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Att: CDM Executive Board

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Response to request for review "HFC23 Decomposition Project at Zhonghao Chenguang Research Institute of Chemical Industry, Zigong, SiChuan Province, China" (0767)

Dear Members of the CDM Executive Board,

We refer to the requests for review raised by three Board members concerning DNV's request for issuance for project activity 0767 "HFC23 Decomposition Project at Zhonghao Chenguang Research Institute of Chemical Industry, Zigong, SiChuan Province, China" and would like to provide the below initial response to these requests for review.

1. *The monitoring report stated that the HFC23 generated during the shutdown of HFC23 incinerator (6-7 July 2007) was emitted to the atmosphere while HCFC22 plant was operated normally. The methodology requires that, when the thermal oxidizer stops, analysis of the effluent gas is done to check leaked HFC23 by sampling. However, the appendix 3 of the quantity of HFC23 in gaseous effluent did not provide the quantity of HFC23 not destroyed during these specific shutdowns. Instead, the quantity of HFC23 not destroyed including the downtime was calculated based on the detection limit of HFC23 by GC, the volume of tail gas and density of HFC23 gas, resulting in 8.5292 kg HFC23. Further clarification is required.*

- First, it is very important to note that the shutdown of the HFC23 incinerator, the emitted HFC23 was not counted as the destroyed HFC23 (q_HFC23) and is not being used for claiming CERs.

- The definition and instruction on where to sample/analyze ND_HFC23 stated in the methodology had been checked before the on-site verification. ND_HFC23 should be measured from the gas effluent of the destruction process (please refer to p11, D6, methodology AM0001/Version 4). The HFC23 emitted to the atmosphere before the mass flow meter and the destruction process is not related to ND_HFC23.

- During the downtime of HFC23 incinerator (6-7 July 2007), the analyses of gaseous effluent were done by the project participant and the results were shown as "not detected". So, the quantity of HFC23 not destroyed was calculated by the PP based on the detection limit of HFC23 by GC, the volume of tail (exhaust stack) gas and density of HFC23 gas as described

in the monitoring report. The analysis results and the calculation had been check by DNV and were deemed to be acceptable and correct.

- During the emergency or maintenance period, the HFC23 emitted to the atmosphere before the mass flow meter and the destruction process was not measured as it is not addressed in the methodology. However, this HFC23 emitted is still included in the total HFC23 generation in this monitoring period for the purpose of the check of the w factor. In order to be conservative in determining the w factor, the PP estimated emitted HFC23 when no direct measurement is available. The calculation had been check by DNV and was deemed to be conservative and correct (please refer to the response to the 2nd issue raised by the requests for review).

- Per a FAR raised during the verification by another DOE of the emission reductions reported for the previous monitoring period "*In case where the incinerator stopped, in order to avoid the mass flow meters of counting the tail gas from Unit A, the CDM plant operator requests the operator in Unit A to escape the tail gas to the atmosphere. However, this is not documented. In order to ensure this emergency response, it should be documented in the monitoring plan.*" In this verification, it was found by DNV that the PP had documented the emergency emission procedure accordingly and properly. During this incinerator stop, the PP was found to respond to the situation according to the requested procedure and, emitted the emergency exhaust of HFC23 before the HFC23 mass flow meters.

2. *Further, for the purpose of the check of the w factor, the project participant has calculated HFC23 generated during the downtime as 1.7172 t, based on HCFC22 production during the downtime and the maximum w factor of 3.23%. In relation to issue 1 above, further clarification is required as to how the DOE verified the actual quantity of HFC23 not destroyed.*

- The analysis results of gaseous effluent during the downtime of HFC23 incinerator (6-7 July 2007) had been verified by DNV and found to be correct. The analyzing equipment, GC SC-5000, was maintained/calibrated according to the procedure established by the PP. The annual calibration (February 2007) and the monthly recalibrations had been done according to the methodology and the certificate had been checked by DNV during the site visit.

- The location of emergency exhaust had been verified on site by DNV and found that in the case of the shutdown of the HFC23 incinerator, the emitted HFC23 was not counted as the destroyed HFC23 (q_HFC23) and is not being used for claiming CERs. Also the data log of distributed control system (DSC) during the downtime of HFC23 incinerator had been checked by DNV and we found that the readings of the mass flow meters (q_HFC23) remained to be zero within the whole downtime period.

- As described above, it is verified by DNV that no HFC23 generated will pass the destruction process during downtime of incinerator because it is emitted to the atmosphere before the mass flow meter (q_HFC23). However, a tiny amount of HFC23 may residue in the destruction facility and vent through the exhaust stack and the HFC23 concentration in the gas effluent of the destruction process was monitored as described above and the measurements showed HFC23 concentration levels below the detection limit of the GC. It is deemed to be conservative that the PP used the detection limit of GC as the concentration of HFC23 when counting the ND_HFC23 in exhaust stack gas during downtime as the analysis results of the exhaust stack gas are "not detected" for the whole period.

- The w value is calculated basing on the figure of HFC23 generation and HCFC22 production in the period (May 1, 2007 to Aug 25, 2007). So the emitted HFC23 at downtime of HFC23 incinerator is also included in the total HFC23 generation during this monitoring period (May 26, 2007 to August 25, 2007).

- This amount of HFC23 is estimated by the product of HCFC22 production at downtime and the waste generation rate (w) chosen by the PP in a way which was deemed to be conservative by DNV. The PP use 3.23% as w value to estimate the amount of HFC23 generated at downtime because the w is 3.23% under normal operation during this monitoring period (May 26, 2007 to August 25, 2007) according to the calculation. It is conservative to select w as 3.23% for the estimation after comparing the maximum w value (3.20%) in the registered PDD from 2002 to 2004 and the w value (3.12%) during the 1st monitoring period (May 1, 2007 to May 25, 2007) Please refer to Tab.1. The calculation of the w value, the production records of HCFC22 during this monitoring period and the description in the registered PDD had been checked by DNV and found to be correct and acceptable.

Tab.1 The w value calculation verified

Period	w value calculated	Comments
2002~2004	3.20	The maximum w value in the registered PDD
1 May 2007 to 25 May 2007	3.12	As calculated in the 1st monitoring report
26 May 2007 to 25 August 2007	3.23	Based on HFC23 generation and HCFC22 production during normal operation in the 2nd monitoring period

- Hence, the HFC23 generated during downtime is 1.7172 t by the calculation. Basing on the HFC23 generation and HCFC22 production in the period (May 1, 2007 to Aug 25, 2007), the waste generation rate was calculated as 3.21%. The detailed information can be found in the revised monitoring report (Rev 2.) which also had been checked by DNV and found to be correct.

We sincerely hope that the Board accepts our aforementioned explanations.

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION AS

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