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PROJECT COMPLETION REPORT

SECTION 1: PROJECT DATA

1.1	Country:	Venezuela
1.2	Project number: (as per inventory)	VEN/FOA/23/INV/61 (MP/VEN/97/181)
1.3	Project title:	Phasing out ODS at Industrias Todos C.A.
1.4	Date of approval of the project:	23th ExCom Meeting in November 1997
1.5	Percentage of national ownership:	100% private company
1.6	Implementing agency:	UNIDO
1.7	Local executing agency/ Financial intermediary:	N/A
1.8	National coordinating agency:	FONDOIN
1.9	Scheduled date of completion:	May 1999
1.10	Actual date of completion:	December 1998
1.11	Date of project completion report:	September 1999
1.12	Completion report done by: (Implementing agency/National agency)	UNIDO

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Reviewed by: E. Puerto-Ferre, SES/MPR

Date: September 1999  
Date: September 1999

## SECTION 2: EXECUTIVE SUMMARY

Item	Plan/ Approved	Actual	National Sector Impact*	Comment
ODS phase-out (in ODP tonnes)	17.8	17.8	6.1%	
Budget and expenditure (US\$)	137,520	137,395	N/A	
Cost-effectiveness (in US\$/kg)	7.73	7.72	N/A	
Project Implementation: (in months)	18	14	N/A	
Project duration	18	14	N/A	
Start up of project activities at country level as stated by Article 5 Party concerned	Dec 3, 1997	December 1997	N/A	
Grant agreement submitted to beneficiary	-	January 1998	N/A	
Grant agreement signature	-	January 1998	N/A	
Bids prepared and requested	February 1998	February 1998	N/A	
Contracts awarded	May 1998	May 1998	N/A	
Equipment delivered	November 1998	November 1998	N/A	
Commissioning and trial runs	November 1998	December 1998	N/A	
Decommissioning and/or destruction of redundant baseline equipment	N.A.	N.A.	N/A	
Submission of completion report	May 1999	April 1999	N/A	

\* Expressed in percentage of National/Sector consumption.

Overall Assessment of the Project: *A brief description of no more than 300 words of the degree to which the project achieved its objective(s), major problems encountered and lessons learned.*

The project has been initiated and prepared in 1997 based on the Venezuelan Country Programme for the phase out of ozone depleting substances. Following approval by the ExCom the project was carried out in three stages:

1. Procurement of the new high pressure machine and equipment.
2. Installation of the new equipment.
3. Commissioning, training, prototyping and testing.

The chosen substitute was HCFC-141b and has totally replaced the originally applied foam blowing agent CFC-11.

The Venezuelan Authorities have checked the installation and certified that both the premisses and the facilities are free of hazards and danger for the staff and also have destroyed the ODS equipment. The project had been developed with out problems.

**SECTION 3(A): ODS PHASE OUT****Pre-Conversion**

3.1 Main lines of products manufactured: (as reported in project document)

Production of molded rigid PU foam (chairs).

3.2 Annual production level: (as reported in project document)

17.8 MTs of CFC-11 were used to manufacture 90,000 chairs.

3.3 ODS Consumed: (as reported in project document)

ODS (1):	<b>CFC-11</b>	Quantity (ODP tonnes):	<b>17.8 MT</b>
ODS (2):	-	Quantity (ODP tonnes):	-
Total:	<b>CFC-11</b>	Quantity (ODP tonnes):	<b>17.8 MT</b>
National/ sector impact:			<b>6.1%</b> (In percentage of National consumption)

**Post-Conversion**

3.4 Year of project commissioned: **1998**

3.5 Year of commencement of new production: **1999**

3.6 The transition of ODS-based to Non-ODS-based production

Year	Units Produced with ODSs	ODSs Consumed (ODP tonnes)	Units Produced with Substitutes	Substitutes Consumed (tonnes)
1997*	90,000 units	17.8 MT	-	-
1998	96,000 units	18.8 MT		
Total	186,000 units	36.6 MT		

\* Year of project approval

3.7 If there is a variance between the ODS phase-out target in the project document and the actual ODS phase-out, please explain.

N.A.

**SECTION 3(B): ODS PHASE OUT (for ODSs recovery and recycling projects)**

N.A.

**SECTION 4: TECHNOLOGY CHOICE**

ITEM	PRE-CONVERSION	POST-CONVERSION
<b>4.1 <u>Technology Choice</u></b>  Technology employed  Environmental impact  Determining factor for choice   Technology change after approval and reason for change	CFC-11  ODP = 1  Not inflammable or explosive materials. No space and conditions for use Pentane   N.A.	HCFC-141b  ODP = 0,11  The choice was accepted   N.A.
<b>4.2 <u>Availability</u></b>  No. of months spent in acquiring the technology  Reason for delay (if any)	Commercially available  The options were already known resulting in a short time to find the technology  N.A.	Commercially available
<b>4.3 <u>Safety</u> (where applicable)</b>  Standard applied  Certification by*		International standards were applied.  FONDOIN

\* *Please attach copies of certification*

4.4 Is there any problem encountered in the implementation of the replacement technology? If yes, please elaborate briefly.

