUISIMETO		Westinghouse	200	R12	200
BAZAR CARACAS	CARACAS		WESTINGHOUSE	50	R12	50
	CARACAS		WESTINGHOUSE	50	R12	50
C.C MONTALBAN	CARACAS		Westinghouse	285	R12	285
	CARACAS		Westinghouse	285	R12	285
	CARACAS		Westinghouse	285	R12	285
C.C PASEO LAS MERCEDES	CARACAS		Westinghouse	320	R12	320

Owner *City* *Model* *Brand* *Capacity Ton* *CFC Charge Kg* *Years*

C.C PASEO LAS MERCEDES	CARACAS		Westinghouse	320R12	320	
	CARACAS		Westinghouse	320R12	320	
	CARACAS		Westinghouse	320R12	320	
C.C PROPATRIA	CARACAS		Westinghouse	420R12	420	28
	CARACAS		Westinghouse	420R12	420	28
	CARACAS		Westinghouse	420R12	420	28
	CARACAS		Westinghouse	420R12	420	28
	CARACAS		Westinghouse	420R12	420	28
	CARACAS		Westinghouse	420R12	420	28
C.V.G	PUERTO ORDAZ		Westinghouse	150R12	150	23
	CIUDAD BOLIVAR		Westinghouse	150R12	150	24
	PUERTO ORDAZ		Westinghouse	150R12	150	23
C.V.P	CIUDAD BOLIVAR		Westinghouse	150R12	150	24
	CIUDAD BOLIVAR		Westinghouse	150R12	150	24
	CARACAS		Westinghouse	500R12	500	27
	CARACAS		Westinghouse	500R12	500	27
	CARACAS		Westinghouse	285R12	285	
	CARACAS		Westinghouse	500R12	500	27
CADAPE	EL PALITO	CE063	Westinghouse	180R12	313	
	EL PALITO	CE063	Westinghouse	180R12	313	
	EL PALITO	CE063	Westinghouse	180R12	313	
	EL PALITO	CE063	Westinghouse	180R12	313	
CADAPE CENTRO	MORON	CE063	Westinghouse	180R12	313	22
	MARACAIBO		WESTINGHOUSE	40R12	40	
	MARACAIBO		WESTINGHOUSE	40R12	40	
CASA PARIS	MARACAIBO		WESTINGHOUSE	40R12	40	
	MARACAIBO		WESTINGHOUSE	40R12	40	
	MARACAIBO		WESTINGHOUSE	40R12	40	
CAVENDES	CARACAS		Westinghouse	105R12	105	28
	CARACAS		Westinghouse	255R12	255	28
	CARACAS		Westinghouse	255R12	255	28
CENTRO MED. LA TRINIDAD	CARACAS		Westinghouse	116R12	116	
	CARACAS		Westinghouse	320R12	320	
CENTRO SIMON BOLIVAR	CARACAS		Westinghouse	550R12	550	28
	CARACAS		Westinghouse	550R12	550	28

Owner	City	Model	Brand	Capacity Ton	CFC Charge Kg	Years
CENTRO SIMON BOLIVAR	CARACAS		Westinghouse	550R12	550	29
	CARACAS		Westinghouse	550R12	550	29
	CARACAS		Westinghouse	550R12	550	29
	CARACAS		Westinghouse	550R12	550	28
	CARACAS		Westinghouse	550R12	550	28
	CARACAS		Westinghouse	550R12	550	28
	CARACAS		Westinghouse	550R12	550	28
	CARACAS		Westinghouse	550R12	550	29
	CARACAS		Westinghouse	50R12	50	
	CARACAS		Westinghouse	50R12	50	
CLINICA ATIA	CARACAS		Westinghouse	50R12	50	
	CARACAS		Westinghouse	50R12	50	
	CARACAS		Westinghouse	50R12	50	
CLINICA ATIAS	CARACAS		Westinghouse	105R12	105	22
	CARACAS	CE063	Westinghouse	180R12	313	21
CLINICA AVILA	CARACAS	CE063	Westinghouse	180R12	313	21
	CARACAS	CE063	Westinghouse	180R12	313	21
	CARACAS	CE063	Westinghouse	180R12	313	21
CLINICA CALICANTO	MARACAY		WESTINGHOUSE	50R12	50	
	MARACAY		WESTINGHOUSE	50R12	50	
CLINICA LA TRINIDAD	CARACAS		Westinghouse	116R12	116	28
	CARACAS		Westinghouse	116R12	116	
COATS DE VENEZUELA	SAN JOAQUIN		Westinghouse	116R12	116	
	SAN JOAQUIN		Westinghouse	116R12	116	
COLEGIO MEDICO D.F	CARACAS		Westinghouse	255R12	255	27
	CARACAS		Westinghouse	255R12	255	27
COMERCIAL SAQUI	CARACAS		Westinghouse	48R12	48	20
	CARACAS		Westinghouse	48R12	48	20
CONCEJO MUNICIPAL DE ARAGUA	MARACAY		Westinghouse	160R12	160	
	MARACAY		Westinghouse	160R12	160	
COOPERATIVA ALTAVISTA	PUERTO ORDAZ		Westinghouse	79R12	79	
	PUERTO ORDAZ		Westinghouse	79R12	79	
CORACREVI	CARACAS		Westinghouse	50R12	50	20
	CARACAS		Westinghouse	50R12	50	20
	CARACAS		Westinghouse	50R12	50	20
	CARACAS		Westinghouse	50R12	50	20

