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PROJECT COMPLETION REPORT

SECTION 1: PROJECT DATA

1.1	Country:	Venezuela
1.2	Project number: (as per inventory)	VEN/FOA/22/INV/57 (MP/VEN/97/109)
1.3	Project title:	Phasing out ODS at Daniven C.A.
1.4	Date of approval of the project:	22th ExCom Meeting in May 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:	January 1999
1.10	Actual date of completion:	January 1999
1.11	Date of project completion report:	April 1999
1.12	Completion report done by: (Implementing agency/National agency)	UNIDO

Prepared by: R. Serpa, SES/MPR
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)	21,6	21,6	7.4 %	Percentage of CFC-11 consumption in 1994
Budget and expenditure (US\$)	164,592	150,058	N/A	
Cost-effectiveness (in US\$/kg)	7.62	6.95	N/A	
Project Implementation: (in months)	18	18	N/A	
Project duration	18	18	N/A	
Start up of project activities at country level as stated by Article 5 Party concerned	July 2, 97	July 97	N/A	
Grant agreement submitted to beneficiary	-	August 97	N/A	
Grant agreement signature	-	August 97	N/A	
Bids prepared and requested	Aug 97 - Dec 97	November 97	N/A	
Contracts awarded	Sep 97	May 98	N/A	
Equipment delivered	Oct 97 - Apr 98	September 98	N/A	
Commissioning and trial runs	May 98 - Dec 98	December 98	N/A	
Decommissioning and/or destruction of redundant baseline equipment	N.A.	N.A.	N/A	
Submission of completion report	Feb 99	September 99	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 high pressure machine in the process area.
3. Commissioning, training and testing.

The chosen substitute was HCF-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 the project document)

Production of insulating panels.

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

21.6 MTs of CFC-11 were used to manufacture 29,000 m² of foam.

3.3 ODS Consumed: (as reported in project document)

ODS (1):	CFC-11	Quantity (ODP tonnes):	21.6 MT
ODS (2):	-	Quantity (ODP tonnes):	-
Total:	CFC-11	Quantity (ODP tonnes):	21.6 MT
National/ sector impact:		7.4%	

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*	29,000 m ²	21.6 MT	-	-
1998	37,700 m ²	21.6 MT		
Total	66,700 m ²	43.2 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
4.1 <u>Technology Choice</u>		
Technology employed	CFC-11	HCF-141b
Environmental impact	ODP = 1	ODP = 0,11
Determining factor for choice	Not inflammable or explosive materials. No space and conditions for use Pentane	The choice was accepted
Technology change after approval and reason for change	N.A.	N.A.
4.2 <u>Availability</u>	Commercially available	Commercially available
No. of months spent in acquiring the technology	The options were already known resulting in a short time to find the technology	
Reason for delay (if any)	N.A.	
4.3 <u>Safety</u> (where applicable)		
Standard applied		International standards were applied.
Certification by*		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 panels production using HP equipment is a 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	109,000	103,866	5,134
Incremental operating cost	46,192	46,192	0
Contingency cost	9,400	0	9,400
Total	164,592	150,058	14,534
ODS phase-out (kg/ODP)	21,600	21,600	
Cost-effectiveness (\$/kg.)	7.62	6.94	

5.2 Budget and Expenditure on Incremental Capital Cost

ITEM*	APPROVED	EXPENDITURE	DIFFERENCE	REASON
General consultancy services.	15,000	14,366	634	
Equipment	94,000	89,500	4,500	
Incremental operating cost	46,192	46,192	0	
Total Investment	155,192	150,058	5,134	

*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				HCF-141B system			
Chemical	wt -%	Price \$/kg	Cost \$/kg	Chemical	wt -%	Price \$/kg	Cost \$/kg
Polyol + MDI	87	3.11	2.7	Polyol + MDI	94	3.26	3.07
CFC-11	13	2.17	0.28	CFC-11	6	3.14	0.19
PU- cost/kg			2.98	PU- cost/kg			3.25
Consumption, kg/m ² , average thickness 5.8 cm			2.5	Consumption, kg/m ² , average thickness 5.8 cm			2.88
Total cost, \$/m ²			8.47	Total cost, \$/m ²			9.38
Cost difference, \$/m ²			0.92				

Production of sandwich panels	Unit incremental cost	Total annual incremental cost
29,000 m ² /year	US\$ 0.92	US\$ 26,547

5.4 Budget and Expenditure on Contingency Cost

CONTINGENCY FUNDS	ITEM(s)	EXPENDITURE
	Total	0
	Approved	9,400
	Difference	9,400

SECTION 6: IMPLEMENTATION EFFICIENCY

ITEM	AS PLANNED		DELAY/COMMENT
	YES	NO	
6.1 Project Schedule	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		
6.2 Equipment			
Quantity as planned	X		
Quality as planned	X		
Delays	no		
6.3 Training			
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.

- 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 panels.