VALIDATION REPORT

YINGPENG HFC23 DECOMPOSITION PROJECT IN CHINA

REPORT NO. 2007-0193

REVISION NO. 03

VALIDATION REPORT

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CERTIFICATION AS

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Approved by: Trine Kopperud	Organisational unit: Climate Change Services
Client: Yingpeng Chemical Co., Ltd.	Client ref.: Mr. Liu, Kai

Project Name: Yingpeng HFC23 Decomposition Project
Country: China
Methodology: AM0001, version 05.2
GHG reducing Measure/Technology: HFC decomposition by thermal destruction
ER estimate: 7,865,277 (annual, measured in tonnes CO_2e)
Size
☒ Large Scale
☐ Small Scale
Validation Phases:
☒ Desk Review
☒ Follow up interviews
☒ Resolution of outstanding issues
Validation Status
☐ Corrective Actions Requested
☐ Clarifications Requested
☒ Full Approval and submission for registration
☐ Rejected

In summary, it is DNV's opinion that the project, as described in the project design document of version 1.4 dated November 29, 2008, meets all relevant UNFCCC requirements for the CDM and correctly applies the approved baseline and monitoring methodology AM0001 version 5.2. Hence, DNV requests the registration of the "Yingpeng HFC23 Decomposition Project" as a CDM project activity.

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Report title:
Yingpeng HFC23HFC23 Decomposition Project.

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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CER	Certified Emission Reduction
CL	Clarification Request
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
DNV	Det Norske Veritas
DNA	Designated National Authority
EPB	Environment Protection Bureau
GHG	Greenhouse Gas(es)
GWP	Global Warming Potential
HFC	HydroFluoroCarbon
HCFC	Hydrochlorofluorocarbon
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of Approval.
MP	Monitoring Plan
NCV	Net Calorific Value
NDRC	National Development and Reform Commission
ECPG	East China Power Grid
NGO	Non-governmental Organisation
ODA	Official Development Assistance
PDD	Project Design Document
UNFCCC	United Nations Framework Convention on Climate Change

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1 EXECUTIVE SUMMARY – VALIDATION OPINION

Det Norske Veritas Certification AS (DNV) has performed a validation of the "Yingpeng HFC23 Decomposition Project" in China. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism and host Party criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of the stated criteria.

The project participant from the host Party China is Yingpeng Chemical Co., Ltd and Enel Trade S.p.A and Infinity Clean Air Development Limited are the project participants from the participating Annex I Parties of Italy and Ireland, respectively. All the Parties fulfil the participation criteria and have approved the project and authorized the project participants. The DNA of China has confirmed that the project assist in achieving sustainable development.

The validation did not reveal any information that indicates that the project can be seen as a diversion of official development assistance (ODA) funding towards China.

The project correctly applies AM0001 version 5.2, "Incineration of HFC 23 waste streams". By the installation of new HFC 23 capture, storage and decomposition facility in the factory, as a part of the project activity, it is expected that HFC 23 will be decomposed almost completely. The project results in emission reductions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the project are estimated to be on the average 7,865,277 t CO_2e per year over the first 7-year crediting period. The emission reduction forecast has been checked, and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

Adequate training, operating, maintenance and monitoring procedures will be formalized and put in place prior to the start of crediting period.

In summary, it is DNV's opinion that the "Yingpeng HFC23 Decomposition Project" in China as described in the PDD of version 1.4 dated November 29, 2008, meets all relevant UNFCCC requirements for the CDM and all relevant host Party criteria and correctly applies the baseline and monitoring methodology AM0001, version 5.2. DNV thus requests the registration of the "Yingpeng HFC23 Decomposition Project" as a CDM project.

2 INTRODUCTION

Yingpeng Chemical Co. Ltd. has commissioned Det Norske Veritas Certification Ltd. (DNV) to perform a validation of the "Yingpeng HFC23 Decomposition Project" (hereafter called "the project"). This report summarises the findings of the validation of the project, performed on the basis of UNFCCC criteria for CDM projects, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and the subsequent decisions by the CDM Executive Board.

2.1 Objective

The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

2.2 Scope

The validation scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology AM0001. The validation team has, based on the recommendations in the Validation and Verification Manual/18/ employed a risk-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

3 METHODOLOGY

The validation consisted of the following three phases:

I a desk review of the project design documents

II follow-up interviews with project stakeholders

III the resolution of outstanding issues and the issuance of the final validation report and opinion

3.1 Desk Review of the Project Design Documentation

The following table outlines the documentation reviewed during the validation:

/1/ CDM PDD version 1.0 of October 30 2006, version 1.1 of March 08 2007 and version 1.4 of November 29, 2008.

/2/ DNA of China (NDRC), Letter of Approval, dated May 22, 2007

/3/ DNA of Italy, Letter of Approval, dated February 13, 2008.

/4/ DNA of Ireland, Letter of Approval, dated November 21, 2007.

/5/ The operation approval of Yingpeng's 25 kiloton HCFC production lines expanding project, The Planning and Economy Commission of Yongkang, December 2000

/6/ Feasibility Study report for "Yingpeng HFC23 Decomposition Project " by Hualu Engineering and Scientific-Technology Co. Ltd. in 2005

/7/ Registry/approval certificate by Yongkang Development and Reform Commission on 7 November 2006.

/8/ EIA reports in July 2006 and its approval letter by Jinhua Environment Protectino Bureau on 28 July 2006

/9/ C and F Materials Balance Calculation Method for HFC 23, Monthly data for the years from 2002 to 2004

/10/ Copies of the stakeholders consultation questionnaires

/11/ Certificate of Registration: ISO9001(2000), Registration No.: 00505Q1096R3M

/12/ Certificate for the system of inspection measurement and test, No. 2005(Zhejiang)-287

/13/ Certificate of Registration: ISO14001: 2004, Registration No.: 05604E101560ROM

/14/ Certificate of Registration: OHSAS18001: 2001, Registration No.: 00505S10970ROM

/15/ Management handbook and standard operation procedures for measurement and testing system.

/16/ CDM Monitoring Manual, contained in CDM PDD version 1.0 of October 30 2006, version 1.1 of March 08 2007 and version 1.4 of November 29, 2008.

/17/ Annual environment monitoring report by Yongkang environment protection monitoring station, 2004~2006

/18/ The FSR of Yingpeng's 25 kiloton HCFC production lines expanding project, October 2000.

/19/ The explanation of the specific size of the HFC 23 market, China Association of Organic Fluorine and Silicone Material Industry, June 27, 2007.

/20/ Jinhua News Network, Legislation Affairs of Yingpeng Chemical Co., Ltd. http://www.jhnews.com.cn/gb/content/2007-07/26/content_824322.htm

/21/ Monthly Production Report of Yingpeng Chemical Co., Ltd., The Statistics Bureau of Yongkang City, http://wszb.yktj.gov.cn/Desktop.asp

Background documents related to the design and/or methodologies employed in the design or other reference documents:

/22/ International Emission Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): *Validation and Verification Manual*. http://www.vvmanual.info

/23/ CDM Executive Board: AM0001 "Incineration of HFC 23 waste stream" version 05, 22 December 2006.

/24/ China Energy Statistical Yearbooks 2000-2002, 2004, 2005

/25/ GB18484-2001: *Pollution Control Standard for Hazardous Waste Incineration*

/26/ GB8978-1996: *National Integrated Wastewater Discharge Standard*

/27/ National Standard, *Verification regulation of gas chromatograph,* JJG 700-1999

/28/ Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories

/29/ Matheson Gas Data Manual, Karl L. Yoes, version 7. page 178.

