JQA

03 December 2007

CDM Executive Board
UNFCCC Secretariat
Martine Luther King Strasse 8
P.O.Box 260124, D-53153 Bonn Germany
Attention: Mr. Hans Jürgen Stehr

Comment on "Request for Review (Ref. No 1105: Changshu Haike HFC 23 Decomposition Project)"

Dear Mr. Stehr,

To result in the faster registration of the proposed project activity by the decision of the next EB meeting, we wish our comments on "Changshu Haike HFC 23 Decomposition Project" could be supportive enough for the discussion.

Yours sincerely,

Mr. Tetsuya Tsukamoto, Senior Executive,
Japan Quality Assurance Organization

Initial comments by JQA for the request for review of "Changshu Haike HFC23 Decomposition Project (Ref. 1105)"

(The following comments are for the first reviewer. The comment for the second and third reviewers is included in Issue 12.)

1. The PDD states that "In Changshu Haike's case, only one existing production facility dedicated exclusively for HCFC22 started its operation in May 2000. The actual annual production of HCFC 22 production was 7,937.7 tons in 2002, 13,179.3 tons in 2003 and 18,106.5 tons in 2004 respectively". Further clarification is required regarding the actual production capacity of the project activity.

(Comment by JQA)

The existing HCFC22 facility has only one production line.

The capacity in HCFC22 production of the factory is permitted to 20 k-tons in1996, and 35 k-tons in 2006 at the same line. The former approval was issued on 17 May 1996 by Changshu Economy Committee, Changhsu Planning Commission. The approval in 2006 was issued by Jiangsu Province Foreign Trade and Economic Cooperation Bureau.

The increase of the production has been performed through the increase of the amount of catalyst packed in the reaction column. It will be limited to the capacity permitted, while the maximum historical production is set as 18,106.5 tons in 2004.

The above-mentioned is added in 3.2 of the Validation Report.

2. The PDD states that "Changshu Haike Chemical Co. Ltd. is the project owner and operator. This legal entity, a Sino-French Joint Venture, is located within the HCFC 22 facility of Arkema (Changshu) Fluorochemical Co. Ltd to treat HFC 23 gas emission from the HCFC 22 process within Arkema (Changshu) Fluorochemical Co. Ltd HCFC 22 facility, which started the HCFC 22 production in May 2000. Arkema (Changshu) Fluorochemical Co. Ltd proposes to transfer exclusively its total HCFC 22 facility HFC 23 waste gas emission during CDM project period to Changshu Haike Chemical Co. Ltd for appropriate destruction and the latter (Changshu Haike Chemical Co. Ltd) accepts this transfer". The PP is requested to further clarify what is the meaning of this proposed transfer, the nature of the transfer in terms of physical implications, and whether this transfer implies the modification of existing facilities or other changes in the facility or its capacity.

(Comment by JQA)

The proposed transfer is to move the HFC23 gas, which is a by-product of the HCFC22 production facility, to the HFC23 decomposition facility through the

connecting pipe for complete destruction, based on the contractual agreement between Changshu Haike Chemical Co. Ltd. and Arkema (Changshu) Fluorochemical Co. Ltd.

The connecting pipe to be installed between the tail of HCFC22 production and the decomposition facility of HFC23 shall not cause any physical leakage so that there is no emission of HFC 23 from the connecting pipe.

The transfer does not imply any modification of the existing HCFC22 production facility. There is no other changes in the facility and its capacity. The installation of the connecting pipe is not for any modification that results in the capacity increase of the existing HCFC22 production facility.

3. The Validation report states that “Through the Site-visit, the total annual productions of the existing HCFC22 facility were confirmed to be 7,937.7 tons in 2002, 13,179.3 tons in 2003 and 18,106.5 tons in 2004 respectively, from checking the monthly and daily data sheets, including the inventory of HCFC22 and the amounts filled in the containers”. Further clarification is required in relation to amounts filled in the containers and source, purpose and use of those containers.

(Comment by JQA)

The “container” is classified into two types: “Disposable” and “Iso-container”, in which both have two sizes in terms of weight, respectively. The net product weights of “Disposables” are around 13.6 kg and 22.7 kg, and the net product weight of “Iso-container” is around 18 tons. The quantities of HCFC22 production were checked against the net weights packed in “Disposable” and “Iso-container” for sale, the net weight in stock in those containers, and the inventory in the storage tanks.

4. The applied Methodology (p.5) includes the following section: “The historical production data of HCFC-22 … in each production line and the determination of … HCFC-22 production capacities … and the maximum annual HCFC-22 production quantity that is eligible for crediting (Q_HCFCy,max) should be documented transparently in the CDMPDD.”