Owner	City	Model	Brand	Capacity Ton	CFC Charge Kg	Years
ELECTRICIDAD DE CARACAS	CARACAS		Westinghouse	460R12	460	25
	CARACAS		Westinghouse	460R12	460	24
	CARACAS		Westinghouse	320R12	320	
	CARACAS		Westinghouse	460R12	460	25
	CARACAS		Westinghouse	320R12	320	
	CARACAS		Westinghouse	460R12	460	25
ELECTRICIDAD DE TACOA	TACOA		Westinghouse	320R12	320	24
	TACOA		Westinghouse	320R12	320	24
FEDECAMARAS	CARACAS		Westinghouse	125R12	125	30
	CARACAS		Westinghouse	125R12	125	30
FLEXILON	MARACAY		Westinghouse	320R12	320	25
	MARACAY		Westinghouse	265R12	265	30
	MARACAY		Westinghouse	420R12	420	25
	MARACAY		Westinghouse	265R12	265	30
	MARACAY		Westinghouse	265R12	265	28
	MARACAY		Westinghouse	240R12	240	24
FORMATOS	BARLOVENTO		Westinghouse	500R12	500	25
HILANDERAS VENEZOLANAS	TINAQUILLO		Westinghouse	150R12	150	25
HOSPITAL BARINAS	BARINAS		Westinghouse	150R12	150	25
	BARINAS		Westinghouse	150R12	150	25
HOSPITAL PEREZ CARREÑO	CARACAS		Westinghouse	150R12	150	
	CARACAS		Westinghouse	150R12	150	
HOSPITAL PUERTO ORDAZ	PUERTO ORDAZ		Westinghouse	150R12	150	25
	PUERTO ORDAZ		Westinghouse	150R12	150	25
HOSPITAL SANTA BARBARA	SANTA BARBARA		Westinghouse	150R12	150	26
	SANTA BARBARA		Westinghouse	150R12	150	26
HOTEL CIUDAD BOLIVAR	CIUDAD BOLIVAR		Westinghouse	79R12	79	22
	CIUDAD BOLIVAR		Westinghouse	79R12	79	22
HOTEL EL LAGO	MARACAIBO		Westinghouse	360R12	360	
	MARACAIBO		Westinghouse	360R12	360	
	MARACAIBO		Westinghouse	360R12	360	
HOTEL HIRAHARA	BARQUISIMETO		Westinghouse	200R12	200	

Owner	City	Model	Brand	Capacity Ton	CFC Charge Kg	Years
FEDECAMARAS	CARACAS		Westinghouse	125R12	125	30
	CARACAS		Westinghouse	125R12	125	30
FERRUM			WESTINGHOUSE	25R12	25	
			WESTINGHOUSE	50R12	50	
			WESTINGHOUSE	50R12	50	
FLEXILON	MARACAY		Westinghouse	285R12	285	30
	MARACAY		Westinghouse	285R12	285	29
	MARACAY		Westinghouse	320R12	320	25
	MARACAY		Westinghouse	420R12	420	25
	MARACAY		Westinghouse	285R12	285	30
FORD	VALENCIA		WESTINGHOUSE	40R12	40	
	VALENCIA		WESTINGHOUSE	40R12	40	
	VALENCIA		WESTINGHOUSE	25R12	25	
	VALENCIA		WESTINGHOUSE	25R12	25	
FORMIATOS	BARLOVENTO		Westinghouse	240R12	240	24
FRIOSISTEMAS			WESTINGHOUSE	75R12	75	
			WESTINGHOUSE	70R12	70	
HILANDERAS VENEZOLANAS	TINAQUILLO		Westinghouse	500R12	500	25
HOECHT REMEDIA	MARACAY		WESTINGHOUSE	80R12	80	
HOSPITAL BARINAS	BARINAS		Westinghouse	150R12	150	25
	BARINAS		Westinghouse	150R12	150	25
HOSPITAL PEREZ CARREÑO	CARACAS		Westinghouse	150R12	150	
	CARACAS		Westinghouse	150R12	150	
HOSPITAL PUERTO ORDAZ	PUERTO ORDAZ		Westinghouse	150R12	150	25
	PUERTO ORDAZ		Westinghouse	150R12	150	25
HOSPITAL SANTA BARBARA	SANTA BARBARA		Westinghouse	150R12	150	26
	SANTA BARBARA		Westinghouse	150R12	150	26
HOTEL CIUDAD BOLIVAR	CIUDAD BOLIVAR		Westinghouse	79R12	79	22
	CIUDAD BOLIVAR		Westinghouse	79R12	79	22
HOTEL EL LAGO	MARACAIBO		Westinghouse	360R12	360	
	MARACAIBO		Westinghouse	360R12	360	