3.2 Follow-up Interviews with Project Stakeholders

Persons interviewed during the validation, or persons who contributed with other information that are not included in the documents listed above:

/30/ **Yingpeng Chemical Co. Ltd.– project owner**
Mr. Zhong Xiangsheng, Director
Mr. Yan Ruikang, General Manager
Mr. Zhang Junren, Deputy General Manager (Production)
Mr. Cheng Hongbo, Deputy General Manager (Marketing)
Mr. Zhao Hongjun, CDM Project Manager
Mr. Yu Sijiang, Technical Manager
Ms. Lu Jianhua, Accounting Manager
Mr. Xie Xunyou, QA/QC Manager
Mr. Lu Min, Dept. of Safety and Environment, Statistics Supervisor
Mr. Shi Qiaopei, Dept. of Safety and Environment, measurement instrument supervisor

/31/ **Yongkang Environment Protection Bureau,**
Mr. Jin Mingliang, Deputy Director

/32/ **China Carbon Technology Co. Ltd. – Project Developer**
Dr. Ding Zhaoming

/33/ **Climate Experts Ltd., Project consultant**
Dr. Naoki Matsuo

3.3 Resolution of Outstanding Issues

The objective of this phase of the validation was to resolve any outstanding issues which needed be clarified prior to DNV's positive conclusion on the project design. In order to ensure transparency a validation protocol is customised for the project. The protocol shows in transparent manner criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of two tables. The different columns in these tables are described in the figure below. The completed validation protocol for the *Yingpeng HFC23 Decomposition Project* is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfilment of CDM criteria or where a risk to the fulfilment of project objectives is identified. Corrective action requests (CAR) are issued, where:

i) mistakes have been made with a direct influence on project results;
ii) CDM and/or methodology specific requirements have not been met; or
iii) there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be certified.

A request for clarification (CL) may be used where additional information is needed to fully clarify an issue.

During the validation process, the PDD had been revised from Version 1.0 dated October 30 2006 to Version 1.4 dated November 29, 2008 by the PP according to thoses findings raised by DNV. Some major changes are,

- The calculation of "w" value had changed to base on the correct data.
- The completeness of the monitoring plan had been confirmed by adding necessary procedures.

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Validation Protocol Table 1: Mandatory Requirements for CDM Project Activities		
Requirement	***Reference***	***Conclusion***
The requirements the project must meet.	*Gives reference to the legislation or agreement where the requirement is found.*	*This is either acceptable based on evidence provided (**OK**), a **Corrective Action Request (CAR)** of risk or non-compliance with stated requirements or a request for **Clarification (CL)** where further clarifications are needed.*

Validation Protocol Table 2: Requirement checklist				
Checklist Question	***Reference***	***Means of verification (MoV)***	***Comment***	***Draft and/or Final Conclusion***
The various requirements in Table 2 are linked to checklist questions the project should meet. The checklist is organised in different sections, following the logic of the large-scale PDD template, version 03 – in effect as of: 28 July 2006. Each section is then further sub-divided.	*Gives reference to documents where the answer to the checklist question or item is found.*	*Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.*	*This is either acceptable based on evidence provided (**OK**), or a **corrective action request (CAR)** due to non-compliance with the checklist question (See below). A request for clarification (CL) is used when the validation team has identified a need for further clarification.*

Validation Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Draft report clarifications and corrective action requests	***Ref. to checklist question in table 2***	***Summary of project owner response***	***Validation conclusion***
If the conclusions from the draft Validation are either a CAR or a CL, these should be listed in this section.	*Reference to the checklist question number in Table 2 where the CAR or CL is explained.*	*The responses given by the project participants during the communications with the validation team should be summarised in this section.*	*This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".*

Figure 1 Validation protocol tables

3.4 Internal Quality Control

The draft validation report including the initial validation findings underwent a technical review before being submitted to the project participants. The final validation report underwent another technical review before requesting registration of the project activity. The technical review was performed by a technical reviewer qualified in accordance with DNV's qualification scheme for CDM validation and verification.

3.5 Validation Team

Role/Qualification	First Name	Last Name	Country
CDM verifier	Tim	Kuo	China
CDM validator	Mindy	Yue	China
CDM validator	Wilson	Tang	China
Sector expert	Chandrashekara	Kumaraswamy	India
Technical reviewer (applicant)	Kakaraparthi	Venkata Raman	India
Technical reviewer	Lehmann	Michael	Norway

The qualification of each individual validation team member is detailed in Appendix B to this report.

4 VALIDATION FINDINGS

The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

4.1 Participation Requirements

The project participants are Yingpeng Chemical Co. Ltd. from the host Party China, Enel Trade S. p. A and Infinity Clean Air Development Limited are the project participants from the participating Annex 1 Parties Italy and Ireland, respectively. All the participating Parties meet the relevant participation requirements. The host Party China has issued a letter of approval (LoA) /2/ authorizing Yingpeng Chemical Co. Ltd., as the project participant and confirming that the project assists in achieving sustainable development. The DNA of Italy and Ireland have issued letter of approvals /3/ & /4/.

The validation did not reveal any information that indicates that the project can be seen as a diversion of official development assistance (ODA) funding towards China.

4.2 Project Design

The project design involves the capture, storage and incineration of the HFC 23 generated as a by-product from the existing two HCFC-22 production lines at Yingpeng Chemicals Co Limited. In the absence of any regulations requiring the generated HFC 23 to be incinerated, prior to the implementation of the project the HFC 23 generated as a by-product was being vented to the atmosphere. Hence, the baseline is established to be zero destruction in the absence of regulations on HFC 23 emissions, according to the approved methodology AM0001 version 5.2 “Incineration of HFC 23 waste streams”.

The technology for the incineration of the HFC 23 will be sourced from Japan as the technology is not available indigenously. The technology and equipments used in the proposed project will be imported from TNCE (Tsukishima Nittetsu Chemical Engineering Ltd). Tokyo, Japan. The operating know-how will be transferred to Yingpeng Chemical Co., Ltd. by training the Chinese technical staffs and workers to operate and maintain the whole operation process and equipment.

The entire HFC 23 decomposition process includes high-temperature decomposition, neutralization and wastewater treatment. The discharged waste gas and wastewater from the HFC23 Decomposition facility will be in compliance with Chinese regulations. The project is therefore deemed to employ current best practice. According to the *China Measurement of Operation and Management of CDM Projects* issued in October 2005, HFC 23 decomposition projects in China, will be levied a tax of 65% of total revenue (from sales of CERs) to be utilised to support activities related to climate change mitigation.

The project starting date is 7 November 2006, and the evidence provided for this start data is the registry/approval (for construction) certificate by Yongkang Development and Reform Commission for the project /7/. The expected operational lifetime of the project activity is 25 years. The project applies a renewable crediting period, with the first crediting period of seven years starting from 1 October 2008. The annual average emission reductions are estimated to be 7 865 277 tCO_2e per year over the first seven years crediting period.

4.3 Baseline Determination

The project applies AM0001 version 5.2, which is applicable to the project activity as a) the project activity destructs HFC 23 waste streams from an existing HCFC-22 production facility b) the production facility of HCFC-22 has operating history from 2000 to 2004 and has been in operation from 2005 till date c) destruction occurs in the same facility as the HFC 23 production and d) there are no regulations in China requiring destruction of HFC 23. Currently there is no regulation on HFC 23 emission control in China. This has been confirmed by the local Environment Protection Bureau (EPB) official /31/. It is therefore reasonable to determine the baseline as; "all the HFC 23 generated during the production of the HCFC22 will be emitted directly to the atmosphere".

The factor "w" being the least of the ratios of the HFC 23 generated to the HCFC-22 production during the latest three years from 2000 to 2004 has been estimated at 2.89%. In the absence of direct measurements of the HFC 23 generated during the period from 2000 to 2004, the ratio has been estimated from the carbon and flourine balance worked out from the raw materials consumed and the HCFC production. The calculation worksheets have been checked and verified to be correct. The values arrived at are as follows.

"W"-----→	2002	2003	2004
By carbon balance	3.32	3.24	3.17
By flourine balance	3.83	3.55	2.89

The estimation of the factor "w" at 2.89% is seen to be reasonable and is lower than the cutoff ratio of 3% as specified in the methodology.

It was also verified that the production facilities at the Yingpeng Chemicals Co. Limited have been in operation between 2000-2004 and that the maximum historical production of HCFC-22 was during the year 2004 and was 23 269.14 MT. It was also verified that the production during the year 2002 was 15115.37 and during year 2003 the production of HCFC-22 was 22723.90 MT. The productions were checked from the production log of the existing production lines.

The baseline determination is deemed to be transparent and reasonable.

4.4 Additionality

In line with the methodology, it has been demonstrated that there are no regulations requiring HFC 23 destruction and that in the absence of the project activity any HFC 23 generated is released to the atmosphere as the installation of a destruction facility entails capital and operating costs and the host entity has no direct economic benefits to incur the costs. As the quantity of HFC 23 generated will be destroyed in the project activity (compared to zero in the baseline), the project is additional. This is in line with the applied methodology of AM0001 version 5.2.