However, the Validation Report states in page 11 that “several production lines operate” and the PDD in Section B6.2 includes data of HCFC22 production totals of all production lines in years 2002-2004, while the number of HCFC22 production lines is not detailed and it does not include production data of each production line. Furthe clarification is required.

(Comment by JQA)

“(b) several production lines operate” in page 11 of the Validation Report simply refers to the comment of the ID number 1b. of “Data to be collected or used to monitor

emissions from the project activity, and how this data will be archived, Monitored data for project emissions in the boundary (GHG) of AM0001 / Version 05.1 (page 9)" in order to explain that "(b) several production lines operate" is not applicable to this project activity.

There is only one existing line of the HCFC22 production facility. "HCFC22 production in 2002", "HCFC22 production in 2003" and "HCFC22 production in 2004" in B.6.2. are the data from the one existing production line.

5. According to PDD section B6.2 - Source of HCFC22 historical production data is: "Provided by Changshu Haike". Further clarification is required on the data provided and its reliability and sources.

(Comment by JQA)

The expression is revised to "Data sheet of HCFC22 output, recorded and archived by the plant, for the row of "Source of data used". The description "HCFC22 output was measured by weight meters" was added for "Any comment",

The amounts of HCFC22 production were checked by the DOE. These weight meters have been calibrated by the legal entity.

6. The DOE shall further clarify how they have assessed, verified and validated HCFC22 historical production data.

(Comment by JQA)

In the factory, the amounts of HCFC22 production have been measured by the two kinds of weight meters made by Siraga (France) and Metler (Switzerland) for the "Disposable" with the net product weights of around 13.6 kg and 22.7 kg where the latter scale is for checking. And other two types of "Iso-containers" with the net product weights of 800 kg and 18 – 20 tons have been also measured by weight meters. These weight meters have been calibrated by the legal entity in accordance with the law. The history of calibration and some recent certificates for these weight meters were confirmed at the Site-visit.

The HCFC22 production data has been daily recorded. The amounts of production were checked on the daily data basis and the consistency of the daily data with the monthly data were checked on the sample base of September/October 2002, September/October 2003 and September/October 2004 by the DOE.

They are summarized as data on the monthly basis. The daily and monthly data were confirmed to be consistent at the Site-visit by the DOE and all the data are electronically available.

Further, the DOE has checked the record of HCFC22 as double checking, and was able

to further confirm the reliability of the production data of HCFC22 of the production line.

How the DOE have assessed and validated HCFC22 historical production data is added in 3.3 of the Validation Report.

7. In relation with HCFC22 production capacities the applied methodology and the above referred methodology section clearly requires determination of each production line of HCFC22 capacity data. However, the PDD does not include information about any production line and does not include information about any installed capacity.

(Comment by JQA)

The existing HCFC22 production facility has only one production line.
Furthermore, there is no plan to establish any other production lines in future.
Information on the installed capacity is referred to the comment to Issue 1.

8. The DOE shall further clarify how they have assessed, verified and validated data related to each production line capacity of HCFC22.

(Comment by JQA)

The existing HCFC22 production facility has only one production line.
Information on the production line capacity of HCFC22 is referred to the comment to Issue 1.

9. In relation to the maximum eligible value of parameter w that shall be used for monitoring, the PDD in page 17 states that “The cut-off condition, specified in the parameter w in the methodology, is to be checked against the actual situation on an ex-post basis.” According to the above PDD declaration, ex-post w value (limited to the methodology maximum w=3.0) maybe used directly without relation to w=1.64% baseline maximum eligible value. It is not clear if the eligible value of parameter w during the monitoring period will be the lower between 1.64% and the ex-post calculations. Further clarification is required.

(Comment by JQA)

The expression is revised to “the actual situation on an ex-post basis is to be checked against w=1.64% (2003) which is the lowest of three historical annual values from 2002 to 2004”.

10. The DOE shall further clarify how they have assessed and validated the maximum eligible value of parameter w that shall be used for monitoring and whether the

determination in the PDD is in line with the applied methodology.

(Comment by JQA)

The parameter “w” is calculated through dividing HFC23 by-production by HCFC22 production. The HCFC22 production was assessed and validated as described in Issue 6.

The DOE checked the amounts of HFC23 by-product through the monthly and daily data sheets obtained by the vortex flow meter. The amounts of HFC23 are calculated through multiplying the volume of HFC23 flow rate measured by the vortex flow meter, the purity of HFC23, and the density of HFC23.

