VERIFICATION REPORT
AZOMURES SA

VERIFICATION OF THE
JI PROJECT AIMED AT N2O EMISSION REDUCTION BY INSTALLATION OF SECONDARY CATALYST INSIDE AMMONIA OXIDATION REACTORS AT 3 NITRIC ACID PRODUCTION PLANTS NA2, NA3, NA4 OF AZOMURES SA, COMPANY SITUATED IN TARGU MURES, ROMANIA

MONITORING PERIOD:
17 DECEMBER 2009 TO 09 OCTOBER 2011

LINE NA2: 24/07/2010 - 09/10/2011
LINE NA3: 14/04/2010 - 10/07/2011
LINE NA4: 17/12/2009 - 30/03/2011

REPORT NO. POLAND-VER2/4090732/2011
REVISION NO. 02

BUREAU VERITAS CERTIFICATION

Report No: POLAND-VER2/4090732/2011

VERIFICATION REPORT

Date of first issue:	Organizational unit:
06/02/2012	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
Azomures S.A.	Mr. Ioan Soleriu

Summary:
Bureau Veritas Certification has made the 2nd periodic verification of the JI Track II Project "JI project aimed at N2O emissions reduction by installation of secondary catalyst inside ammonia oxidation reactors at 3 nitric acid production plants NA2, NA3 and NA4 of Azomures SA, company situated in Targu Mures, Romania", JI Registration Reference Number 0137, project of S.C. Azomures S.A. located in Targu Mures city, Mures County, Romania and applying the AM0034 "Catalyst reduction of N2O inside the ammonia burner of nitric acid plants" v03, methodology, on the basis of UNFCCC criteria for the JI, as well as the criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Accredited Entity of the monitored reductions in GHG emissions during the defined verification period, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification, Corrective Action Requests, Forward Action Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in the approved project design documents. The installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and is total 2 474 185 tons of CO2eq for the monitoring period.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and monitoring, and its associated documents.

Report No.:	Subject Group:	
POLAND-VER2/4090732/2011	JI	
Project title: JI project aimed at N2O emissions reduction by installation of secondary catalyst inside ammonia oxidation reactors at 3 nitric acid production plants NA2, NA3 and NA4 of Azomures SA, company situated in Targu Mures, Romania		
Work carried out by: Tomas Paulaitis: Lead Verifier Liliana Voicu: Verifier		
Work reviewed by: Zsolt Bácskai		
Work approved by: Witold Dzugan		
Date of this revision: 16/02/2012	Rev. No.: 02	Number of pages: 37

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1 INTRODUCTION

Azomures S.A. has commissioned Bureau Veritas Certification to verify the emission reductions of its JI project, the „ JI project aimed at N2O emissions reduction by installation of secondary catalyst inside ammonia oxidation reactors at 3 nitric acid production plants NA2, NA3 and NA4 of Azomures SA Company, situated in Targu Mures, Romania") located at Targu Mures city, Mures county, Romania, JI Registration Reference Number 0137.
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This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The order includes second periodic verification of the project for the monitoring periods of 3 production lines, respectively:

- LINE NA2: 24/07/2010 - 09/10/2011;
- LINE NA3: 14/04/2010 - 10/07/2011;
- LINE NA4: 17/12/2009 - 30/03/2011.

1.1 Objective

Verification is a periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during the defined verification period.

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

1.2 Scope

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the Accredited Independent Entity. The verification is based on the submitted monitoring report, the determined project design documents including its monitoring plan and determination report, previous verification reports, the applied monitoring methodology, relevant decisions, clarifications and guidance from the CMP and the JISC and any other information and references relevant to emission reductions resulting from the project activity. These documents are reviewed against the requirements of the Kyoto Protocol, the JI modalities and procedures and related rules and guidance and also against Romanian national JI guidelines.
The verification is not meant to provide any consulting towards the Client. However, stated requests for clarification, corrective and/or forward

actions may provide input for improvement of the project monitoring towards reductions in GHG emissions.