4.5 Monitoring

The project applies the approved monitoring methodology, AM0001 "Incineration of HFC 23 waste stream". DNV has confirmed that the project is applicable to AM0001 /23/, as all the applicability conditions are satisfied.

The authorities and responsibilities for monitoring and reporting of all data related to the emission reductions have been addressed. It has been verified during the follow-up interviews, that project management and procedures have been appropriately implemented. The

manufacturing facility is certified to management systems and environment management systems (ISO 9001, ISO 14001, OHSAS 18001 and Certificate for the system of inspection measurement and test /11/-/14/). Yingpeng Chemical Co. Ltd. will further develop its current management system, including the monitoring and reporting systems to incorporate all monitoring requirements of the proposed project. The monitoring plan as outlined in the PDD of November 29, 2008, including frequency, monitoring, measurement, calibration and reporting, is in line with the monitoring methodology AM0001.

Training of the current workforce will be provided by the technology provider.

It has also been evidenced that detailed procedures have been added to the CDM Monitoring Manual /16/, including responsibilities and authorities for project management, procedures for monitoring and reporting, QA/QC procedures, procedures for calibration of metering equipment and procedures for training and maintenance are deemed to be ready. Detailed procedures have to be implemented during the crediting period to enable subsequent verification of emission reductions.

4.5.1 Parameters determined ex-ante

The following parameters reported in the updated project design document from the project proponent have been assessed in detail.

1. Maximum of historical annual HCFC22 production during 2002–2004, $Q\_HCFC22_{y,}$ tHCFC22 has been capped ex-ante at 23,269.14 tons (year 2004). and has been verified
2. The factor "w" being the tHFC 23/tHCFC22 is the minimum for the years 2002, 2003 and 2004 has been fixed ex-ante at 2.89% based on the carbon and flourine balance in the absence of direct HFC 23 measurements. The calculations have been verified to be correct.
3. Global warming potential (GWP) of HFC 23, *GWP*_HFC 23, tCO_2e/tHFC 23, For the first commitment period, the COP decided to use the GWP specified in the Second Assessment Report of the IPCC which is 11,700.
4. Emission factor of decomposing HFC 23 to CO_2, *EF*, tCO_2/tHFC 23:
   By chemical calculation,
   EF =44/[(molecular weight of HFC 23)/(number of C in a molecule of HFC 23)].
   =44/70.
   =0.62857 [tCO_2/tHFC 23] as per the methodology.
   The contribution of the whole emission reductions is confirmed to be minor.
5. CO_2 emission factor of LPG per kg, *E*_LPG, tCO_2/kg :
   The value is ex-ante determined and fixed during the credit period as follows:
   – Caloric value of LPG is 50179 kJ/ kg (China Energy Statistical Yearbook 2006)
   – Carbon content of LPG is 17.2 t C/TJ (IPCC 2006 default value)
   – Liquid LPG/Gasification LPG is 2.36 kg-LPG/ Nm3-LPG (sourced from the LPG supplier)
   LPG emission factor is calculated to be 0.00747 tCO_2e/ Nm^3. The calculation in annex 3 of the updated PDD had been assessed by DNV.
6. CO_2 emission factor of the steam, *E*_Steam, tCO_2/tSteam:
   The value 0.305, used in this PDD is calculated from the parameters as below,
   – Coal consumption amount per unit steam is 0.154 kg-ce/kg-steam (the operation record of Yingpeng Chemical)
   – Heat value of coal is 20.908 MJ/kg-ce (China Energy Statistic Yearbook 2006)
   – The carbon emission factor of coal is 0.0946 kg-CO_2/MJ (IPCC 2006 default value)
   The calculation in Annex 3 of the PDD had been checked and found to be correct. The

value is ex-ante determined and fixed for the credit period.

7. CO_2 emission factor of the sludge, *E*_sludge:
   The value 0.0057 tCO_2/t sludge is calculated from the parameters as below:
   – Carrying capacity of transporting truck is 10 tonnes, transportation distance of waste is 80 km and diesel consumption per unit distance is 4 km/l (Feasibility study report)
   – Proportion of diesel is 0.888 kg/l (National fuel standard in China)
   – Heat value of diesel is 43.33 TJ/k-tonne (IPCC 2006 default value)
   – CO_2 emission factor of diesel is 20.2 t-C/TJ (IPCC 2006 default value)
   The calculation in Annex 3 of the PDD had been checked and found to be correct. The value is ex-ante determined and fixed during the credit period.
8. CO_2 emission factor of the NaOH consumed for the neutralization processing, *E*_ NaOH,.
   The value 2.03863 tCO_2/t NaOH is calculated based on the below main parameters:
   – Electricity consumption per ton NaOH during production is 2.25MWh/t NaOH (Technics Manual published by Juhua Group Corperation)
   The calculation in Annex 3 of the PDD had been checked and found to be correct. The value is ex-ante determined and fixed during the credit period.
9. CO_2 emission factor of the $Ca(OH)_2$ consumed for wastewater processing, *E*_ $Ca(OH)_2$,:
   The value 0.3394 tCO_2/t $Ca(OH)_2$is calculated based on the below main parameters:
   – Coal consumption per ton $Ca(OH)_2$ during production is 0.17 t-ce/t $Ca(OH)_2$ (the $Ca(OH)_2$ supplier)
   The calculation in Annex 3 of the PDD had been checked and found to be correct. The value is ex-ante determined and fixed during the credit period.
10. CO_2 emission factor of per tonne wastewater during processing, *E*_wastewater:
    The value,0.0023 tCO_2/t wastewater is calculated based on the below main parameters,
    – Electricity consumption per ton wastewater during processing is 0.0025MWh/t wastewater (the operation record of Yingpeng Chemical)
    The calculation in Annex 3 of the PDD had been checked and found to be correct. The value is ex-ante determined and fixed during the credit period.
11. CO_2 emission factor of the grid electricity (Eastern China Grid), E_Elec:
    The value 0.90465 tCO_2/MWh has been sourced from the latest Chinese Government calculation (09/08/2007)* and is fixed ex-ante for the crediting period. The data source of the factor is deemed to be acceptable.
12. Baseline quantity of HFC 23 to be destroyed by the regulation in China, *B*_HFC 23 (or *r* = *B*_HFC 23 / *Q*_HFC 23_y), tHFC 23/yr (or no dimension):
    Since currently there is no regulation in China to limit HFC 23 emissions. The value used is zero which is found to be reasonable.

4.5.2 Parameters monitored ex-post

In line with the approved monitoring methodology, AM0001 "Incineration of HFC 23 waste stream", the parameters that will be monitored ex-post are as follows,

– Quantity of HFC 23 flow supplied the destruction process, q_HFC $23_{y,}$ kg-HFC 23
– Purity of HFC 23 supplied to the destruction process, P_HFC $23_{y,}$ %
– Quantity of LPG used by the destruction process, Q_$LPG_{y,,}$kg

* http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File1364.pdf

- Quantity of un-decomposed amount of HFC 23 in stack gaseous effluent, *ND*_HFC 23_y, kg-HFC 23
- The quantity of HCFC 22 produced in the plant in year y, Q_HCFC$22_{y,}$ t-HCFC22
- Maximum annual production of HCFC 22 at the originating plant that is eligible for crediting, *Q*_HCFC$22_{y,max,}$ t-HCFC22
- HFC 23 sold by the facility generating the HFC 23 waste, HFC 23_$sold_{y,}$ t-HFC 23
- Electricity consumption by decomposition process, *Q*_$Elec_{y,}$ MWh/yr
- Steam consumption by decomposition process, *Q*_$Steam_{y,}$ tSteam/yr.
- NaOH (caustic) and $Ca(OH)_2$ used in the process – emissions related to the manufacture and transportation up to the project site.
- Sludge generated and transportation
- Electricity consumption (waste water treatment section) Emissions in the treatment of the waste water generated by the project. It is stated in the PDD that the quantity of waste water generate d is nearly 23% of the total waste in the company.

The management/maintenance/calibration arrangement and the accuracy of the monitoring equipments used, including mass flow meter, gas chromatography, weighting meter and wattmeter, is defined in the updated PDD and found to be compliance with the monitoring methodology. While the two flow meters for the monitoring of HFC 23 to the destruction facility will be recalibrated every six months with a zero check every week, all the other flow meters will be recalibrated every month as per internationally accepted procedures.

