



Mr. Hans Jürgen Stehr
Chair, CDM Executive Board
UNFCCC Secretariat
CDMinfo@unfccc.int

December 3rd, 2007

Re Request for clarifications for the request for issuance of “GHG emission reduction by thermal oxidation of HFC 23 at Navin Fluorine International Limited (NFIL), Surat, Gujarat, India”

Dear Mr. Stehr,

SGS has been informed that the request for issuance of the CDM project activity “GHG emission reduction by thermal oxidation of HFC 23 at Navin Fluorine International Limited (NFIL), Surat, Gujarat, India” (Ref No. 0838) for the monitoring period 01st May 2007 to 15th August 2007 is under consideration for review because three requests for review have been received from members of the Board.

The requests for review are based on the same reasons outlined below and read. SGS, following discussions with the Project Participant, would like to provide a response to the issue raised by the review team:

Request for clarification to the DOE/PP:

1. The DOE is required to verify that the w value cannot exceed the capped value for the past one year period, in accordance with paragraph 90 of EB35.

We are reproducing paragraph 90 of EB 35 which reads as “*The Board took note of the reporting of the HFC 23 waste generation rate / HCFC 22 production (“w”) values by the project activities while applying the approved methodology AM 0001. The Board agreed that the DOEs should ensure, for each request for issuance, that the value of “w” shall not exceed the maximum value as registered in the PDD, taking into account the issuances that have occurred in the past one year period, in order to ensure that the annual maximum “w” value has not been exceeded.*”

In view of the aforesaid, we would like to highlight that the first monitoring report version 1 was issued prior to EB 35. However the “w” was verified and the same is mentioned in page 11 of our verification and certification report. This point is also covered in *Appendix 4 of the monitoring report - “Check against baseline requirements”* on page number 23. The table clearly shows that the actual “w” value for the monitoring period is 3.27% (which is higher than the eligible baseline) whereas the “w” value applied for calculation of CERs is 3.00%, being the maximum ratio as per the approved baseline in the registered PDD.

The “w” value will be verified during each monitoring period so as ensure that it will not exceed the capped value for the annual year.

2. The monitored parameters should be reported monthly in accordance with the monitoring plan and the methodology.

The Approved Methodology; AM 0001/Version 4 requires that the parameters / data which may be measured, calculated or estimated should be **recorded** monthly. However, neither the Approved Methodology nor the Monitoring Plan, as documented in the PDD requires these parameters / data to be **reported** monthly.

Accordingly, the parameters / data are recorded monthly (the production records), as per the Approved Methodology / Monitoring Plan and offered to the DOE for verification. To confirm the accuracy of the monthly data, daily plant data have been checked with the plant log-sheets.

However, the relevant parameters / data are reported in the Monitoring Report and commented upon in the Verification Report of the DOE for the entire monitoring period.

3. Further clarifications are required regarding the following issues:

3.a Quantity of HCFC22 was not measured but obtained from production records. The production records implied this data was obtained by measurement. Also the PDD mentioned that the quantity of HCFC is measured through process control flow meters (PDD, p.17)

The Approved Methodology (refer page 11 of AM0001/V.4) states that the quantity of HCFC (Q_{HCFC_y}) "*Will be obtained from production records of the facility where the HFC 23 waste originates*". Hence, the terminology 'production records' has been used.

Please note that the basis of measurement of quantity of HCFC ($Q_{HCFC 22}$) as mentioned on page 25 of the PDD reads as follows: "*HCFC production will be measured using sales records and stock tank levels*". This method is adopted in the first monitoring report which has been verified by the DOE.

It may be observed that the data, parameters and methods described in these two paragraphs under this section are applicable while the project is on stream and these should be applied for the monitoring reports, verifications and certifications.