Owner	City	Model	Brand	Capacity Ton	CFC Charge Kg	Years
HOTEL EL LAGO	MARACAIBO		Westinghouse	360 R12		360
HOTEL HIRAHARA	BARQUISIMETO		Westinghouse	200 R12		200
HOTEL HOLIDAY INN	BARQUISIMETO		Westinghouse	200 R12		200
	CARACAS		Westinghouse	320 R12		320
	CARACAS		Westinghouse	320 R12		29
	CARACAS		Westinghouse	320 R12		29
	CARACAS		Westinghouse	320 R12		29
HOTEL PIPO	CARACAS		Westinghouse	320 R12		29
	CARACAS		Westinghouse	320 R12		23
	MARACAY		Westinghouse	94 R12		94
	MARACAY		Westinghouse	94 R12		94
HOTEL TAMANACO	MARACAY		Westinghouse	94 R12		94
	CARACAS		Westinghouse	320 R12		320
	CARACAS		Westinghouse	320 R12		320
	CARACAS		Westinghouse	320 R12		320
I.N HIPODROMO	CARACAS		Westinghouse	255 R12		255
	CARACAS		Westinghouse	255 R12		255
	CARACAS		Westinghouse	116 R12		116
IMPRES	CARACAS		Westinghouse	79 R12		79
	CARACAS		Westinghouse	79 R12		79
INCLAAR	MARACAY		WESTINGHOUSE	40 R12		40
	MARACAY		WESTINGHOUSE	40 R12		40
INDUSTRIA QUIMICA CARABOBO	VALENCIA		WESTINGHOUSE	20 R12		20
	JUACA		WESTINGHOUSE	115 R12		115
LA TRINIDAD	BARLOVENTO		WESTINGHOUSE	115 R12		115
	BARLOVENTO		WESTINGHOUSE	115 R12		115
	BARLOVENTO		WESTINGHOUSE	115 R12		115
	BARLOVENTO		WESTINGHOUSE	115 R12		115
	BARLOVENTO		WESTINGHOUSE	115 R12		115
	BARLOVENTO		WESTINGHOUSE	115 R12		115
LAMIFORTE	CARACAS		Westinghouse	320 R12		320
			WESTINGHOUSE	100 R12		100
			WESTINGHOUSE	100 R12		100
			WESTINGHOUSE	100 R12		100

Owner City Model Brand Capacity Ton CFC Charge Kg Years

MATPLASTIC				WESTINGHOUSE	40R12	40
MONTANA GRAFICA	MARIARA			WESTINGHOUSE	50R12	50
NEGROVEN	VALENCIA			WESTINGHOUSE	25R12	25
OTIMECA				WESTINGHOUSE	40R12	40
				WESTINGHOUSE	50R12	50
				WESTINGHOUSE	50R12	50
OTIMECA (EDIF. BRISA)				WESTINGHOUSE	25R12	25
				WESTINGHOUSE	50R12	50
				WESTINGHOUSE	50R12	50
OTIMECA (EDIF. BRISA)				WESTINGHOUSE	50R12	50
PARACERAS				WESTINGHOUSE	50R12	50
PDVSA	Punta de Mata				100R12	150
	Punta de Mata				210R12	315
	Punta de Mata				210R12	315
	Punta de Mata				100R12	150
	Punta de Mata				100R12	150
	Punta de Mata				240R11	360
	Punta de Mata				240R11	360
	Punta de Mata				240R11	360
	Punta de Mata				240R11	360
PLASTICOS AURORA				WESTINGHOUSE	40R12	40
				WESTINGHOUSE	40R12	40
PLASTICOS METALGRAFICA				WESTINGHOUSE	20R12	20
PLASTIGEN				WESTINGHOUSE	25R12	25
POLIEDRO	CARACAS			Westinghouse	460R12	460
	CARACAS			Westinghouse	460R12	460
	CARACAS			Westinghouse	460R12	460
PRADO HUMBOLDT	CARACAS			Westinghouse	130R12	130
	CARACAS			Westinghouse	130R12	130
PRADO HUMBOLDT	CARACAS			Westinghouse	116R12	116
	CARACAS			Westinghouse	135R12	135

Owner	City	Model	Brand	Capacity Ton	CFC Charge Kg	Years
PRADO HUMBOLT	CARACAS		Westinghouse	150	R12	150
PROVEDURIA PETARE	CARACAS		Westinghouse	50	R12	19
	CARACAS		Westinghouse	50	R12	19
	CARACAS		Westinghouse	50	R12	19
	CARACAS		Westinghouse	50	R12	19
	CARACAS		Westinghouse	50	R12	19
	CARACAS		Westinghouse	50	R12	19
RACOL			WESTINGHOUSE	55	R12	55
RON SANTA TERESA	LA ENCRUCIJADA		WESTINGHOUSE	50	R12	50
	LA ENCRUCIJADA		WESTINGHOUSE	50	R12	50
SAVIRAM			WESTINGHOUSE	20	R12	20
			Carrier	500	R12	454
Sidor	Puerto Ordaz, Centr. Serv II	Centrifugo		1000	R11	1040
	PTO. ORDAZ, CENTRAL	CVHB-095K-DL451	TRANE	1000	R11	1040
	PTO. ORDAZ, CENTRAL	CVHB-095K-DL451	TRANE	1000	R11	1040
	Puerto Ordaz, Sala Elec TS	CE0631Centrifugo,	Westinghouse	180	R12	313
	Puerto Ordaz, H14 Sala Ele	CE063JCentrifugo,	Westinghouse	180	R12	313
	Puerto Ordaz, Sala Elec TS	CE063KCentrifugo,	Westinghouse	180	R12	313
	Puerto Ordaz Sala Elec TS	CE063KCentrifugo,	Westinghouse	180	R12	313
	Puerto Ordaz Sala Elec TS	CE0631Centrifugo, I	Westinghouse	180	R12	313
	Puerto Ordaz, Sala Chiller	Centrifugo	Carrier	500	R12	454
	Puerto Ordaz, Sala Chiller	Centrifugo	Carrier	500	R12	454
	PTO. ORDAZ, CENTRAL	CVHB-095K-DL451	TRANE	1000	R11	1040
	Puerto Ordaz, Centr. Serv II	Centrifugo	Carrier	500	R12	454
	Puerto Ordaz, Centr. Serv II	Centrifugo	Carrier	500	R12	454
	Puerto Ordaz, Bloque 123	CE063JCentrifugo,	Westinghouse	180	R12	320
	Puerto Ordaz, Bloque 123	CE063JCentrifugo,	Westinghouse	180	R12	320
	Puerto Ordaz, Bloque 123	CE063JCentrifugo,	Westinghouse	180	R12	320
	Puerto Ordaz, Casa 1 Eq 3	CE063JCentrifugo,	Westinghouse	180	R12	320
	Puerto Ordaz, Casa 1 Eq 2	CE063JCentrifugo,	Westinghouse	180	R12	320
	Puerto Ordaz, Casa 1 Eq 1	CE063JCentrifugo, I	Westinghouse	180	R12	320
	Puerto Ordaz, Sala Elec TS	Centrifugo	Westinghouse	180	R12	313