In addition the quantities of gaseous effluents (CO, HCl, HF, ClB2B, dioxin and NOBXB) and liquid effluents (PH, COD, BOD, n-H (normal hexane extracts), SS (suspended solid), phenol, and metals (Cu, Zn, Mn and Cr) are measured every six months to ensure compliance with environmental regulations.

4.5.3 Management system and quality assurance

The responsibility and authority for registration, monitoring, measurement and reporting activities have been properly addressed in the PDD. Also, DNV was able to verify that necessary procedures related to,

- Organization and training,
- Monitoring and Reporting Procedure,
- Monitoring and Metering Instruments/Calibrations and Maintenance of Instruments, and
- Data Management System,

have been appropriately prepared and implemented.

4.6 Estimate of GHG Emissions

Project Emissions

Quantitatively, the amount of project emissions is estimated preliminary as the total summation of the non-destroyed HFC 23 emitted from the incinerator, the emission due to the LPG usage and the GHG generation from HFC 23 incineration/decomposition. By using the ex ante estimation for the parameters involved, the project emission is calculated to be 1 757 tCO_2e/yr.

It is noted that this figure is much smaller than the uncertainty level of the whole emission reductions.

Leakage

Quantitatively, the amount of leakage is estimated preliminary as the total summation of emission due to the electricity and steam consumed during incineration process. The leakage is then calculated as 959 tCO2e/yr on an *ex ante* basis.

It is noted that this figure is much smaller than the uncertainty level of the whole emission reductions.

Baseline Emissions

The amount of baseline emissions is capped by Q_HCFC22_y * 2.89% * 11,700 which equals to 7 867 993 tCO_2e/yr in a typical year.

Emission Reductions

The emission reductions calculated according to the methodology as,

Emission Reduction = 7 867 993 [tCO_2e/yr] –1757 [tCO_2e/yr] –959 [tCO_2e/yr]

= 7 865 277 [tCO_2e/yr]

The estimation and calculation of emission reductions has been checked and found to be correct.

4.7 Environmental Impacts

An environmental impact assessment (EIA) has been conducted according to Chinese laws and regulations. The potential environmental impacts have been sufficiently identified on the environmental impacts assessment report.

No significant environmental impacts are expected from the project activity. The Yongkang EPB approved the project activity on 28 July 2006 /8/. A copy of all the relevant approvals has been submitted to and verified by DNV.

4.8 Comments by Local Stakeholders

Besides the stakeholder consultation process stipulated in the Chinese EIA regulation, the project developer has conducted an additional stakeholder consultations. During the period of June to July 2006, the project information has been published on the local EPB's website, in the notice boards of the neighbouring villages, residential area and government agencies. Comments from all different stakeholders were invited. Most of the comments were supportive to the project. There is no need to amend the project design.

Relevant evidence of the announcement of the project information and questionnaires have been provided and verified by DNV.

4.9 Comments by Parties, Stakeholders and NGOs

The PDD of 30 October 2006 was made publicly available on DNV's climate change website (www.dnv.com/certification/climatechange) and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 14 November 2006 to 13 December 2006.

No comment was received during the period.

APPENDIX A

CDM VALIDATION PROTOCOL

Table 1 Mandatory Requirements for Clean Development Mechanism (CDM) Project Activities

Requirement	Reference	Conclusion	Cross Reference / Comment
1. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3	Kyoto Protocol Art.12.2	OK.	Table 2, Section E.4.1
2. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof	Kyoto Protocol Art. 12.2, CDM Modalities and Procedures §40a	OK ~~CAR 1~~	Table 2, Section A.3
3. The project shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC	Kyoto Protocol Art.12.2.	OK ~~CAR 1~~	Table 2, Section E.4.1
4. The project shall have the written approval of voluntary participation from the designated national authority of each party involved	Kyoto Protocol Art. 12.5a, CDM Modalities and Procedures §40a	OK ~~CAR 1~~ ~~CAR 2~~	The LoAs from DNAs of China, Italy and Ireland have not been issued.
5. The emission reductions shall be real, measurable and give long-term benefits related to the mitigation of climate change	Kyoto Protocol Art. 12.5b	OK	Table 2, Section E
6. Reduction in GHG emissions shall be additional to any that would occur in absence of the project activity, i.e. a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity	Kyoto Protocol Art. 12.5c, CDM Modalities and Procedures §43	OK	Table 2, Section B.2
7. In case public funding from Parties included in Annex I is used for the project activity, these Parties shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties.	Decision 17/CP.7, CDM Modalities and Procedures Appendix B, § 2	OK	The validation did not reveal any information that indicates that the project can be seen as a diversion of official development assistance (ODA) funding

Requirement	Reference	Conclusion	Cross Reference / Comment
			towards the China
8. Parties participating in the CDM shall designate a national authority for the CDM	CDM Modalities and Procedures §29	OK	The DNA of China is the National Development and Reform Commission. The DNA of Italy is the Ministry for the Environment and Territory, Department for Global Environment, International and Regional Conventions. The DNA of Ireland is the Environmental Protection Agency.
9. The host Party and the participating Annex I Party shall be a Party to the Kyoto Protocol	CDM Modalities §30/31a	OK	China ratified the Kyoto Protocol on 30 August, 2002. Both Italy and Ireland ratified it on 31 May 2002.
10. The participating Annex I Party's assigned amount shall have been calculated and recorded	CDM Modalities and Procedures §31b	OK	The assigned amount is 92 % of the emissions of that in 1990 both for Ireland and Italy.
11. The participating Annex I Party shall have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7	CDM Modalities and Procedures §31b	OK	The validation has not in detail assessed Italy's and Ireland's compliance with article 5 and 7 of the Kyoto Protocol. However, Both Italy and Ireland have in place a national system for estimating GHG emissions and submits annually their

Requirement	Reference	Conclusion	Cross Reference / Comment
			most recent GHG inventory.
12. Comments by local stakeholders shall be invited, a summary of these provided and how due account was taken of any comments received	CDM Modalities and Procedures §37b	OK	Table 2, Section G
13. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out.	CDM Modalities and Procedures §37c	OK	Table 2, Section F
14. Baseline and monitoring methodology shall be previously approved by the CDM Executive Board	CDM Modalities and Procedures §37e	OK	Table 2, Section B.1.1 and D.1.1
15. Provisions for monitoring, verification and reporting shall be in accordance with the modalities described in the Marrakech Accords and relevant decisions of the COP/MOP	CDM Modalities and Procedures §37f	OK ~~CL 7~~ ~~CL 8~~ ~~CL 11~~ ~~CL 12~~	Table 2, Section D
16. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available	CDM Modalities and Procedures §40	OK	DNV published the PDD of 30 October 2006 on the DNV Climate Change web site (http://www.dnv.com/certification/ClimateChange) and stakeholders, were, through the UNFCCC CDM web site, invited to provide comments within a 30 days period from 11 November 2006 to 14 December 2006. DNV

Requirement	Reference	Conclusion	Cross Reference / Comment
			published the PDD of 08 March 2007 from 28 March 2007 to 26 April 2007. No comment has been received during the period.
17. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances	CDM Modalities and Procedures §45c,d	OK ~~CL 4,~~ ~~CL 5,~~ ~~CL 6~~	Table 2, Section B.2
18. The baseline methodology shall exclude to earn CERs for decreases in activity levels outside the project activity or due to force majeure	CDM Modalities and Procedures §47	OK	Table 2, Section B.2
19. The project design document shall be in conformance with the UNFCCC CDM-PDD format	CDM Modalities and Procedures Appendix B, EB Decision	OK	The PDD is in conformance with the CDM-PDD version 03.