Section B.6.2 on page 17 of the PDD relates to data and parameters that are available for validation of Baseline quantity of HCFC 22 produced in the years 2000-2004 for the Project. On this page, under the heading "*Justification of the choice of data or description of measurement methods and procedures actually applied*" it is stated that "*Actual Quantity of HCFC 22 and CFCs produced in the years 2002, 2003 and 2004 measured through process control flow meters or production logs (wherever applicable)*".

The data, parameters and methods described in the aforesaid paragraph are used for ascertaining and validating the baseline for the Project. These are not to be applied, as per the monitoring plan for the monitoring reports and verification reports. The monitoring methodology and plan are described in Section B.7 of the PDD.

3b. The calculation of electricity generation emission factor was not included. This information is presented in the monitoring report in page 21

The calculation of electricity generation emission factor has been included in the monitoring report along with other information in this regard, (please refer Appendix 2 page number 21 of the monitoring report).

This has been also verified and is mentioned in the verification report paragraph 6 on page 11.

3c. w and HCFC22 production exceed maximum capacity. The PP describes the historical performance of the plant from 2002-2004, which shows that in the those years the w were always higher than 3.0%, therefore, the w is capped at 3.0%. The maximum HCFC22 production of 7992 tonnes was derived from the maximum data of the three years, however, it does not necessarily mean that the maximum plant capacity is 7992 tonnes.

The purpose of the baseline values of “w” and HCFC22 as given in the approved methodology AM 0001 / V.4 is:

“to exclude the possibility of manipulating the production process to increase the quantity of waste, the quantity of HFC 23 waste (Q_HFC23y) is limited to a fraction (w) of the actual HCFC production during the year at the originating plant (Q_HCFCy).

$$Q_HFC23y \leq Q_HCFCy * w$$

Where Q_HCFCy is the actual production of HCFCs during the year at the plant where the HFC 23 waste originates measured in metric tones. Q_HCFCy is limited to the maximum historical annual production level at this plant (in tonnes of HCFC22) during any of the last three (3) years between beginning of the year 2000 and the end of the year 2004, including CFC production at swing plants adjusted appropriately to account for the different production rates of HCFC22 and CFCs.”

Therefore, in view of the aforesaid, we would like to clarify as follows:

As per approved methodology AM0001 / V.4, the historical HFC23 generation is estimated for the three most recent years of operation upto 2004 and the value of “w” is set to the lowest of the three and not to exceed 3% (the default cap).

As stated in the question the registered PDD describes that the value of W from 2002-2004 was always higher than 3.0 %,

Year 2002: 3.15 %
Year 2003: 3.06 %
Year 2004: 4.33 %

As this minimum was higher than 3% an annually monitored limit of 3% was set for “w” factor in line with the methodology AM0001 / V.4 for the project. Therefore, “w” is capped at 3 %.

In the first monitoring period of 107 days 89.33 MT of HFC 23 was generated which is 3.27% w/w. However, the “w” considered for calculation of CERs is 3 % only (the ultimate cap) which is equivalent of 81.93 MT of HFC 23. The balance 7.40 MT of HFC 23, being higher than the baseline condition has not been considered as eligible and no CERs have been claimed. Please refer to Appendix 4 of the monitoring report in this regard. The excess 7.40 MT of HFC 23 has been stored and shall be incinerated.

Therefore the “w” factor considered in the subject monitoring report is within the limits defined in the PDD for the project.

As stated in the Approved Methodology AM 0001/V.4 (Q_HCFCy) quantity of HCFC22 for baseline purpose of the CDM Project has been calculated based on *“the maximum historical annual production level at this plant (in tonnes of HCFC22) during any of the last three (3) years between beginning of the year 2000 and*

the end of the year 2004, including CFC production at swing plants adjusted appropriately to account for the different production rates of HCFC22 and CFCs”.