Owner	City	Model	Brand	Capacity Ton	CFC Charge Kg	Years
Sidor	Puerto Ordaz, Sala Elec TS	Centrifugo	Westinghouse	180R12	313	26
	Puerto Ordaz, Sala Elec TS	PF116Centrifugo, 1	Westinghouse	116R11	202	28
	Puerto Ordaz, Sala Elec TS	PF116Centrifugo, 1	Westinghouse	116R12	202	28
	Puerto Ordaz, Sala Chiller	Centrifugo	Carrier	500R12	454	17
	Puerto Ordaz, Sala H955-2	CE100J Centrifugo,	Westinghouse	500R12	680	28
	Puerto Ordaz, Sala H955-1	Centrifugo CE 100J,	Westinghouse	500R12	680	28
	PTO. ORDAZ, CENTRAL	CVHB-095K-DL451	TRANE	1000R11	1040	
	Puerto Ordaz, Sala H10 Eq	CE100J Centrifugo,	Westinghouse	500R12	680	28
	Puerto Ordaz, Sala H10 Eq	CE100J Centrifugo	Westinghouse	500R12	680	28
	PTO. ORDAZ, CENTRAL	CVHB-095K-DL451	TRANE	1000R11	1040	
TECNODUCTOS			WESTINGHOUSE	40R12	40	
			WESTINGHOUSE	40R12	40	
			WESTINGHOUSE	50R12	50	
			WESTINGHOUSE	40R12	40	
			WESTINGHOUSE	40R12	40	
TERCLIMA			WESTINGHOUSE	70R12	70	
TERMOAIRE			WESTINGHOUSE	50R12	50	
			WESTINGHOUSE	100R12	100	
			WESTINGHOUSE	100R12	100	
TERMOTROL			WESTINGHOUSE	85R12	85	
			WESTINGHOUSE	85R12	85	
			WESTINGHOUSE	20R12	20	
THECLIMA			WESTINGHOUSE	20R12	20	
	LA VICTORIA		WESTINGHOUSE	60R12	60	
	LA VICTORIA		WESTINGHOUSE	60R12	60	
			WESTINGHOUSE	20R12	20	
	VALENCIA		WESTINGHOUSE	100R12	100	
TORRE CAMORUCO	VALENCIA		WESTINGHOUSE	80R12	80	
	VALENCIA		WESTINGHOUSE	80R12	80	
	VALENCIA		WESTINGHOUSE	100R12	100	
	VALENCIA		WESTINGHOUSE	100R12	100	
	VALENCIA		WESTINGHOUSE	100R12	100	

Owner	City	Model	Brand	Capacity Ton	CFC Charge Kg	Years
TORRE CAMORUCO	VALENCIA		WESTINGHOUSE	100R12		100
	VALENCIA		WESTINGHOUSE	100R12		100
	VALENCIA		WESTINGHOUSE	100R12		100
	VALENCIA		WESTINGHOUSE	150R12		150
	VALENCIA		WESTINGHOUSE	100R12		100
UNION ISRAELITA			WESTINGHOUSE	75R12		75
			WESTINGHOUSE	75R12		75
UNIVERSIDAD DEL ZULIA	MARACAIBO		Westinghouse	200R12		200
	MARACAIBO		Westinghouse	200R12		200
VASOS DIXIE	MARACAY		WESTINGHOUSE	25R12		25
			WESTINGHOUSE	25R12		25
VASOS VENEZOLANOS			WESTINGHOUSE	25R12		25
			WESTINGHOUSE	60R12		60
VEMAR			WESTINGHOUSE	100R12		100
VENAIRE			WESTINGHOUSE	100R12		100

Total Charge Kg Total Capacity

R11	6842	6076
-----	------	------

Total Charge Kg Total Capacity tn

R12	56166	51377
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APPENDIX

USER HANDBOOK DATA BASE

**REFRIGERANT MANAGEMENT PLAN
OF VENEZUELA**

Manual de Usuario

DATA BASE NATIONAL SURVEY

Requerimientos para el uso del Programa

El programa por ser desarrollado en Access, no genera un programa ejecutable propiamente dicho, por lo que requiere necesariamente del software en la PC donde se desee usar.