No special problems were encountered. Rigid PU foam production using HP equipment is well known technology.

## SECTION 5: BUDGET AND EXPENDITURES

This is a status report on project expenditures at the time of preparing the project completion report with the understanding that a full financial completion report will be prepared as a supplement once the accounts of the project are closed.

### 5.1 Summary

ITEM	PLAN/APPROVED (US\$)	EXPENDITURE (TO-DATE) (US\$)	DIFFERENCE/ COMMENT (US\$)
Incremental capital cost	50,000	79,579	-29,579
Incremental operating cost	83,520	53,941	29,579
Contingency cost	4,000	3,875	125
Total	137,520	137,395	125
ODS phase-out (kg/ODP)	17,800	17,800	
Cost-effectiveness (\$/kg.)	7.73	7.72	

### 5.2 Budget and Expenditure on Incremental Capital Cost

ITEM*	APPROVED	EXPENDITURE	DIFFERENCE	REASON
General consultancy services.	10,000	3,694	6,306	
Equipment	40,000	79,760	(39,760)	
Incremental Operating Cost	83,520	53,941	29,579	
<b>Total Investment</b>	<b>133,520</b>	<b>137,395</b>	<b>-3,875</b>	

\*List of equipment approved in the project document (additional equipment should be so indicated).

5.3 Budget and Expenditure on Incremental Operating Cost

CFC-11 system			HCFC-141b system		
Chemical	Ratio	Price	Chemical	Ratio	Price
	wt / wt	\$/kg		wt / wt	\$/kg
Polyol + CFC-11	1.00	3.60	Polyol + HCFC 141b	1.00	4.00
CFC-11	1.00	3.80	CFC-11	1.20	3.80
PU- cost/kg		3.7	PU- cost/kg		3.9
Consumption, in ton per annum	240		Consumption, in ton per annum	240	
Total cost per annum US\$ 888,000			Total cost per annum US\$ 936,000		
Cost difference US\$			48,000		
Total incremental cost					
First year			48,000		
Second year (NPV coefficient 1.74)			35,520		
TOTAL (included NPV)			83,520		

5.4 Budget and Expenditure on Contingency Cost

CONTINGENCY FUNDS	ITEM(s)	EXPENDITURE
	Total	3,875
	Approved	4,000
	Difference	125



**SECTION 6: IMPLEMENTATION EFFICIENCY**

ITEM	AS PLANNED		DELAY/COMMENT
	YES	NO	
<b>6.1 Project Schedule</b>	X		
Project duration	X		
Start of project activities at country level as stated by Article 5 Party concerned	X		
Grant agreement submitted to beneficiary	X		
Grant agreement signature	X		
Bids prepared and requested	X		
Contracts awarded	X		
Equipment delivered	X		
Commissioning and trial runs	X		
Decommissioning and/or destruction of redundant baseline equipment	X		Old LP equipment destroyed as requested in ProDoc.
Submission of completion report	X		
<b>6.2 Equipment</b>			
Quantity as planned	X		
Quality as planned	X		
Delays	no		
<b>6.3 Training</b>			
Quantity as planned	X		
Quality as specified	X		
Delays	no		

6.4 Please describe any major problems encountered in project implementation and what was the major cause of delay.

No problems were encountered, clearing the equipment for customs was done without difficulties and installation and the commissioning of the equipment took place as planned.

## SECTION 7: DISPOSAL OF ODS-BASED PRODUCTION EQUIPMENT

### 7.1 List of equipment rendered unusable

LIST OF EQUIPMENT RENDERED UNUSABLE (The Baseline)*		DISPOSAL IMPLEMENTED			
Name of Equipment	Description **	Method of Disposal	Date of Disposal	Implementer	Certified By
N.A.	N.A.	-	-	-	-

\* *List of equipment rendered unusable in the project document*

\*\* *Description should include Model No. And Serial No.*

7.2 Describe briefly the process of destruction and attach copies of certification of destruction.

Equipment available before the conversion is being used following the conversion.

## SECTION 8: OVERALL ASSESSMENT OF PROJECT

Using three quantifiable indicators, namely ODS phase-out (plan v. actual) cost and speed of completion (plan v. actual), give an overall assessment of the project in the scale below.

- {X} Highly satisfactory, more than planned
- { } Satisfactory, as planned
- { } Satisfactory, though not as planned
- { } Unsatisfactory, less than planned
- { } Unacceptable

Comments from Government:

## SECTION 9: LESSONS LEARNT

State any lessons that can be drawn from this project that will benefit future projects.

No significant problems were found during the implementation of the project, due to the technical capability of the counterpart to deal with the replacement of the foaming agent and to produce rigid PU foams.