Therefore, for the baseline purpose the annual quantity of HCFC22 has been calculated on the basis of actual historical production of the plant and not on the basis of the nominal daily capacity of the plant which in this case is higher. Secondly, the cap, as per the Approved Methodology and the PDD, is an annual cap and not an aggregated value of a daily production cap. Therefore, though the HCFC22 production during the First monitoring period is 2731 MT, this is well below the annual limit of 7992 MT stated in the question and the PDD and it shall be monitored such that (Q_{HCFCy}) does not exceed the annual cap of 7992 MT. Please refer the last paragraph of Annex.4 – Monitoring Information of the PDD.

The reviewer therefore is correct in his final comment that the plant has been capable of producing more than 7992 MT of HCFC22 per year but is limited to only being able to claim CERs generated due to the production of 7992 MT of HCFC 22 per year, i.e. the plant’s maximum capacity is above the baseline HCFC22 production limit.

- 4. According to the Methodology the quantity of HCFC22 should be measured. Monitoring Report v.4 (page 15 ID7) reports that this parameter was obtained from “production records” and was not measured as required by the Methodology. Further clarification in a transparent manner is required as to whether the production records implied this data was obtained by measurement and whether the quantity of HCFC is measured through process control flow meters.**

The Approved Methodology (refer page 11 of AM0001/V.4) states that the quantity of HCFC (Q_{HCFCy}) *“Will be obtained from production records of the facility where the HFC 23 waste originates”*. Hence, the use of the term *“Production Records”*.

Section B.7 of the PDD lays down the monitoring methodology and description of monitoring plan. *For Q_{HCFCy} on page 25 of the PDD under “Description of Measurement methods and procedures to be applied” it is stated that “HCFC production will be measured using sales records and stock tank levels”*. Therefore, the statement made in the Monitoring Report v.4 (page 15 ID7) stating that this parameter was obtained from *“production records”* is in compliance with the PDD and the Approved Methodology AM 0001/V.4. In this context it must be noted that the data/information maintained in the *“Production Records”* is recorded after due measurement as required by the approved methodology and the monitoring plan. The measurement and recording of HCFC22 production is based on the measurement of levels in the HCFC22 storage tanks and the use of the appropriate Level-mass calibration charts. The supporting data are verified by the DOE in course of the verification process.

- 5. According to the Methodology the quantity of HFC23 sold should be measured. Monitoring Report v.4 page 15 ID8 reports that this parameter was obtained from “sales records” and was not measured as required by the Methodology. Further clarification in a transparent manner is required.**

The approved methodology AM0001/V.4 Page 11 states that HFC23_sold *“Will be obtained from production records of the facility where the HFC 23 waste originates”*.

The PDD monitoring plan gives the source of data to obtain the quantity of HFC 23 sold as *“Sales receipts , Weighing of product packages prior to dispatch”* (PDD version 3, Page 31). At the project site the weight and number of cylinders dispatched is recorded in the sales record, which is in line with the PDD monitoring plan.

Please note that there has been no HFC 23 sold during the monitoring period as stated in the Monitoring report. This has been verified during the site verification process. Therefore, the question of measurement of HFC23 sold during this verification does not arise.

To aid clarity a comment will be added to all subsequent monitoring reports to state the number and weight of cylinders of HFC 23 that were filled and/or sold during the monitoring.

- 6. According to the PDD Monitoring Plan quantity of refrigerant should be “Measured by weight”. Monitoring Report v.4 page 16 ID16 reports that this parameter was “Calculated from plant records” and was not measured as required by the PDD Monitoring Plan. Further clarification in a transparent manner is required.**

Refrigerant used in the CDM plant is supplied in cylinders that are weighed during the filling procedure and there is no other means. The number of cylinders used is included in the plant records. The quantity of refrigerant thus used is calculated by multiplying the net weight of cylinders used by the number of cylinders used.

For the first monitoring period one 61 kg cylinder was used and recorded in the plant records which were verified by the DOE during the verification visit.

- 7. The Monitoring Report does not include actual readings of meters. Further clarification is required.**

Monitoring report presents cumulative values for all data from the Production Records. The production records are generated from either physical verification or electronic output from meters as maintained in accordance with the requirements of the approved methodology and the monitoring plan described in Section 7 of the PDD. These have been checked during the verification visit.

