



Industrie Service

**Choose certainty.  
Add value.**

TÜV SÜD Industrie Service GmbH · 80684 Munich · Germany

## CDM Executive Board



DAP-PL-2885.99  
DAP-IS-2886.00  
DAP-PL-3089.00  
DAP-PL-2722  
DAP-IS-3516.01  
DPT-ZE-3510.02  
ZLS-ZE-219/99  
ZLS-ZE-246/99

Your reference/letter of	Our reference/name	Tel. extension/E-mail	Fax extension	Date/Document	Page
	IS-CMS-MUC/Mu Javier Castro	+49 89 5791-2686 javier.castro@tuev-sued.de	+49 89 5791-2756	2008-09-10	1 of 3

## Response to Request for Review

Dear Sirs

Please find below the response to the request for review formulated for the CDM project with the registration number 0099. In case you have any further inquiries please let us know as we kindly assist you.

Yours sincerely,

Javier Castro  
Carbon Management Service

Headquarters: Munich  
Trade Register: Munich HRB 96 869

Supervisory Board:  
Dr.-Ing. Axel Stepken (Chairman)  
Board of Management:  
Dr. Peter Langer (Spokesman)  
Dipl.-Ing. (FH) Ferdinand Neuwieser

Telefon: +49 89 5791-2246  
Telefax: +49 89 5791-2756  
[www.tuev-sued.de](http://www.tuev-sued.de)  
**TÜV®**

TÜV SÜD Industrie Service GmbH  
Niederlassung München  
Umwelt Service  
Westendstrasse 199  
80686 Munich  
Germany

## **Response to the CDM Executive Board**

### **Request 1, 2 and 3**

#### **Issue:**

Q\_GE (effluent gas) was not continuously measured for four hours on 04 July 2008 due to the recording failure. Thus default values were used for this period and the DOE closed CR 1 in view of the conservativeness of the default values. Further clarification is required on how the DOE verified Q\_GE (effluent gas) in line with the methodology and the monitoring plan.

#### **Response by TÜV SÜD:**

The methodology requires a continuous measurement of the Q\_GE parameter. The DOE had checked in the IT data acquisition system (Distributed Control System) that it has been done during all the period. During 4 hours on 04 July a recording failure appears and for this case the registered PDD include a comment in the section D.4 in combination with the monitoring plan and the data handling protocol on how to deal with such failures. In this case the DOE can confirm that the measurement complies with the methodology (continuous measurement) and with the monitoring plan (clarification regarding how to deal with failures) as stated in the registered PDD. The detailed process description on how to deal with such failures is described in "Data Handling Protocol" which has been submitted for issuance confidentially.

The DOE decided during the verification process that there is no reason to request a revision of the monitoring plan, because the monitoring plan is in line with the methodology.

In addition the DOE did not determine at verification that the project participants deviated from the provisions contained in the documentation related to the registered CDM project activity. In the registered PDD the described documents (data review protocol, data handling protocol,) are to be seen as a summary of quality control procedures as required to be applied by the guidelines of completing the project design document.

The Data Handling Protocol is uploaded by TÜV SÜD as a confidential document on UNFCCC system on each Issuance request together with the Verification report, so that the corrections are transparent for the UNFCCC reviewer.

Both protocols were checked by TÜV SÜD during the Initial verification. Any changes of the protocols were indicated and assessed during the consecutive periodic verifications in the verification reports. TÜV SÜD checked that these adjustments of parameters were always made in a conservative manner: minimisation of the base line, maximisation of the project emissions and of the leakage emissions in order to be conservative on the CER demand.

The conservative recalculation of waste gas flow rate at the stack (Q\_GE) and consequently the non-destroyed N<sub>2</sub>O (ND N<sub>2</sub>O) was done according to the Data Handling Protocol subsection E8-2. Although the Data Handling Protocol was communicated already to the UNFCCC during issuance request, the corresponding pages 24-25 are joined (see "Annex 1 Pages 24-25 Data handling protocol PR(Korean English)\_rev10")

Basically, to be conservative, the wrong instant gas flow rates (in Nm<sup>3</sup>/h) at the stack between 06:55 AM and 10:48 AM on July 4 were replaced by the highest instant gas flow rate value (19949.7 Nm<sup>3</sup>/h) of the adjacent days to the incident:

### Highest Q\_GE value

start time	endtime	C58400 GAS OUTLET F58407/A11/PV.CV Nm3/h	
7/3/08 6:05:00 AM	7/4/08 6:05:00 AM	19713.7	previous day
7/4/08 6:05:00 AM	7/5/08 6:05:00 AM	19971.2	involved day
7/5/08 6:05:00 AM	7/6/08 6:05:00 AM	19949.7	next day

It has been checked that the plant was running under normal operating conditions during this period (the parameters Flow rate of waste gas, Flow rate of natural gas, Oxygen control had remained in the same range):