Table 2 Requirements Checklist

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
A. General Description of Project Activity *The project design is assessed.*					
A.1. Project Boundaries *Project Boundaries are the limits and borders defining the GHG emission reduction project.*					
A.1.1. Are the project's spatial (geographical) boundaries clearly defined?	/1/	DR I	Yes, the project's spatial boundaries have been defined and are limited to the two HFC22 production lines and HFC 23 destruction facility at the Yingpeng Chemical Co., Ltd., which located at Yonghua road of Yongkang city.		OK
A.1.2. Are the project's system (components and facilities used to mitigate GHGs) boundaries clearly defined?	/1/	DR I	Yes. The project's system boundary is restricted to the HFC22 production lines and HFC 23 destruction facility at the Yingpeng Chemical Co., Ltd.		OK
A.2. Technology to be employed *Validation of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The validator should ensure that environmentally safe and sound technology and know-how is used.*					
A.2.1. Does the project design engineering reflect current good practices?	/1/	DR I	The project will consists of a tail gas collection facility, a storage facility, an incinerator, a cooling tower, an alkali absorbing tower and a neutralization pool. But the details of the described technology are to be provided.	~~CL 1~~	OK

* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
A.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	/1/	DR	Yes.		OK
A.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	/1/	DR	No.		OK
A.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	/1/	DR I	Yes, extensive initial training and maintenance efforts are needed. The training will be provided by technology supplier.		OK
A.2.5. Does the project make provisions for meeting training and maintenance needs?	/1/	DR I	A training plan is needed.	~~CL 2~~	OK
A.3. Contribution to Sustainable Development *The project's contribution to sustainable development is assessed.*					
A.3.1. Is the project in line with relevant legislation and plans in the host country?	/1/ /7/ /8/ /8/	DR I	There is no regulatory requirement related to HFC 23 emissions in China. During the site visit, it has been confirmed that the project is in line with relevant legislation and plans in China. The project was approved by the local government and local EPB.		OK
A.3.2. Is the project in line with host-country specific CDM requirements?	/1/	DR	Yes. The project meets the specific CDM requirements of China.		OK
A.3.3. Is the project in line with sustainable development policies of the host country?	/1/ /2/	DR	The project is line with China's policy on sustainable development. But formal LOA from DNA of China has not been obtained.	~~CAR 1~~	OK
A.3.4. Will the project create other environmental or social benefits than GHG emission reductions?	/1/	DR	Yes. The project will transfer the HFC 23 decomposition technology to the project		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
			owner and create employment opportunities for the local area.		
B. Project Baseline *The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.*					
B.1. Baseline Methodology *It is assessed whether the project applies an appropriate baseline methodology.*					
B.1.1. Is the baseline methodology previously approved by the CDM Executive Board?	/1/ /23/	DR	Yes. The approved methodology AM0001 version 05 titled "Incineration of HFC 23 waste streams" has been applied to this project.		OK
B.1.2. Is the baseline methodology the one deemed most applicable for this project and is the appropriateness justified?	/1/	DR I	AM0001 version 05 is the one and only approved baseline methodology that can be applied for HFC 23 decomposition projects, and the project is deemed to meet its applicability conditions as follows: - At least three years operating history from 2000 to 2004 - No regulation requirement for destruction of the total amount of HFC 23 As there are 2 HFC22 production lines in the plant, the specific operation starting date for each line need to be specified in the PDD.	~~CL 3~~	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
B.2. Baseline Determination *The choice of baseline will be validated with focus on whether the baseline is a likely scenario, whether the project itself is not a likely baseline scenario, and whether the baseline is complete and transparent.*					
B.2.1. Is the application of the methodology and the discussion and determination of the chosen baseline transparent?	/1/	DR	The application and determination of the baseline are explained in a transparent manner.		OK
B.2.2. Has the baseline been determined using conservative assumptions where possible?	/1/	DR	The lowest HFC 23/HFC22 ratio during the last three years (2002-2004) is 4.06% (in 2004). The necessary assumptions, data source, measurement and test for the calculation of the C balance and F balance need to be provided in the PDD in order to be transparent.	~~CL 4~~	OK
B.2.3. Has the baseline been established on a project-specific basis?	/1/	DR	Yes.		OK
B.2.4. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	/1/	DR	Yes.		OK
B.2.5. Is the baseline determination compatible with the available data?	/1/	DR	Yes. The data used for baseline calculations are available.		OK
B.2.6. Does the selected baseline represent the most likely scenario among other possible and/or discussed scenarios?	/1/	DR	The selected baseline is the most likely and plausible scenario, i.e. status quo: the continuation of current situation, without installation HFC 23 decomposition facility and HFC 23 emitted into atmosphere directly.	~~CL 5~~	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
			In 2005, there have been 68 tons of HFC 23 sold as low temperature refrigerant. And in the PDD it also says there is a very small market for HFC 23 in China. Please describe the specific size of the market size adequately. Any possible HFC 23 sold in the crediting period should be deducted in the baseline.		
B.2.7. Is it demonstrated/justified that the project activity itself is not a likely baseline scenario?	/1/	DR	Yes.		
B.2.8. Have the major risks to the baseline been identified?	/1/	DR	Future changes in regulation restricting HFC 23 release is a major risk to the baseline. However this is to be monitored properly according to the description in the PDD.		OK
B.2.9. Is all literature and sources clearly referenced?	/1/	DR	No. In estimating the emissions from diesel burning within the project activity, the carbon content of the diesel is assumed to be 86.2%. The reference of the GB 0 of diesel needs also to be provided.	~~CL 6~~	OK
C. Duration of the Project/ Crediting Period *It is assessed whether the temporary boundaries of the project are clearly defined.*					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	/1/	DR	Project will start on January 1, 2008 with an operational lifetime 25 years.		OK
C.1.2. Is the assumed crediting time clearly defined (renewable crediting period of seven years with two possible renewals or fixed crediting period of 10 years with no renewal)?	/1/	DR	Yes, the renewable crediting period (7 years) has been selected for the project.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
D. Monitoring Plan *The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed ((Blue text contains requirements to be assessed for optional review of monitoring methodology prior to submission and approval by CDM EB).*					
D.1. Monitoring Methodology *It is assessed whether the project applies an appropriate baseline methodology.*					
D.1.1. Is the monitoring methodology previously approved by the CDM Executive Board?	/1/	DR	The monitoring methodology applied to the project was approved as AM0001 version 05.		OK
D.1.2. Is the monitoring methodology applicable for this project and is the appropriateness justified?	/1/	DR	The monitoring methodology is applicable to HFC 23 waste streams from an existing HCFC 22 production facility with at least three years of operating history 2000 and 2004 where the project activity occurs and where no regulation requires the destruction of the total amount of HFC 23 waste. The present project activity satisfies these applicable conditions.		OK
D.1.3. Does the monitoring methodology reflect good monitoring and reporting practices?	/1/	DR	The monitoring methodology is fully in line with the AM0001 and reflects good monitoring and reporting practices.		OK
D.1.4. Is the discussion and selection of the monitoring methodology transparent?	/1/	DR	Discussion and selection of the monitoring methodology are transparent.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
D.2. Monitoring of Project Emissions *It is established whether the monitoring plan provides for reliable and complete project emission data over time.*					
D.2.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the project boundary during the crediting period?	/1/	DR	Yes. Project emission related parameters, including the quantity of HFC 23 decomposed, non-decomposed HFC 23 and electricity/ diesel consumed, will also be monitored.		OK
D.2.2. Are the choices of project GHG indicators reasonable?	/1/	DR	Yes.		OK
D.2.3. Will it be possible to monitor / measure the specified project GHG indicators?	/1/	DR	According to the PDD, there will be at least 2 flow-meters installed to monitor the flow of HFC 23. Please specify in certain how many flow meters will be installed and illustrate how they are installed and will be used. The accuracy and uncertainty level of the flow meters need also to be described in the PDD.	~~CL 7~~ ~~CL 8~~	OK
D.2.4. Will the indicators give opportunity for real measurements of project emissions?	/1/	DR	Yes.		OK
D.2.5. Will the indicators enable comparison of project data and performance over time?	/1/	DR	Yes.		OK
D.3. Monitoring of Leakage *It is assessed whether the monitoring plan provides for reliable and complete leakage data over time.*					
D.3.1. Does the monitoring plan provide for the collection and archiving of all relevant data	/1/	DR	The monitoring plan is in line with the AM0001. All relevant data will be properly		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
necessary for determining leakage?			collected and archived according to the monitoring plan.		
D.3.2. Are the choices of leakage indicators reasonable?	/1/	DR	Yes. Grid electricity, and steam consumed by the project activity, sludge to be transported will be monitored in compliance with the methodology. The choice of indicators is reasonable.		OK
D.3.3. Will it be possible to monitor / measure the specified leakage indicators?	/1/	DR	Yes.		OK
D.3.4. Will the indicators give opportunity for real measurements of leakage effects?	/1/	DR	Yes.		OK
D.4. Monitoring of Baseline Emissions *It is established whether the monitoring plan provides for reliable and complete project emission data over time.*					
D.4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining baseline emissions during the crediting period?	/1/	DR	In the absence of regulations on HFC 23 emissions, the HFC 23 waste is typically released to the atmosphere, so the baseline is zero destruction. The amount of HFC 23 destroyed is monitored as required in AM0001. According to the AM0001 version 05, in case where the HFC 23 from 2 production lines is destroyed in one destruction facility, or in case where HFC 23 is captured and sold, the amount of FHC23 waste generated at the HCFC22 production plant should be measured with a single flow meter for each production line in addition to the measurement of the amount of HFC 23 destroyed	~~CL 9~~	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
D.4.2. Is the choice of baseline indicators, in particular for baseline emissions, reasonable?	/1/	DR	Yes, this is in line with AM0001.		OK
D.4.3. Will it be possible to monitor / measure the specified baseline indicators?	/1/	DR	According to the PDD, there will be at least 2 flow-meters installed to monitor the flow of HFC 23. Please specify in certain how many flow meters will be installed and illustrate how they are installed. The accuracy and uncertainty level of the flow meters need also to be described in the PDD.	~~CL 7~~ ~~CL 8~~	OK
D.4.4. Will the indicators give opportunity for real measurements of baseline emissions?	/1/	DR	Yes. Baseline emissions are the amount of HFC 23 destroyed (monitored) multiplied with the emission factor of HFC 23.		OK
D.5. Monitoring of Sustainable Development Indicators/ Environmental Impacts *It is checked that choices of indicators are reasonable and complete to monitor sustainable performance over time.*					
D.5.1. Does the monitoring plan provide the collection and archiving of relevant data concerning environmental, social and economic impacts?	/1/	DR	AM0001 does not require monitor of sustainable development indicators. However the following environmental indicators are to be monitored by the local environmental Protection Bureau. - Gaseous effluents (CO, HCl, HF, Cl_2, dioxin and NO_X) - Liquid effluents (PH, COD, n-C6 soluble matter, suspended solid, phenol, Cu, Zn, Mn and Cr).		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
D.6. Project Management Planning *It is checked that project implementation is properly prepared for and that critical arrangements are addressed.*					
D.6.1. Is the authority and responsibility of project management clearly described?	/1/	DR I	The authority and responsibility of overall project management are clearly described in the PDD, B.7.2.		OK
D.6.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	/1/	DR I	Yes. The relevant authority and responsibility for registration, monitoring, measurement and reporting have been described.		OK
D.6.3. Are procedures identified for training of monitoring personnel?	/1/	DR I	The related procedures for training of monitored personnel have not been identified.	~~CL 10~~	OK
D.6.4. Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	/1/	DR I	Procedures for emergency preparedness have been identified.		OK
D.6.5. Are procedures identified for calibration of monitoring equipment?	/1/	DR	Procedures related to calibration of monitoring equipment and installations have not been identified.	~~CL 11~~	OK
D.6.6. Are procedures identified for maintenance of monitoring equipment and installations?	/1/	DR	Procedures related to maintenance of monitoring equipment and installations, monitoring, measurement, reporting, day-to-day data handling, dealing with possible monitoring data adjustment and uncertainties, review of data, internal audits, performance review, have not been identified.	~~CL 12~~	OK
D.6.7. Are procedures identified for monitoring, measurements and reporting?	/1/	DR	Same as above	~~CL 12~~	OK

* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
D.6.8. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	/1/	DR	Same as above	~~CL 12~~	OK
D.6.9. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	/1/	DR	Same as above	~~CL 12~~	OK
D.6.10. Are procedures identified for review of reported results/data?	/1/	DR	Same as above	~~CL 12~~	OK
D.6.11. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	/1/	DR	Same as above	~~CL 12~~	OK
D.6.12. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	/1/	DR	Same as above	~~CL 12~~	OK
D.6.13. Are procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting?	/1/	DR	Same as above	~~CL 12~~	OK
E. Calculation of GHG Emissions by Source *It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.*					
E.1. Project GHG Emissions *The validation of ex-ante estimated project GHG emissions focuses on transparency and completeness of calculations.*					
E.1.1. Are all aspects related to direct and indirect	/1/	DR	Yes. All project GHG emissions are		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
GHG emissions captured in the project design?			captured.		
E.1.2. Are the GHG calculations documented in a complete and transparent manner?	/1/	DR	The calculations of GHG emission are documented in a complete and transparent manner.		OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	/1/	DR	The PDD has assumed the ND_HFC 23 to be 0% This is not deemed to be conservative.	~~CL 13~~	OK
E.1.4. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	/1/	DR	Uncertainties in the GHG emission estimates have been addressed.		OK
E.1.5. Have all relevant greenhouse gases and source categories listed in Kyoto Protocol Annex A been evaluated?	/1/	DR	For this project, other greenhouse gases than CO_2 and HFC 23 are not expected to be generated.		OK
E.2. Leakage *It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed and estimated ex-ante.*					
E.2.1. Are potential leakage effects beyond the chosen project boundaries properly identified?	/1/	DR	Potential leakage effects due to steam consumption, and waste transportation are identified.		OK
E.2.2. Have these leakage effects been properly accounted for in calculations?	/1/	DR	Yes.		OK
E.2.3. Does the methodology for calculating leakage comply with existing good practice?	/1/	DR	The calculation of the leakage itself is appropriate. The calculation methodology is deemed to comply with good existing practice.		OK
E.2.4. Are the calculations documented in a complete and transparent manner?	/1/	DR	Yes.		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
E.2.5. Have conservative assumptions been used when calculating leakage?	/1/	DR	The estimated transport distance of 10km (return trip) for sludge transportation is not deemed to be conservative according to the result of site visit.	~~CL 14~~	OK
E.2.6. Are uncertainties in the leakage estimates properly addressed?	/1/	DR	The leakage amount is expected to be insignificant compared with the total amount of emission reductions.		OK
E.3. Baseline Emissions *The validation of ex-ante estimated baseline GHG emissions focuses on transparency and completeness of calculations.*					
E.3.1. Have the most relevant and likely operational characteristics and baseline indicators been chosen as reference for baseline emissions?	/1/	DR	According to AM0001 version 05, the quantity of HFC 23 waste streams required to be destroyed by regulations in China, constitute the baseline emissions. Currently, this is zero as there are no regulations in China. In 2005, there have been 68 tons of HFC 23 sold as low temperature refrigerant. And in the PDD it also says there is a very small market for HFC 23 in China. Please describe the specific size of the market size properly. Any possible HFC 23 sold in the crediting period should be deducted in the baseline. See also in B.2.6	~~CL 5~~	OK
E.3.2. Are the baseline boundaries clearly defined and do they sufficiently cover sources and sinks for baseline emissions?	/1/	DR	The baseline boundary is defined as the same as the project boundary.		OK
E.3.3. Are the GHG calculations documented in a complete and transparent manner?	/1/	DR	The baseline emissions are documented in the PDD in line with AM0001.		OK
E.3.4. Have conservative assumptions been used	/1/	DR	The baseline emissions are calculated		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
when calculating baseline emissions?	/9/	I	based on the maximum historical annual production amount of HCFC 22 and the lowest waste generation rate (HFC 23/$HCFC_{22}$). In the project case, the rate in last 3 years all exceeds 3% and the default value 3% is selected. However, the difference between the value from the C balance and that from F balance are considerable (for example in 2004, 5.21% for C balance while 2.91% for F balance), which is unreasonable. According to ACM0001, the DOE shall verify if the estimates obtained in this way can reasonably be used to calculate w or if it shall be considered that insufficient data are available to calculate HFC 23 release for this plant (and therefore require the use of a default value of 1.5%). The calculation of the w needs to be re-calculated with support from sufficient and reasonable data, otherwise w of 1.5% needs to be used. As there are two production lines consisted in the project activity, the calculation of the cut-off ratio (w) of each production line should be provided.	~~CAR 3~~ ~~CL 15~~	
E.3.5. Are uncertainties in the GHG emission estimates properly addressed in the documentation?	/1/	DR	Uncertainties accompanying with regulatory change is properly addressed.		OK
E.3.6. Have the project baseline(s) and the project emissions been determined using the same appropriate methodology and conservative assumptions?	/1/	DR	Yes. Both project baseline and the project emissions are calculated by multiplying quantities with their emission factors, as in AM0001		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
E.4. Emission Reductions *Validation of ex-ante estimated emission reductions*.					
E.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	/1/	DR	Yes.		OK
F. Environmental Impacts *Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the validator.*					
F.1.1. Has an analysis of the environmental impacts of the project activity been sufficiently described?	/1/	DR	Yes. There has been sufficient analysis of the environmental impacts in the PDD.		OK
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	/1/ /8/	DR	Yes. The project has completed its EIA report and got approved by the local EPB.		OK
F.1.3. Will the project create any adverse environmental effects?	/1/	DR	No significant adverse environmental effects have been identified according to the EIA reports.		OK
F.1.4. Are transboundary environmental impacts considered in the analysis?	/1/	DR	No trans-boundary environmental impacts are likely to occur.		OK
F.1.5. Have identified environmental impacts been addressed in the project design?	/1/	DR	No significant environmental impacts have been identified.		OK
F.1.6. Does the project comply with environmental legislation in the host country?	/1/	DR	Yes. See F.1.2.		OK
G. Stakeholder Comments *The validator should ensure that a stakeholder comments have been invited and that due account has been taken of any comments received.*					
G.1.1. Have relevant stakeholders been consulted?	/1/	DR	Yes. Local government agencies, neighbouring villagers and local residents		OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl
			have been consulted.		
G.1.2. Have appropriate media been used to invite comments by local stakeholders?	/1/	DR	The announcement of the project information has been published on the local EPB's website. It has also been published on the notice board of the neighbouring villages and residential areas.		OK
G.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	/1/	DR	According to the Provincial EPB's requirements to the project, the public consultation process performed by project developer is the action beyond legal requirement.		OK
G.1.4. Is a summary of the stakeholder comments received provided?	/1/	DR	Yes. The summary of the stake holder comments have been provided.		OK
G.1.5. Has due account been taken of any stakeholder comments received?	/1/	DR	Yes.		OK