The amounts of HFC23 by-product were checked on the daily data basis and the consistency of the daily data with the monthly data were checked on the sample base of September/October 2002, September/October 2003 and September/October 2004 by the DOE. All the data are electronically available.

The purity of HFC23 has been obtained by the gas chromatography, which is operated under the Laboratory Work Instruction, Determination of R23 from D610 reflux and degas. The DOE checked the weekly and monthly data. The consistency of the weekly data of March/September 2002, March/April/September/October 2003 and March/April/September/October 2004 with the monthly data was checked on the sample base by the DOE.

How the DOE have assessed and validated HFC23 is added in 3.3 of the Validation Report.

11. In relation to the available data for calculation of parameter w, the applied methodology -in page 5- includes the following section: “If insufficient data is available for the calculation of HFC23 release for all three (3) most recent years of operation up to 2004, then the default value for w to be used is 1.5%.” According to PDD, section B6.2, the source of data is as: “Provided by Changshu Haike’s Internal procedure”, which maybe regarded as insufficient. Further clarification is required. Furthermore, if the source and transparency of data is “insufficient”, a reduction of the eligible maximum value of parameter w to w=1.5% may be appropriate.

(Comment by JQA)

According to Issue 11 of the first reviewer, the expression is revised to “Data sheet of HFC23 output, recorded and archived by the plant” for the row of “Source of data used”. The description “HFC23 was measured by vortex flow meter and gas chromatography” was added for “Any comment”.

The data including HCFC22 production and the volume and purity of HFC23 for calculating the parameter “w” were checked by the DOE, where 3.4 kg/m3 was adopted

as the density of HFC23 for the temperature of outlet pipe, -27 degree centigrade (246K).

12. The monitoring plan should include the monitoring of two (2) important parameters as prescribed in the monitoring methodology: the quantity of HFC23 generated in each HCFC22 production line, and hourly HCFC22 production capacity.

(Comment by JQA for all reviewers)

The existing HCFC22 production facility has only one production line. There is no plan to establish any other production lines in future. And there is no swing production at the facility.

Because this facility does not adopt the swing production, "$C_{HCFC-22}$" is not necessary for this CDM project activity.

13. The applied methodology in page 9 to 14 includes ID number for each monitored parameter. The PDD does not apply any ID numbers. The Monitoring Plan shall follow the Methodology ID numbers of the monitored parameters.

(Comment by JQA)

The ID number for each monitoring parameter is added in the PDD, following the Methodology ID numbers of the monitored parameters. The description is added in the Validation Report.

14. The Methodology requires the following parameters to be monitored using meters:

a. ID 8 - HFC23 sold by the facility generating the HFC23 waste. According to the PDD in page 24 this parameter is based on "Sales record". This way of monitoring of this parameter is different than required by the applied Methodology.

b. ID 9 - Quantity of HCFC22 produced based on the historical production records. According to the PDD in page 17 this parameter is "Provided". This way of monitoring of this parameter is different than required by the applied Methodology.

(Comment by JQA)

a) The expression of "Sales record" is revised to "weight meters" in the PDD.

b) It is same as described in Issue 5.

15. In the PDD (page 36) Table 3 describes the increase of noise to very high levels and noise reduction measures, which shall be included in the project activity. However the Monitoring Plan does not include the monitoring of noise level.

The Monitoring Plan should include monitoring the following parameters related to the efficiency of noise reduction measures, that are part of the project:

a. air blower of the thermal oxidizer;
b. induced draft fan for waste gas treatment;
c. various kinds of water pumps.

(Comment by JQA)

According to Issue 15 of the first reviewer, the monitoring plan for noise is modified in D.1. of the PDD as follows: The efficiency of these noise reduction measures will be inspected and approved by local authority before project start-up.

The Validation Report explains this situation.

16. The DOE shall sequentially identify CARs and CLs that in the Validation report have no ID number.

(Comment by JQA)

The ID number for each CAR and CL is added in the Table 2 of Annex A.

17. The DOE shall provide a list of CARs and CLs to facilitate consideration and assessment of the project activity.

(Comment by JQA)

The CARs and CLs are shown in Table 2 of Annex A. The resolutions for these CARs and CLs are also shown *in italics* in the table. We think this way is sufficient for consideration of the project activity

18. The DOE shall further clarify why it has closed CL as identified in Validation Report page 15: “The measurement procedures, calculations and assumptions used to determine “w” should be documented transparently in the PDD, whereas It has been just added in the revised methodology.” This CL was closed as per the following reason: “The description of the procedures as well as calculations and assumptions used, was added in the PDD, in accordance with the methodology.” However, the only information regarding the source of w yearly values is: “Provided by Changshu Haike’s Internal procedure”. The above statement “Provided by Changshu Haike’s Internal procedure“ cannot be regarded as proper corrective action and the PDD still does not include the following elements initially required by the DOE:
a. measurement procedures
b. calculations
c. assumptions
d. “documented transparently in the PDD”

(Comment by JQA)

The CL in page 15 of Table 2, Annex A was closed through addition of the description of the last nine lines in “5) of Basic assumptions and calculation of parameters:” in page 17 of the PDD.

