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PROJECT PROPOSAL: ROMANIA

This document consists of the comments and recommendations of the Fund Secretariat on the following project proposal:

Production

- Sector plan for production sector (fourth tranche)

UNIDO

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SECTOR PLAN FOR ROMANIA PRODUCTION SECTOR (FOURTH TRANCHE)

Introduction

1. UNIDO is submitting to the 53rd Meeting of the Executive Committee, on behalf of the Government of Romania, the request for the approval of US \$1,200,000 plus US \$90,000 as support cost for the implementation of the 2008 annual work programme of the Agreement for the Romanian ODS production sector. The submission from UNIDO includes the 2008 annual work programme, the verification report on the 2007 production of CTC and of diethylperoxycarbonate (DEHPC) (a CTC process agent application) at Plant Oltchim, and the 2007 CTC production at Plant Chimcomplex as of August in 2007. The work programme and the verification reports are not attached but could be made available upon request.

Background

2. At its 47th Meeting in 2005, the Executive Committee approved the Agreement for the Romanian ODS production sector at an approved-in-principle funding level of US \$6.3 million. This would facilitate the total permanent closure of all the production capacity and, where applicable, the co-production of the controlled substances in Group I Annex A and Group I Annex B (CFCs), Group II (carbon tetrachloride) and Group I Annex E (methyl bromide), dismantling of MB and CFC production facilities and/or development of capacity to produce alternatives to these ODSs. Subsequently the Committee approved the 2006 and 2007 work programmes in November 2006 and July 2007 respectively, with a total disbursement of US \$5.1 million as of July 2007. The 2008 work programme represents the final funding tranche of this Agreement.

3. The submission of the 2008 annual work programme has been made by the agency on the basis that the agreed level of funding would be paid according to the following schedule, upon the submission by UNIDO and the approval by the Executive Committee of the independent verification report on the completion of agreed production decreases for the preceding year as per the terms of the Agreement. However, this submission would have been due for submission in 2008 after Romania's reclassification as a Party not operating under Article 5 of the Protocol.

Table 1

PRODUCTION REDUCTION TARGETS AND SCHEDULE OF DISBURSEMENT

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Max. annual allowable production of CTC for controlled uses* (ODP tonnes)	170.0	170.0	170.0	0.0	0.0	0.0						
Max. annual allowable production of methyl bromide (ODP tonnes)	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Max. annual allowable production of TCA (ODP tonnes)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL MLF Grant (US \$'000)	3,440	968	1,075	1,290	0	0	0	0	0	0	0	6,773
Project cost (US \$'000)	3,200	900	1,000	1,200	0	0	0	0	0	0	0	6,300
Agency fees (US \$'000)	240	67.5	75	90	0	0	0	0	0	0	0	472.5

* - except for the uses exempted by a decision of the Parties to Montreal Protocol

4. At its 50th Meeting in 2006, the Executive Committee, in its decision 50/37, approved the terminal phase-out management plan for CTC production and consumption for process agent uses in Romania and requested UNIDO to include in its verification reports on the production sector, to be submitted to the second meeting of the Executive Committee in 2007, 2008 and 2009, information on the levels of production and consumption of CTC for process agent applications in Romania. This should include independently audited confirmation of their consistency with the limits provided for in the project.

ODS producing plants and production in Romania

5. There were four plants producing CFCs, CTC, TCA and MB in Romania. The following table provides a profile of these producers in 2007.

Table 2

STATUS OF THE ODS PLANTS

Name	ODS product	Nominal annual capacity	Plant history	Status
BICAPA TARNAVENI S.A.	CFC-11 CFC-12	4,750 mt (total) (CFC-12: 3,900 mt CFC-11: 850 mt)	Commissioned in 1989	Dismantled in 2005 and verified in 2006
OLTCHIM S.A.	CTC	26,000 mt	Commissioned in 1974, revamped in 1992	Active
	TCA	2,800 mt	TCA Plant dismantled	Dismantled
CHIMCOMPLEX BORZESTI S.A.	CTC mixture	300–320 mt as mixture with chloroform	Commissioned in 1960	Active
SINTEZA S.A.	Methyl bromide	150 mt	Fist line commissioned in 1973, second line commissioned in 1997	Dismantled and verified in 2006

PROJECT DESCRIPTION

Verification of 2007 production of CTC

6. The verification was carried out in August 2007 by an Indian consulting firm, Ess Jay Consultants, the same company which had been contracted by UNIDO to carry out the same exercise in the last two years. The consultant followed the same methodology in auditing the two CTC plants, as described below:

- (a) The plants completed the Questionnaire prepared by Ess Jay Consultants for data collection and returned it to the auditors prior to the site inspection;
- (b) During the site visit, the enterprises made available to the team of auditors the services of required managers and experts who answered all queries in an open and professional way. Access was provided to all premises of the plants and to all documents, daily production logs, and sales and financial records requested by the auditors for the purpose of the audit and validation of the data provided in the completed Questionnaire;