Ejecución del Programa

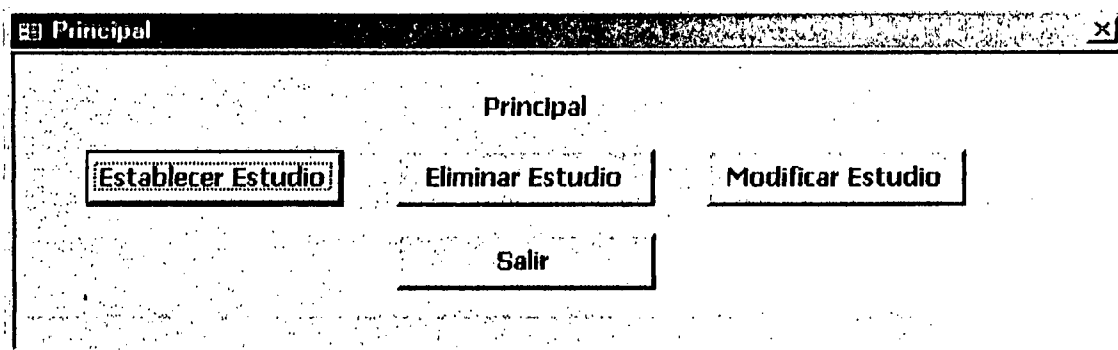
En principio para ejecutar el programa es necesario accionar doble clic izquierdo con el mouse sobre el archivo que lo identifica, en este caso "Proyecto.mdb", desde el CD que lo contiene o desde cualquier directorio de alguna PC donde se haya copiado



Desarrollo del Programa

Luego de la ejecución del programa, se presenta ante el usuario, el entorno Access bajo el cual fue diseñado, con privacidad, en lo que a diseño interno se refiere con una ventana llamada Principal.

Primera Ventana



En términos del programa este guía al usuario de acuerdo a lo que este desee hacer proporcionando alternativas en él. Si no soporta alguna información antigua, primeramente exige el establecimiento de un estudio, donde el usuario escogerá una tupla de años de estudio comprendida específicamente entre 1950 a 2050 excluyendolos. Así mismo se determinará un responsable, un código numérico fácil de recordar para el que utiliza el software y un conjunto de observaciones si resulta necesario.

Si previamente se ha establecido un estudio y la información esta contenida en las tablas internas del programa, este proporcionará dos opciones más: La de modificar un estudio o eliminarlo. De acuerdo a la cantidad de información que manejan ambas

alternativas luego de escoger alguna de ellas, el programa requerirá el código del estudio que se desea eliminar o modificar. Si desea salir del programa, el usuario puede hacerlo con el botón Salir.

Al establecer un estudio se abre esta ventana

Datos Estudio

Código de estudio

A1

A2

A3

Responsable

Observaciones

Restablecer Registrar Cancelar

Al elegir eliminar un estudio se abre la ventana:

Eliminar Estudio

Código de estudio:

Eliminar Cancelar

Al elegir modificar un estudio se abre la ventana:

Modificar Estudio

Código de estudio

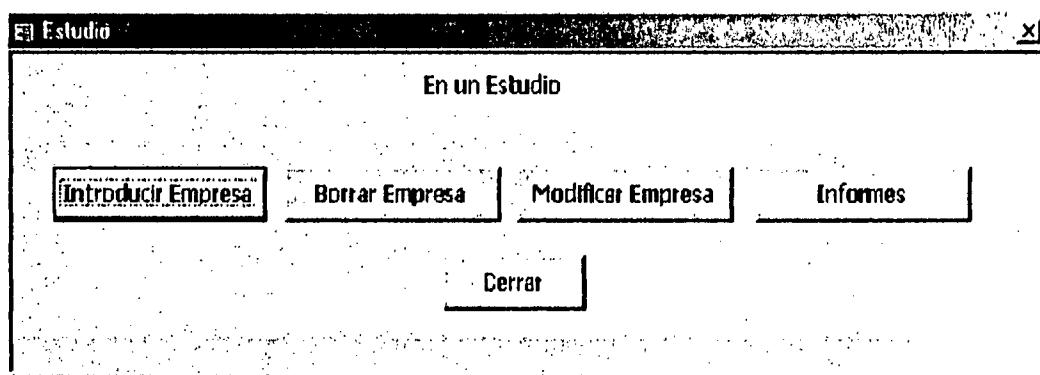
Modificar Cancelar

Todas las ventanas desplegadas presentan la alternativa de cancelar la acción que tiene a cargo con un botón común llamado “Cancelar” o “Salir”

Importante: Luego de eliminar un estudio no pueden restablecerse los valores involucrados, por lo que debe realizarse cuidadosamente.

En un Estudio:

Al establecer o modificar un estudio el recorrido del programa es común, iniciándose al desplegarse la siguiente ventana:



Sí el usuario requiere introducir una empresa en el estudio debe recurrir al primer botón. Si desea borrar alguna empresa al segundo y sí decide modificarla al tercero. Para acceder a los informes respecto al estudio la alternativa correcta es el cuarto botón. Sí desea salir del entorno actual sólo active el botón “Cerrar”.