- 8. Daily production data of HCFC22 and HFC23 are required for crosschecking of Waste Generation Rate (w) and to verify that the monitored daily production of HCFC22 is below the production capacity. As the Monitoring Report does not include daily production data, these data should be submitted from date of beginning of the storage of HFC23.**

Paragraph 90 of EB 35 states that *“The Board took note of the reporting of the HFC 23 waste generation rate / HCFC 22 production (“w”) values by the project activities while applying the approved methodology AM 0001. The Board agreed that the DOEs should ensure, for each request for issuance, that the value of “w” shall not exceed the maximum value as registered in the PDD, taking into account the issuances that have occurred in the past one year period, in order to ensure that the annual maximum “w” value has not been exceeded.”*

The Approved methodology AM0001/V.4 page 6 under Monitoring Methodology – Other factors in the monitoring process for quality control are: states that *“The output of HFC23 from the HCFC22 plant will be checked **yearly** by comparing the amount of HCFC22 produced to the sum of HFC23 recovered for sale and HFC23 decomposed”.*

Thus, paragraph 90 of EB 35 as well as the approved methodology requires that the Waste Generation Rate (w) is calculated cumulatively over a 12-month period. (An annual average takes into account daily fluctuations due to changes in such things as maintenance downtime, plant throughputs, operating conditions and catalyst condition).

It is noted that as with all statistical averages the individual values should be expected to vary above and below the average value. Accordingly, it is so mentioned in the monitoring plan, please refer to Section 7 of the PDD. So the daily HFC 23 generation rates for the monitoring period will be both above and below the average rate.

Please also note that the PDD does not include a maximum daily HCFC22 production capacity. It only defines the maximum annual HCFC22 production capacity based on the maximum annual production from 2002 –2004 as required by the approved methodology and not based on the daily nominal capacity of the plant. The approved methodology only requires the 12 month production to be compared with this maximum baseline annual HCFC22 production capacity during the life time of the project. Please refer to the last paragraph of Annex.4 – Monitoring Information of the PDD.

The daily HCFC22 production varies from day to day based on market demands, raw material availability, maintenance requirements, etc. so the maximum annual HCFC22 production (baseline) cannot sensibly be used to derive a maximum daily HCFC22 production rate for the plant.

The Approved Methodology does not require the daily totals of the monitored parameters to be provided. Hence, the Monitoring Report does not provide the daily totals of the monitored parameters.

The data in respect of most of the monitored parameters is automatically archived in the computerized DCS system on an on-line basis, and from this data, the daily values are verified by the DOE during verification.

- 9. The PDD in page 20 declares that yearly production capacity of HCFC22 is 7,992 t-HCFC22/y, resulting in 21.9 t-HCFC22 per day. The monitored HCFC22 production is 2,731 t per 107 days of the monitoring period, resulting in 25.5 t-HCFC22 per day, up to 17% above the production capacity in average. Further clarification is required. In addition, daily production data are required for checking if higher monitored values were recorded.**

As stated in the Approved Methodology AM 0001/V.4 (Q_{HCFCy}) quantity of HCFC22 for baseline purpose of the CDM Project has been calculated based on *“the maximum historical annual production level at this plant (in tonnes of HCFC22) during any of the last three (3) years between beginning of the year 2000 and the end of the year 2004, including CFC production at swing plants adjusted appropriately to account for the different production rates of HCFC22 and CFCs”*.

Therefore, for the baseline purpose the annual quantity of HCFC22 has been calculated on the basis of actual historical production of the plant and not on the basis of the nominal daily capacity of the plant which in this case is higher. Hence, it will be inappropriate to arrive at the daily capacity of the plant by dividing 7992 MT by 365 days.