- (c) A tour of the plants was done to clearly understand the operations and record keeping system. The system of measurement for raw material receipts and issues, production, sales and closing stock was reviewed; and
- (d) The following operational and statutory records for the year 2006 were examined:
 - (i) Raw material purchase and issue records;
 - (ii) Daily production logs and production records;
 - (iii) Inventory level records;
 - (iv) Process parameters records;
 - (v) Stock register in value as per books of accounts for the year 2006 to check the closing stock;
 - (vi) Stock transfer documents;
 - (vii) Laboratory analysis reports; and
 - (viii) Monthly value added tax (VAT) returns filed with revenue authority for claim of VAT, which gives the monthly purchase of raw materials and sales of finished goods.

Findings and conclusions at Chimcomplex, the CTC plant

7. Chimcomplex is a diversified company which produces a variety of chemicals including caustic soda, chlorine and agrochemicals. The chloromethane plant was started in 1965 under license from the former USSR, and was primarily producing methylene chloride in a continuous process by reacting chlorine and methane gas. However the residue from the process was a mixture of chloroform and CTC which had to be separated in a batch operation. The residue contained about 30-40 per cent of CTC and the balance was a mixture of chloroform and chlorinated hydrocarbons. CTC was not an intended product and was difficult to find a market for because of its impurity. The mixture has been stored by the plant in wagons waiting to be disposed of.

8. To verify CTC production, the team determined that there was a production of 95 mt of mixture containing CTC up until July 2007 which was stored in three wagons. Samples from the three wagons were collected and analysed, and it was determined that the approximate content of CTC in the mixture was 30 per cent, which was consistent with the report provided by the plant. The total quantity of CTC produced until July 2007 was 39.9 mt in the 95 mt mixture containing CTC.

9. The auditor reported that the plant might not continue the production of methylene chloride, the main line of product, for the rest of the year because the price of it was not competitive enough against the world price and as a result the plant owners believed that they could contain by-production of the CTC mixture below 131 mt for the whole year. This would mean that the mixture would contain no more than 70 mt of CTC.

10. There was no sale of CTC in 2007 and the total closing stock of CTC/chloroform mixtures at the end July 2007 was 535 mt.

11. As for the plan to install an incinerator to destroy the stock of mixtures, a key component of the 2007 work programme, the auditor reported that the plant was to commence incineration activity in this year and that the company had committed to the local government in Bacau that they would incinerate a minimum of 25 mt of mixture in 2007. They estimated that the entire stock of mixtures would be incinerated in 18 months.

12. The auditor also provided an update on 16 October indicating that the mechanical erection of the destruction facility was completed by 5 October 2007; that company has finished the set-up of electrical and automation equipment and would carry out the technological tests and start-up procedures of the incineration unit in two weeks time. Also the company planned that in November-December the incineration plant would work to incinerate a minimum 30 mt of CTC mixture against their commitment of 25 mt in 2007.

Findings and conclusions at Oltchim, the CTC plant

13. Oltchim produces CTC by reacting dichloropropane (DCP) and chlorine to form CTC and per-chloroethylene (PCE). The reaction is initiated with propylene, then removed and substituted with DCP. Oltchim produces both DCP and chlorine in-house. The company has significantly reduced the production of CTC from an average of 8,900 ODP tonnes in 1998-2000, to 154 ODP tonnes in 2007, and has shifted to the production of PCE. The company also produces diethylhexylperoxycarbonate (DEHPC) in which CTC is used as a process agent.

14. The company produced a total of 154 mt of CTC in March 2007 and used 83.663 mt in the production of DEHPC until August. No external sales of CTC had been made and CTC was transferred as a process agent internally for DEHPC production. At the same time the project to convert the use of CTC in the production of DEHPC was proceeding under UNIDO implementation and was scheduled for completion in 2008. Before that the company was to rely on the existing stock of CTC to maintain the production of DEHPC, which stood at 131 mt as at end of August.

15. The auditor reported that the plant had removed the distillation columns dedicated for purifying CTC, and thus completed its process modification to eliminate the possibility of producing CTC.

Proposed 2008 annual work programme

16. The proposed 2008 annual work programme consists of two parts: part one on the progress achieved in the implementation of the 2007 annual work programme, and part two on the plan of action in 2008.