Table 3 Resolution of Corrective Action and Clarification Requests

Draft report corrective action requests and requests for clarifications	Ref. to Table 2	Summary of project participants' response	Final conclusion
CAR 1 The LOA from DNA of China has not been received.	A.3.3	The LOA from DNA of China has been submitted to DNV.	OK, The Chinese LoA has been received.
CAR 2 The LOAs from DNAs of Italy and Ireland have not been received.	A.3.3	The LOAs from DNAs of Italy and Ireland have been submitted to DNV.	OK, The LOAs from Annex I countries have been received.
CAR 3 The difference between the value of w from the C balance and that from F balance are considerable (for example in 2004, 5.21% for C balance while 2.91% for F balance), which is unreasonable. According to ACM0001, the DOE shall verify if the estimates obtained in this way can reasonably be used to calculate w or if it shall be considered that insufficient data are available to calculate HFC 23 release for this plant (and therefore require the use of a default value of 1.5%). The calculation of the w needs to be re-calculated with support from sufficient and reasonable data, otherwise a w factor of 1.5% needs be used.	E.3.4	Though examination, we found that the key data (annual output of HCFC22, annual consumption of hydrofluoric acid and annual consumption of chloroform of 2002, 2003 and 2004) used to be calculated w value in the PDD/version 1.0 and 1.1 was not correct. The data source came from financial data, and not from production data. Based on the historical HCFC22 Production Log, we re-calculated the w value, and the new calculation result is 3.32% based on C balance and 3.83% based on F balance in 2002 respectively, 3.24% and 3.55% in 2003, and 3.17% and 2.89% in 2004. The new calculation spreadsheet of w value has been submitted to the DNV auditor. At the same time, through further examination of data sources, we found the historical HCFC22 Production Records in 2001-2004 which contained the historical direct measured value of	OK, According to AM0001 version 05, to determine the historical waste generation rate w, direct measurement of HFC 23 release is to be used where data are available, otherwise mass balance or other methods based on actual data are to be used. In the previous PDD version 1.1 dated March 8, 2007, the w was determined based on the average of C balance and F balance in the 3 years (2002-2004). And the difference between the value from the C balance and that from F balance are significant (for example in 2004, 5.21% for C balance while 2.91% for F balance), which is unreasonable. However in the succeeding validation process, it is found that the result of previous calculation should not be used because the key data (annual output of HCFC22, annual consumption of hydrofluoric acid and annual consumption of chloroform of 2002, 2003 and 2004) used to calculated w

Draft report corrective action requests and requests for clarifications	Ref. to Table 2	Summary of project participants' response	Final conclusion
		HFC 23 release. These data need to be re-validated by the DNV auditor.	value in the PDD version 1.0 and 1.1 came from anthropogenic incorrect financial data/20/, and not from actual production data. In the updated PDD version 1.4 dated November 29, 2008, based on the historical HCFC22 Production Log in 2002-2004, the w value was re-calculated. The new calculation result is 3.32% based on C balance and 3.83% based on F balance in 2002 respectively, 3.24% and 3.55% in 2003, and 3.17% and 2.89% in 2004. During the validation, the used data in the Production Log had been cross-checked with the monthly declaration records which had been archived according to authority's requirement in the database of the Statistics Bureau of Yongkang City/21/. The result of the cross-check is deemed to be correct. For the conservative consideration, the updated PDD chose the lowest w value, 2.89%, which is deemed to be acceptable.
CL 1 The detailed information related to the described technology is to be provided.	A.2.1	Details please refer to "Process Description" in Annex 1.	OK, A description of HFC 23 decomposition process is provided. The HFC 23 decomposition technology and equipments used in the proposed project come from TNCE (Tsukishima Nittetsu Chemical Engineering Ltd., Tokyo, Japan). The detailed information

Draft report corrective action requests and requests for clarifications	Ref. to Table 2	Summary of project participants' response	Final conclusion
			related to the described technology has been submitted to DNV.
CL 2 A training plan is needed.	A.2.5	Please refer to "Staff Training Plan" in Annex 2.	OK. A Staff Training Plan is provided, including the training on environmental management, production method, operation and maintenance of equipment and instrument, also monitoring.
CL 3 As there are 2 HFC22 production lines in the plant, the specific operation starting date for each line need to be specified in the PDD.	B.1.2	The operation stating date of the two HCFC22 production lines was the same time, July, 2001.The detailed information related to the operation starting date has been submitted to the DNV auditor.	OK, By checking the operation approval of Yingpeng's 25 kiloton HCFC production lines expanding project/18/ issued by the Planning and economy commission of Yongkang in December 2000 and the Feasibility Study Report of Yingpeng's 25 kiloton HCFC production lines expanding project/5/ in October 2000, it is confirmed that the operation stating date of the 25 kiloton HCFC22 production lines, total capacity within the proposed project activity, was the same in July 2001. The applicability and eligibility of the whole capacity within the proposed project are therefore confirmed by the DOE.
CL 4 The necessary assumptions, data source, measurement and test for the calculation of the C balance and F balance need to be provided in the PDD in order to be	B.2.2	the necessary assumptions, data source, measurement and test for the calculation of the C balance and F balance would be provided in annex 5 of the PDD.	OK, In the updated PDD version 1.4 dated November 06, 2007, based on the historical HCFC22 Production Log in 2002-2004, the w value was re-

Draft report corrective action requests and requests for clarifications	Ref. to Table 2	Summary of project participants' response	Final conclusion
transparent.			calculated. The new calculation result is 3.32% based on C balance and 3.83% based on F balance in 2002 respectively, 3.24% and 3.55% in 2003, and 3.17% and 2.89% in 2004.
CL 5 In 2005, there have been 68 tons of HFC 23 sold as low temperature refrigerant. And in the PDD it also says there is a very small market for HFC 23 in China. Please properly describe the specific size of the market size. And the possible HFC 23 sold in the crediting period should be deducted in the baseline.	B.2.6	The information of the specific size of the HFC 23 market provided by China Association of Organic Fluorine and Silicone Material Industry has been submitted to the DNV auditor.	OK, By checking the statement provided by China Association of Organic Fluorine and Silicone Material Industry/19/, it is acknowledged that the HFC 23 is not a commercial product in China nowadays. Within the statement, the explanation of the specific limited size of the HFC 23 market has been clarified to DNV.
CL 6 In estimating the emissions from diesel burning within the project activity, the carbon content of the diesel is assumed to be 86.2%. The reference of the GB 0 of diesel needs also to be provided.	B.2.9	The information is added in the Annex 3 of the PDD.	OK.
CL 7 According to the PDD, there will be at least 2 flow-meters installed to monitor the flow of HFC 23. Please specify in certain how many flow meters will be installed and illustrate how they are installed and will be used to monitor the waste streams.	D.2.3	Two groups of flow-meters in parallel and each group consists of two flow-meters which are connected in series.	OK. From the provided monitoring plan, for the HFC 23 supplied to the destruction process, two groups of flow meters in parallel with each group consisting two flow meters in series will be installed.
CL 8 The accuracy and uncertainty level of the flow meters need also to be described in the	D. 2.3	Please refer to "Monitoring and Metering Instruments" in Annex 3.	OK, The description of the accuracy and uncertainty level of the flow meters has