Introducir Empresa

Al decidir introducir una empresa se requerirán los siguientes datos de la misma en el siguiente orden:

- a) Nombre.
- b) Dirección.
- c) Ciudad.
- d) Teléfono.
- e) Fax
- f) E- Mail.
- g) Dueño o Engargado.
- h) Años Activa
- i) Tipo de Empresa

Ventana Inicial al decidir Introducir una Empresa:

The screenshot shows a window titled "Datos de Empresa" with a close button in the top right corner. The window contains the following fields and controls:

- Nombre Empresa: Text input field.
- Dirección: Text input field.
- Ciudad: Text input field.
- Teléfono: Text input field.
- Fax: Text input field.
- e-mail: Text input field.
- Dueño o Encargado: Text input field.
- Años Activa: Text input field.
- Tipo de Empresa: Dropdown menu.
- Registrar: Button.
- Cancelar: Button.

En esta ventana al escoger el tipo de empresa se establecen tres alternativas

- 1: Empresas de Ventas.
- 2: Talleres de Reparación Equipos.
- 3: Talleres de Reparación de Vehículos.

Importante: Esta categoría no es modificable posteriormente, por lo que al cometer un error al respecto sólo se puede borrar la empresa.

Al introducir alguna empresa de acuerdo a su tipo, comienza un recorrido particular del software que permite describir dicha empresa a través del servicio que presta y la información clasificada que puede proporcionar al estudio de agentes contaminantes (refrigerantes) que afectan la capa de ozono.

Empresas de Ventas:

La información relacionada con las empresas de tipo 1 comienza a incorporarse a la base de datos de acuerdo a la siguiente secuencia de interfaz:

Ventana 1

The screenshot shows a window titled "Ventas de Equipos" with the following elements:

- Equipment selection: "Equipo" with a dropdown menu.
- Sale year: "Año de Venta" with a dropdown menu.
- Refrigerant type: "Tipo de Refrigerante" with a dropdown menu.
- Quantity: "Cantidad" with a text input field containing the value "0".
- Navigation buttons: "Regresar", "Restablecer", "Continuar", "Registrar", and "Salir".
- Status bar: "Registro: 1 de 1 (Filtrado)" with navigation icons.

Esta ventana se refiere a la información relacionada con la venta de equipos donde se especifica uno a uno el equipo, año, tipo de refrigerante y cantidad de la venta realizada, donde los años se restringen a los establecidos en el estudio, al igual que los equipos a la siguiente lista:

- Aire Acondicionado de 10 a 100 tn
- Aire Acondicionado de 36000
- Aire Acondicionado de 3 a 10 tn
- Aire Acondicionado Mayor a 100 tn
- Aire Acondicionado Vehículo
- Cavas Refrigeradas de Vehículos
- Chiller Industrial
- Compresores
- Congeladores
- Enfriadores Agua
- Maquinas de Helado
- Neveras
- Vitrinas Refrigeradas

También los refrigerantes son especificados por la interfaz a:

- R11
- R12
- R1134A
- R22

Importante: Para moverse en los registros las ventanas que lo requieren proporcionan botones de desplazamiento en ellas, sino se salvó alguna información antes de decidir desplazarse entre registros se despliega un mensaje donde se ofrecen las alternativas de salvar el registro.

Al continuar por el recorrido de la interfaz la ventana siguiente corresponde al origen de los equipos en venta en porcentajes:

Ventana 2

Origen de los Equipos

% Fabricantes Nacionales

% Mayoristas Nacionales

% Usado

% Importado Directamente

Marcas

Regresar Restablecer Continuar Registrar Salir

En esta ventana se coloca en porcentaje cuantos equipos provienen de: Fabricantes Nacionales, Mayoristas Nacionales, Equipos Usados e Importados Directamente. Además se incluye información extra sobre las marcas que vende la empresa.

Al continuar abre la Ventana 3

Ventas Refrigerantes

Año de Venta

Tipo de Refrigerante

Cantidad

Regresar Restablecer Continuar Registrar Salir

Registro: 1 de 1 (Filtrado)

En esta ventana se habilita una interfaz que permite proporcionar a la base de datos información referente a la venta de refrigerantes restringiendo en año de venta y los refrigerantes como en la ventana 1, incluyendo botones de desplazamiento entre registro y registro.

Ventana 4

Proveedores

Nombre del Proveedor:

Teléfono:

Recarga envase

Envase Normalizado Color Normalizado

Otros Envases:

Regresar Restablecer Registrar Salir

Registro: 1 de 1 (Filtrado)

Como última ventana se muestra una donde se proporciona la posibilidad de introducir datos específicos sobre proveedores de la empresa que se introduce. Estos datos son:

- Nombre del Proveedor
- Teléfono
- Recarga Envase: Si / No
- Envase Normalizado: Si / No
- Color Normalizado: Si / No
- Otros Envases

Esta ventana proporciona botones desplazamientos entre registros otorgando la posibilidad de introducir mas de un proveedor si es ese el caso.

Importante: En general casi todas las ventanas poseen:

Un botón “Regresar” que permite volver a la ventana anterior.

Un botón “Restablecer” que permite restablecer el último valor que tenía el registro.

Un botón “Continuar” que permite seguir a la ventana que corresponde.

Un botón “Registrar” que guarda la información especificada por el usuario

Empresa de Talleres:

Ambos talleres, tanto los de reparación de equipos como los de reparación de vehículos, introducen en la base de datos básicamente la misma información. En principio abren con la siguiente ventana:

Ventana 1

Herramientas de la Empresa

Bomba de Vacío

Válvula Servicio Manifold

Detector Fugas

Equipo Recuperador

Balanza

Regresar Restablecer Continuar Registrar Salir

En esta ventana se señala que herramientas utiliza la empresa con un tilde mediante el mouse.