		C58400 GAS OUTLET F58407/A11/PV.CV	LNOX TO F58010 FC57015/PID1/PV.CV	LNG FROM SUPPLIER F91485/A11/PV.CV	O2 C58400 INLET AC58406B/PID1/PV.CV	C58400 GAS OUTLET F58407/A11/PV.CV
apart from data logger failure	average	17246.09	6269.33	1350.00	1.49	17246.09
	min	16204.28	6017.74	1313.52	1.41	16204.28
	max	18196.38	6629.34	1369.98	1.59	18196.38
during failure of data logger	average	16196.68	6184.31	1339.28	1.49	19949.74
	min	9905.86	6002.59	1316.48	1.31	19949.74
	max	16479.85	6467.16	1371.99	1.59	19949.74
daily average value		17075.56	6256	1348	1.49	17685.43
Raw value		409813.5			Corrected value	424450.4

The daily values were then recalculated and put in the ER Workbook:

- waste gas flow rate: Q\_GE value : 409825.31 --> 424450.4Nm3/day;
- non-destroyed: N2O ND N2O value : 4.078 --> 4.133 kg/day.

As explained in the CR1, the details of this calculation were provided to TÜV SÜD during the audit as reported in "Annex 2 p10 ONSAN N2O EMISSION REDUCTION - DATA EXTRACTION PERIOD #17 rev0" and "Annex 2bis FT58407 data logger failure extraction value". A detailed note "Annex 3 Data recording system failure" was also provided to TÜV SÜD during the audit to explain the causes of origin of the data acquisition failure and the corrective actions.

As demonstrated above TÜV SÜD has verified Q\_GE (effluent gas) in line with the methodology and the monitoring plan. The made correction by 17 kg CO2e is already considered being conservative and is substantiated by plausibility checks along the operating conditions during the relevant period.

### Response by Rhodia:

1/ Section D.4 of the PDD states in point 2 (Data processing, validation, adjustment, and recording): "In case of failure of an instrument, or non-consistency of the data, he [the process engineer] adjusts the data according to a procedure that will be written during the project implementation. In case the failure is not covered by the procedure, the Adipic Acid Plant Manager makes the decision to correct the figures or to abandon the data". The procedure here stated is named the "Data Handling Protocol" and was implemented by the project participant during the project implementation as required and defined by the monitoring plan.



2/ The monitoring plan states in chapter 9 (Organizational structures & procedures during project implementation) the plant manager will develop in particular the “Data Handling Protocol” and the “Data Review Protocol” defined as the following:

***“Data handling protocol***

The establishment of a transparent system for the collection, computation and storage of data, including adequate record keeping and data monitoring systems is required. It is the Adipic Acid Plant Manager’s responsibility to ensure implementation of a protocol that provides for these critical functions and processes. For electronic-based and paper-based data entry and recording systems, there must be clarity in terms of the procedures and protocols for collection and entry of data, usage of the spreadsheets and any assumptions made, so that compliance with requirements can be assessed by the DOE. **Stand-by processes and systems, e.g. paper-based systems, must be outlined and used in the event of, and to provide for, the possibility of systems failures.”**

***“Data review protocol***

It is the Adipic Acid Plant Manager’s responsibility to **prepare a data review protocol that in case of failure of an instrument, or non-consistency of the data, enables staff to adjust the data according to the procedures outlined in this protocol.** The data review protocol shall also include procedures for emergency preparedness for cases where emergencies can cause unintended emissions.”

3/ The Section E of the Data Review Protocol (Data adjusting procedure) states:

E.5 Failure of instrument

To be adjusted based on the back-up procedures in the “Data Handling Protocol”.

The Section E of the Data Handling Protocol describes for each critical instrument (including Q\_GE) the procedure to be followed when there is a problem or a down time for calibration.

“When there is a default, an adjustment or maintenance on an instrument or analyzer used in the monitoring, the production engineer or the process engineer shall apply this back-up procedure in order to correct and adjust the data to be recorded for the monitoring of emissions.”

Document “Data recording system failure”, 080806 KHS Rev 0 in combination with FT58407 data logger failure extraction value (xls)

4/ Q\_GE is used to calculate the remaining non destroyed N<sub>2</sub>O quantity (N<sub>2</sub>O\_ND) exiting the N<sub>2</sub>O destruction unit. As the N<sub>2</sub>O destruction unit has a destruction rate higher than 99.9%, this quantity is very small and represents around 0.005% of the baseline emission and the conservative correction concerns 55g of N<sub>2</sub>O (17kg CO<sub>2</sub>).

In the case that the Executive Board still concludes that a further correction must be done for the CERs issuance, Rhodia has prepared a new Monitoring report “Annex 4 CDM Monitoring report #17 rev 2”. In this new version, the Baseline Emission (33 550 tCO<sub>2</sub>) of July 4th have been fully taken out from the Emission Reductions as it is technically difficult to take out the 4 hours period alone.