Draft report corrective action requests and requests for clarifications	Ref. to Table 2	Summary of project participants' response	Final conclusion
PDD.			been added in the PDD version 1.4.
CL 9 According to the AM0001 version 05, in case where the HFC 23 from 2 production lines is destroyed in one destruction facility, or in case where HFC 23 is captured and sold, the amount of FHC23 waste generated at the HCFC22 production plant should be measured with a single flow meter for each production line in addition to the measurement of the amount of HFC 23 destroyed.	D.4.1	The amount of HFC 23 waste generated at the HCFC22 production plant would be measured with a single flow meter for each production line	OK,
CL 10 The related procedures for training of monitored personnel have not been identified.	D.6.3	Please refer to "Staff Training Plan" in Annex 2.	OK, The description of these procedures has been added in the PDD version 1.4. and checked to be OK.
CL 11 Procedures related to calibration of monitoring equipment and installations have not been identified.	D.6.5	Please refer to "Calibration and Maintenance of the Instruments" in Annex 4.	OK, The description of these procedures has been added in the PDD version 1.4. and checked to be OK.
CL 12 Procedures related to maintenance of monitoring equipment and installations, monitoring, measurement, reporting, day-to-day data handling, dealing with possible monitoring data adjustment and uncertainties, review of data, internal audits, performance review, have not been identified.	D.6.6~13	Please refer to "Monitoring and Reporting Procedure of the Relevant Parameters in Determining the Emission Reduction" in Annex 5.	OK, The description of these procedures has been added in the PDD version 1.4. and checked to be OK.
CL 13 The PDD has assumed the ND_HFC 23 to be 0% This is not deemed to be conservative.	E.1.3	The parameter ND_HFC 23 is to be determined after monitoring. Therefore, it is adjusted even if it is not conservative in the ex ante calculation.	OK, The parameter ND_HFC 23 has been modified to be 0.01% and revised in the PDD version 1.4. Which is deemed to

Draft report corrective action requests and requests for clarifications	Ref. to Table 2	Summary of project participants' response	Final conclusion
		Actually, the applied technology is expected to decompose more than 99.99% of HFC 23. Therefore, it is reasonable to neglect ND_HFC 23 in the ex ante calculation which include much more uncertainties.	be acceptable.
CL 14 The estimated transport distance of 10km (return trip) for sludge transportation is not deemed to be conservative according to the result of site visit.	E.2.5	In Annex 3 of PDD, it is modified to 80km.	OK
CL 15 As there are two production lines consisted in the project activity, the calculation of the cut-off ratio (w) of each production line should be provided.	E.3.5	Because the HCFC22 generated from the two HCFC22 production lines are simultaneously fed into a set of mass measurement installation, the HCFC22 production output measurement is sum of HCFC22 from the two HCFC22 production lines, and the HCFC22 production output of each HCFC22 production line is unavailable. Therefore, the calculation of the cut-off ratio (w) of each HCFC22 production line is not available.	OK, From the production process, actually there one production line with double reactors line, and there is one middle product tank as well as one final product storage facility. It is agreed that the calculation of the cut-off ratio (w) of each HCFC22 production line is not available.

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APPENDIX B

CERTIFICATES OF COMPETENCE

CERTIFICATE OF COMPETENCE

Tim Kuo

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	--	***JI Validator:***	--
CDM Verifier:	Yes	***JI Verifier:***	--
Industry Sector Expert for Sectoral Scope(s):	--		

Høvik, 30 October 2007

Michael Lehmann
Techncal Director, International Climate Change Services

CERTIFICATE OF COMPETENCE

Wilson Tang

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	--
CDM Verifier:	--	***JI Verifier:***	--
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope 13		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	Yes		
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029, AM0045	Yes		

Høvik, 6 November 2006

Einar Telnes
Director, International Climate Change Services

Michael Lehmann
Technical Director

CERTIFICATE OF COMPETENCE

Mindy (Ming) Yue

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	--
CDM Verifier:	--	***JI Verifier:***	--
Industry Sector Expert for Sectoral Scope(s):	--		

Høvik, 5 January 2007

Einar Telnes
Director, International Climate Change Services

Michael Lehmann
Technical Director

CERTIFICATE OF COMPETENCE

Kumaraswamy Chandrashekara

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	--
CDM Verifier:	Yes	***JI Verifier:***	--
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope 4 & 5		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	Yes	*AM0027*	Yes
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029, AM0045	Yes	*AM0030*	Yes
ACM003, ACM0005, AM0033, AM0040	Yes	*AM0031*	Yes
ACM0004, ACM0012	Yes	*AM0032*	Yes
ACM0006, AM0007, AM0015, AM0036, AM0042	Yes	*AM0035*	Yes
ACM0007	Yes	*AM0038*	Yes
ACM0008	Yes	*AM0041*	Yes
ACM0009, AM0008, AMS-III.B	Yes	*AM0034*	Yes
AM0006, AM0016, AMS-III.D, ACM0010	Yes	*AM0043*	
AM0009, AM0037	Yes	*AM0046*	
AM0013, AM0022, AM0025, AM0039, AMS-III.H, AMS-III.I	Yes	*AM0047*	
AM0014	Yes	*AMS-II.A-F, AM0044*	Yes
AM0017	Yes	*AMS-III.A*	Yes
AM0018	Yes	*AMS-III.E, AMS-III.F*	Yes
AM0020	Yes		
AM0021, AM0028, AM0034, AM0051	Yes		
AM0023	Yes		
AM0024	Yes		

Høvik, 5 February 2007

Einar Telnes
Director, International Climate Change Services

Michael Lehmann
Technical Director

CERTIFICATE OF COMPETENCE

Raman Venkata Kakaraparthi

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	--
CDM Verifier:	Yes	***JI Verifier:***	--
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope 5		
Technical Reviewer for (group of) methodologies:			
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029, AM0045	Yes		

Høvik, 30 October 2007

Michael Lehmann
Technical Director, International Climate Change Services

CERTIFICATE OF COMPETENCE

Michael Lehmann

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-CDMJI-i1

GHG Auditor:	Yes		
CDM Validator:	Yes	***JI Validator:***	Yes
CDM Verifier:	Yes	***JI Verifier:***	Yes
Industry Sector Expert for Sectoral Scope(s):	Sectoral scope 1, 2, 3		
Technical Reviewer for (group of) methodologies:			
ACM0001, AM0002, AM0003, AM0010, AM0011, AM0012, AMS-III.G	Yes	*AM0027*	Yes
ACM002, AMS-I.A-D, AM0019, AM0026, AM0029, AM0045	Yes	*AM0030*	Yes
ACM003, ACM0005, AM0033, AM0040	Yes	*AM0031*	Yes
ACM0004, ACM0012	Yes	*AM0032*	Yes
ACM0006, AM0007, AM0015, AM0036, AM0042	Yes	*AM0035*	Yes
ACM0007	Yes	*AM0038*	Yes
ACM0008	Yes	*AM0041*	Yes
ACM0009, AM0008, AMS-III.B	Yes	*AM0034*	Yes
AM0006, AM0016, AMS-III.D, ACM0010	Yes	*AM0043*	
AM0009, AM0037	Yes	*AM0046*	
AM0013, AM0022, AM0025, AM0039, AMS-III.H, AMS-III.I	Yes	*AM0047*	
AM0014	Yes	*AMS-II.A-F, AM0044*	Yes
AM0017	Yes	*AMS-III.A*	Yes
AM0018	Yes	*AMS-III.E, AMS-III.F*	Yes
AM0020	Yes		
AM0021, AM0028, AM0034, AM0051	Yes		
AM0023	Yes		
AM0024	Yes		

Høvik, 5 February 2007

Einar Telnes
Director, International Climate Change Services

Michael Lehmann
Technical Director