Ventana 2

Reparaciones de Equipos

Equipo

Año de Reparación

Reparaciones en el año

Regresar Restablecer Continuar Registrar Salir

Registro: 1 de 1 (Filtrado)

En esta ventana se presenta la alternativa de proporcionar datos sobre la reparación de Equipos o Vehículos de acuerdo al caso que se presente. Si son reparaciones de equipos estos se restringen a la siguiente lista:

- Aire Acondicionado de 10 a 100 tn

- Aire Acondicionado Doméstico
- Aire Acondicionado de 3 a 10 tn
- Aire Acondicionado Mayor a 100 tn
- Cava Refrigerada
- Cava Refrigerada de Vehículos
- Congeladores
- Enfriador Industrial
- Enfriadores Agua
- Maquinas de Helado
- Neveras
- Vitrina Refrigerada

Si son reparaciones de vehículos estos se restringen a la siguiente lista:

- Aire acondicionado de Autobús
- Aire acondicionado de Camión
- Aire acondicionado de Vehículo
- Vehículo Refrigerado

Al igual que la Ventana 1 de la Empresa de Ventas, se restringen los años a los del estudio y los refrigerantes a la lista mencionada.

Ventana 3

The screenshot shows a window titled "Carga" with the following elements:

- A dropdown menu labeled "Equipo".
- A text input field labeled "Carga en Kilogramos".
- Five buttons: "Regresar", "Restablecer", "Continuar", "Registrar", and "Salir".
- A status bar at the bottom indicating "Registro: 1 de 1 (Filtrado)" with navigation icons.

En esta ventana se introduce información sobre la carga en kilogramos de cada equipo o vehículo a reparar de acuerdo a la clases de taller. Incluye botones de desplazamiento entre registros. Los equipos y vehículos se restringen al igual que en la ventana 2 de esta sección.

Ventana 4

Nombre y Apellido:

Teléfono:

Curso Fondoin

Bachiller

TSU

Ince

Técnico Empírico

Regresar Restablecer Continuar Registrar Salir

Registro: 14 | 1 de 1 (Filtrado)

Los talleres poseen técnicos que realizan servicios de reparaciones, por lo que el software ofrece una interfaz para introducir uno a uno los datos de los empleados en esta área con respecto a las empresas consideradas. En esta parte se destaca el hecho de que un técnico haya realizado el curso Fondoin, sea Bachiller, Técnico Superior Universitario, Ince o por el contrario sea un Técnico empírico

Ventana 6

Tipo de Refrigerante

Cantidad en Kg

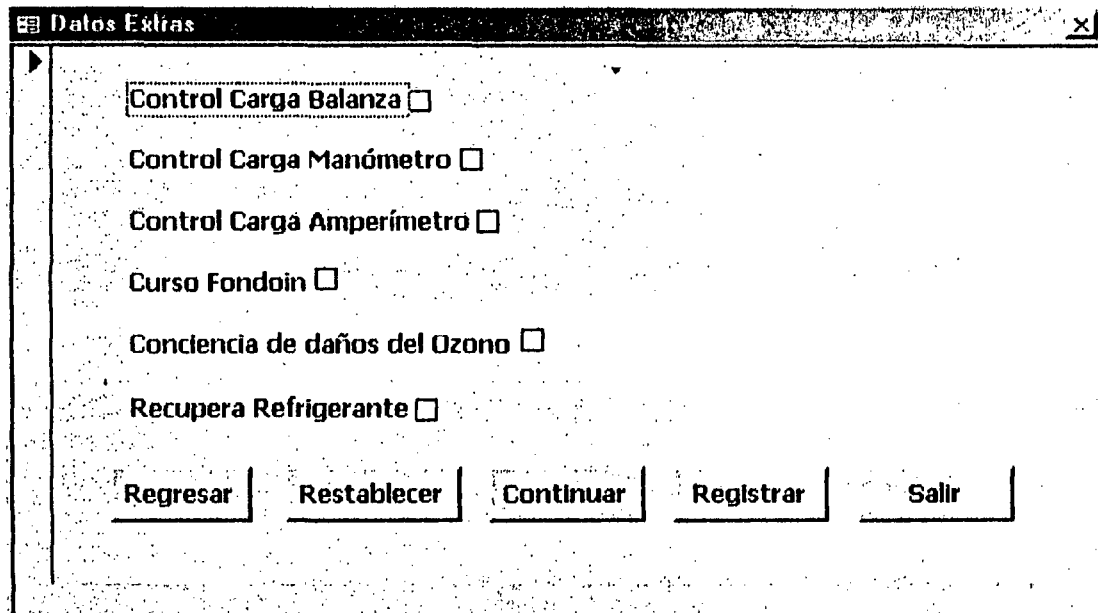
Regresar Restablecer Continuar Registrar Salir

Registro: 1 | 1 de 1 (Filtrado)

Siendo un Taller de reparaciones se considera también la compras de Refrigerantes del último año de la tupla establecida en el estudio. Restringiendo los refrigerantes como en anteriores ventanas.

Ventana 7

En esta ventana se especifican datos extras de la empresa en respuestas de Si y No.