17. The work programme of 2008 proposes the annual targets as shown in the following table.

Table 3**TARGETS FOR 2008**

ODS, ODP tonnes	Actual maximum 2007	Target 2008	Reduction 2007/2008
CFC	0	0	0
CTC	47.1	0	47.1
Methyl bromide	0	0	0
TCA	0	0	0
CTC production for PA use	169.4	0	169.4
CTC PA consumption	169.4	0	169.4

18. In terms of activities to be implemented by the industries, the following are proposed:

- (a) Oltchim is to ensure nil production and consumption of CTC for process agent uses in line with the country's CTC emission reduction scheme for process agent use; and
- (b) Chimcomplex is to ensure the calculated level of CTC production below zero through the destruction of CTC mixtures, as per the agreement with Regional Agency for Environmental Protection, Bacau County¹, and to investigate the feasibility of the process modification or dismantling of the chloromethane production plant.

19. The Ministry of Environment and Water Management continues to be responsible for monitoring and managing the phase-out programme. The National Ozone Unit is to conduct the supervision of enterprises and verification of ODS production and phase-out activities. UNIDO advised that the regulation for the control and ban of production and import of ODS was enacted on 1 January 2007 in line with the regulations of the European Union on ODS. A technical assistance programme will continue in 2008, which includes a number of activities covering public awareness, training, market survey of remaining demand of ODS, and an information system on ODS production, consumption and exports.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

The verification report of 2007 CTC production

20. The verification report submitted by UNIDO follows the guidelines and standard format for verification of ODS production phase-out approved at the 32nd Meeting of the Executive Committee. The consultant who carried out the verification has demonstrated his competence in earlier exercises of a similar nature for UNIDO.

¹ Minimum of 150 mt of CTC mixtures.

21. However since the verification was done in August 2007, it covered only the implementation of the 2007 work programme up till then. It is understood that the timing of undertaking the verification in August 2007 instead of the beginning of 2008 is related to Decision XIX/19 of the 19th Meeting of the Parties by which Romania will cease being an Article 5 country from 1 January 2008 and consequently that could bring into question the eligibility of the fourth funding tranche, which should be disbursed in 2008 upon the satisfactory verification of the completion of the 2007 work programme.

22. However the early implementation of the verification requirement before the completion of the 2007 work programme raises the question of what would happen to the CTC production and consumption between August and 31 December 2007. Related issues were raised by the Secretariat and answered by the consultant who carried out the verification. However there are some remaining doubts.

23. In spite of the progress reported on the construction of the CTC incinerator in Chimcomplex, it is not completed yet. But the incinerator is important not only for destroying the CTC mixtures, which have been sitting in wagons for a couple of years and have become an environmental problem. It is also important because the company intends to upgrade its chloromethane technology from using methane to using methanol. This new technology will reduce the co-production of CTC but not completely eliminate it, and as a result the plant will still need the incinerator to destroy the CTC if the country is to comply with the requirement of the Montreal Protocol on CTC phase out.

24. The assumption of the maximum production of CTC of 47 ODP tonnes by Chimcomplex till the end of the year was made by the consultant on the basis that the company might not produce methylene chloride between August and the rest of the year because of the global market competition for methylene chloride. However the global demand for the substance could change and make the production profitable again, so increasing the co-production of CTC.

25. With regard to the CTC production in Olchim, the company produced 154 mt in March 2007 and used 83.6 mt for the production of DPHDC until August, the time of the verification. Unless the balance of 70 mt is used during 2007 in the production of DPHDC, which according to Decision X/14 is exempted from being included in the calculation of controlled consumption and production, it will be counted as production for the year 2007. As a result, the CTC production until the time of the verification would be the total of 39.9 mt from Chimcomplex and 70 mt from Olchim, which is 110 mt (121 ODP tonnes), and this could further increase till the end of the year.

The 2008 annual work programme

26. The proposed targets for 2008 are consistent with those in the Agreement and those in the terminal phase-out management plan for CTC production and consumption for process agent uses in Romania. The successful implementation would complete the phase out of CTC production and consumption in Romania. However as the verification undertaken by UNIDO took place in August 2007, there is still work to be done both by the production plants and in the conversion of CTC used in the production of DEPHC in order to achieve the complete phase out of CTC in 2008.

RECOMMENDATION

27. The Secretariat recommends that the Executive Committee:
- (a) Takes note of the verification report submitted by UNIDO on the 2007 CTC production and consumption as process agent till August 2007;
 - (b) Approves the fourth tranche of funding of US \$1,200,000 for the implementation of the 2008 annual programme of the Agreement of Romania ODS production sector and US \$90,000 as support cost to UNIDO, in view of the progress already achieved in establishing the CTC incinerator in Chimcomplex and the completion of the removal of the capability to produce CTC at Oltchim;
 - (c) Requests UNIDO to withhold disbursement until it carries out a verification of the completion of the 2007 work programme and clears with the Secretariat that the targets for 2007 have been achieved; and
 - (d) Requests UNIDO to carry out the verification of the ODS production sector and the terminal phase out of CTC for process agent project in 2008 and 2009.