Secondly, the cap is an annual cap, as per the Approved Methodology, and not an aggregated value of a daily production cap and the last paragraph of Annex.4 – Monitoring Information of the PDD. Therefore, though the HCFC22 production during the First monitoring period is 2731 MT, this is well below the annual limit of 7992 MT stated in the question and the PDD and it shall be monitored such that (Q_{HCFCy}) does not exceed the annual cap of 7992 MT.

The Approved Methodology does not require the daily totals of the monitored parameters to be provided. Hence, the Monitoring Report does not provide the daily totals of the monitored parameters.

The data in respect of most of the monitored parameters is automatically archived in the computerized DCS system on an on-line basis, and from this data, the daily values are verified by the DOE during verification.

10. The PDD in page 20 declares that waste generation rate (w) = 0.03. The Monitoring Report v.4 reports $w = 0.0327$ in average. Further explanation is required how it is possible that the monitored value of w is higher than in baseline and high above maximum theoretical value. Furthermore, daily production data are required for checking if higher monitored values were recorded.

As per approved methodology AM0001 / V.4, the historical HFC23 generation is estimated for the three most recent years of operation between 2000 and 2004 and the value of "w" is set to the lowest of the three and not to exceed 3% (the default cap, which is not the same as the Maximum theoretical value).

Please refer page 15 of the PDD and note that the value of "w" from 2002-2004 in case of the project has always been higher than 3.0 %. For example; in year 2002 it was 3.15 %, in year 2003 it was 3.06 % and year in 2004 it was 4.33 %.

As this minimum was higher than 3% an annually monitored limit of 3% was set for "w" factor in line with the methodology AM0001 / V.4.

Page 20 of the PDD mentions only the cap value of "w" along with other cap values. This, when read with the contents of page 15 of the PDD gives a comprehensive clarity to the subject.

In Appendix 4 of the first monitoring report the actual calculated waste emission rate has been mentioned as 3.27 %. However, the "w" considered for calculation of CERs is 3 % (the ultimate cap) only which is equivalent of 81.93 MT of HFC 23. The balance 7.40 MT of HFC 23, being higher than the baseline condition has not been considered as eligible and no CERs have been claimed. The excess 7.40 MT of HFC 23 has been stored and shall be incinerated.

Therefore the "w" factor considered in the subject monitoring report is within the limits defined in the PDD for the project.

As explained against Question No. 9 the Approved Methodology does not require the daily totals of the monitored parameters to be provided. Hence, the Monitoring Report does not provide the daily totals of the monitored parameters though they have been verified by the DOE during the verification visit.

11. The DOE shall further clarify how they have verified that the above mentioned parameters are measured according to requirements.

As required by the approved methodology and the monitoring plan of the PDD all the parameters were verified through plant production records and from the DCS history.

12. The DOE shall further clarify how they have prepared its own materials balance and how they have performed crosschecking of the results in order to verify emissions reductions.

The material balance data was provided by NFIL on a spreadsheet, the data was verified with plant production records and the DCS readings.

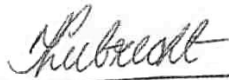
13. Further clarification is required regarding the date of the request for issuance.

According to our records the projects was submitted with a request for issuance on 30.10.2007. An email from the UNFCCC was received on 31.10.2007 stating that the submission was incomplete, as SGS had requested to re-open the interface for re-uploading the request for issuance. A new Verification report was

submitted on 31.10.2007 and again communication from UNFCCC secretariat citing "Incomplete submission" for the project was received on 02.11.2007. A new verification report to correct these issues was sent on the 05.11.2007. The request was published on 6.11.2007.

Shivananda Shetty (0091 9871794706) will be the contact person for the review process and is available to address questions from the Board during the consideration of the review in case the Executive Board wishes.

Yours sincerely,



Irma Lubrecht
Technical Reviewer
Irma.lubrecht@sgs.com
T: +31 181 693293
M: +31 651 851777



Shivananda Shetty
Lead Auditor
Shivananda_shetty@sgs.com
T: + 91 124 2399990 - 98
M: + 91 9871794706