The screenshot shows a window titled "Datos Extras" with a close button (X) in the top right corner. The window contains a list of six items, each with a checkbox to its right:

- Control Carga Balanza
- Control Carga Manómetro
- Control Carga Amperímetro
- Curso Fondoin
- Conciencia de daños del Ozono
- Recupera Refrigerante

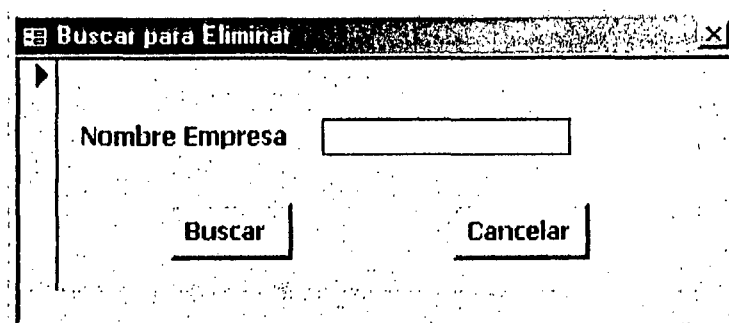
At the bottom of the window, there are five buttons: "Regresar", "Restablecer", "Continuar", "Registrar", and "Salir".

Ventana 8

Por último, se presenta la ventana que permite introducir en la base de datos la información sobre los proveedores de la empresa. Esta ventana es de formato idéntico a la de proveedores de empresas de ventas.

Borrar Empresa

Para borrar alguna empresa se escoge el botón que corresponde a esa elección en la ventana referente al estudio. Inmediatamente se despliega una ventana igual a la siguiente:



The screenshot shows a window titled "Buscar para Eliminar" with a close button (X) in the top right corner. The window contains a text input field labeled "Nombre Empresa" and two buttons below it: "Buscar" and "Cancelar".

En ella se realiza una búsqueda específica de acuerdo a un nombre bien definido o aún más fácil, a través de una búsqueda asociativa colocando como variable de búsqueda una parte del nombre que lo diferencie totalmente de otro
Ej: Si la Empresa se llama "Refrigeraciones La Dolorosa" con colocar Dolorosa, el programa encontrara la empresa a borrar y la eliminará.

Modificar Empresa

Para modificar alguna empresa el proceso de búsqueda se realiza igual que para eliminarla, con la diferencia de que despliega en principio la siguiente ventana, donde se inicia el proceso que permite realizar todos los cambios que requiera una o mas empresas, excluyendo únicamente del cambio el tipo de empresa, debido a que esto generaría una nueva empresa por lo que lo recomendable es eliminarla y crear una nueva empresa si fuera el caso.

The image shows a screenshot of a software window titled "Datos Modificables Empresa". The window contains several input fields for company information, each with a label to its left:

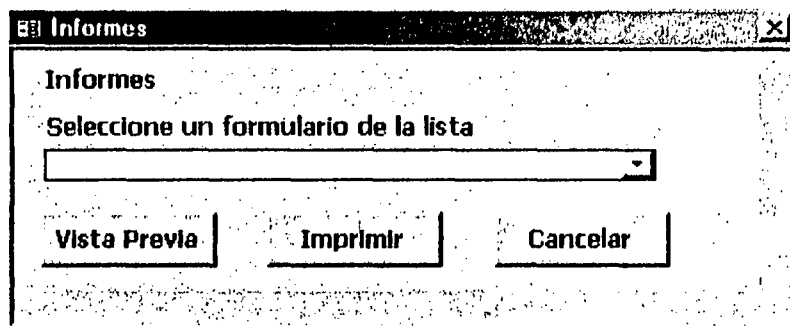
- Nombre Empresa
- Ciudad
- Dirección
- Teléfono
- Fax
- e-mail
- Dueño o Encargado
- Años Activa

At the bottom of the window, there are three buttons: "Continuar", "Modificar", and "Salir".

Luego de esta ventana, el programa recorre cada ventana de forma similar al proceso realizado al introducir una nueva empresa de acuerdo a su tipo (1,2,3). Con la posibilidad de regresarse o continuar de acuerdo a lo que se desee, e ir corrigiendo donde sea necesario.

Informes

Para poder generar informes relacionados con la base de datos, desde la ventana de estudio se activa el botón de informes. Luego de eso se despliega la siguiente ventana:



De esta forma, mediante esta ventana se puede hacer una vista previa de cada informe o imprimirlo.

Importante: Para imprimir un documento completo, basta con imprimir desde el botón que proporciona la interfaz del programa. Si por el contrario se quiere imprimir sólo una parte del informe se utiliza la herramienta proporcionada por Access, donde de acuerdo a las propiedades de la impresión que el producto otorga, se puede establecer un rango específico de impresión

Los Informes que proporciona el programa por estudio son:

- Store General List
- Refrigeration Shop Service General List
- Vehicle AC Shop Service General List
- Refrigeration Store List
- Shop Service List
- Refrigeration Shop Service List
- Vehicle AC Shop Service List
- Container Information
- Instrument Used for Charge Control
- Ecology Report
- Fondoin Curse
- Total Repairs Report and amount of Charge
- Amount of Refrigerant Purchases in last year
- Academical Technician General List
- Empirical Technician General List

- Number of Technician
- Number of Academical Technician
- Number of Empirical Technician
- Service Shop Suppliers
- Store Suppliers
- Equipment Sales for Refrigerant
- Amount of Refrigerant Sales
- Used Equipment