“a. measure procedures” is described as “The parameter w is obtained by direct measurement through tail gas vortex flow meter and gas chromatography HFC23 composition analysis”.

“b. calculations” is described as “w is the waste generation rate (HFC23)/(HCFC22) for the originating plant” in page 15”.

“c. assumptions” is discussed in relation to the accuracy of the vortex flow meter and gas chromatography.

“d. documented transparently in the PDD” is assessed through these descriptions in the PDD.

19. The Validation Report, in its Section 3.7 “Environmental Impacts”, does not include requirements for noise reduction and monitoring of the relevant data. Further clarification is required.

(Comment by JQA)

The factory is located in Jiangsu Hi-tech Fluorine Chemical Industry Park (FCIP), separated from the residential area. The noise sources such as air blower of the thermal oxidizer, induced draft fan for waste gas treatment, and various kinds of water pump are to be controlled by several measures in order to be fully in compliance with the relevant national standard. Following Issue 15 of the first reviewer, the PDD was revised as that the noise from such noise sources is to be inspected, controlled and approved by authority before project start-up. Accordingly, Section 3.7 of the Validation Report is revised.

20. The DOE shall further clarify how they have checked that “the calibration by an external accredited entity, (e.g. The Center Metrology Station of Yangzi Pertrochemical Co. Ltd.)” is deemed appropriate and how they have verified that the external entity is fully qualified for that activity.

(Comment by JQA)

The gas flow meter should be calibrated by an external accredited entity for assuring the QA/QC of the instrument. The DOE confirmed at the Site-visit through the certificate of the flow meter that the flow meter has been calibrated by the Center Metrology Station of Yangzi Petrochemical Co., Ltd. who has been assessed by China National Accreditation Committee for Laboratories (CNAL). The certificate of laboratory accreditation No. is L1069. In this CDM project, the certified company is considered as a candidate of the calibration entity.

21. The DOE shall further clarify how they have ensured that uncertainties are to be addressed in a systematic manner in the documentation.

(Comment by JQA)

In the applied methodology, uncertainty in emission rate estimates is requested to be quantified. The quantity of HCFC22 production has been measured by weight meters, which were calibrated according to Chinese national regulation and standards. These procedures are to be continued in the project activity.

The quantity of HFC23 by-production has been measured by the vortex gas flow meter and gas-chromatography. The accuracy of vortex flow meter is higher than 99%. The gas chromatography's accuracy is in ppm level. The uncertainty in estimating the quantity of HFC23 is discussed in assessing four potential sources of uncertainties in page 52 - 53 of the PDD.

22. The DOE states in the Validation report that "Mr. Toshimizu Okada is an assessor of CDM and ISO 14001. He has Master of Forest Resources. He has several experiences of CDM project validation and JI project determination including HFC23 decomposition, small-scale renewable energy, energy-efficiency improvement and biomass utilization". However, the grant of sectoral scope as CDM assessor to Mr. Okada by JQA is dated on 1st November 2006, just a month before the contractual arrangement for this project activity was signed. In addition, Mr. Okada academic background is in Forest Resources. Further clarification is required as to how Mr. Tomada gained experience in HFC decomposition projects without having been granted the certificate as assessor in the pertinent sectoral scope.

(Comment by JQA)

The grant of the sectoral scope to CDM assessors is given in accordance with the JQA CDM Quality Manual. The grant of the sectoral scope 11 of Mr. Toshimizu Okada is effective since the granted date, 01 November 2006. The certificate dated on 18 April 2007 was issued due to the request of the EB's decision to attach the certificate to the Validation Report. He was endowed with the expertise of the sectoral scope 11 through assessing his validation activities in the preceding two registered CDM projects of HFC23 decomposition (Project for HFC23 Decomposition at Zhejiang Dongyang Chemical Co., Ltd., China (Ref. 0549) & Project for HFC23 Decomposition at Limin Chemical Co., Ltd. Linhai, Zhejiang Province, China (Ref. 0550)).

His expertise of this field is added in the Validation Report.