1.3 Verification Team

The verification team consists of the following personnel:

Bureau Veritas Certification Team Leader, Climate Change Verifier
Tomas Paulaitis is a lead auditor for the environment and quality management systems with over 10 years of experience and a lead GHG verifier (EU ETS, JI, CDM) with over 6 years of experience in energy, oil refinery, chemistry and cement industry sectors, he was/is involved in the determination/verification of more than 50 JI/CDM projects. Tomas Paulaitis holds a Master's degree in chemical engineering.

Bureau Veritas Certification, Climate Change Verifier
Liliana Voicu is QMS/EMS lead auditor and GHG verifier (JI, CDM) with 6 years of experience in EMS certification. She was/is involved in the determination/verification of 2 JI projects.

This verification report was reviewed by:

Zsolt Bácskai
Bureau Veritas Certification, Internal Technical Reviewer
Zsolt Bácskai is a lead auditor for environment, safety and quality management systems and a lead verifier for GHG projects. He has been involved in more than 150 days of work for GHG related projects.

2 METHODOLOGY

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, the verification protocol was customized for the project, according to version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, the criteria (requirements), means of verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

The completed verification protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Monitoring Report (MR) version 1 dated 16/11/2011 submitted by AZOMURES S.A. and additional background documents related to the project design and baseline, i.e. the country Law, Project Design Document (PDD), Approved CDM methodology and guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on verification requirements to be checked by an accredited independent entity, were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, S.C. AZOMURES S.A. revised the MR and resubmitted it on 15/02/2012 as version 6.
The verification findings presented in this report relate to the project as described in the PDD version 1.6 (dated 17/10/2010).

2.2 Follow-up Interviews

On 05/12/2012 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of S.C. AZOMURES S.A. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
S.C. AZOMURES S.A.	Organizational structure, responsibilities and authorities Project implementation and technology Training of personnel Quality management procedures Metering equipment control Monitoring record keeping system Environmental requirements
Vertis Finance Kft.	Monitoring plan Monitoring report Emission Reduction Calculation Model

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation.

If the Verification Team assessing the monitoring report and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

(a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;

(b) Clarification request (CL), requesting the project participants to provide additional information for the Verification Team to assess compliance with the monitoring plan;

(c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

The Verification Team will make an objective assessment whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the verification.

To guarantee the transparency of the verification process, the concerns raised are documented in more detail in the verification protocol in Appendix A.

3 VERIFICATION CONCLUSIONS

In the following sections, the conclusions of the verification are stated.

The findings from the desk review of the original monitoring documents and the findings from interviews during the follow-up visit are described in the Verification Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 2 Corrective Action Requests, 7 Clarification Requests, and 0 Forward Action Requests.

The number between brackets at the end of each section corresponds to the DVM paragraph.

3.1 Remaining issues and FARs from previous verifications

The previous verification report POLAND-VER1/4090732/2010, rev. 06 dated 19/02/2011 notes the following open issue:

FAR1: Please define the back-up procedures for the Emission Reduction Model in documented or electronic form in such a way that copies can have developer of the model and representatives of AZOMURES plant.

„Backup procedure of data regarding Nitric Acid“ (dated 02/01/2012) was provided for verification team. Procedure ensures that the database always holds the data from the beginning of the monitoring to present time, hence FAR1 is closed.

3.2 Project approval by Parties involved (90-91)

The written project approval was issued by France on 18/07/2010 by the DFP of that Party (Ministry of Ecology, Energy, Sustainable Development and Sea NL Agency) when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest.

The above mentioned written approval and approval issued by Romania on 10/05/2010 by the DFP of that Party (Ministry of Environment and Forests Romania) are unconditional.

3.3 Project implementation (92-93)

The purpose of the project is the reduction of nitrous oxide (N2O) emissions from nitric acid production Lines at the nitric acid plant of AZOMURES SA. The Company is situated in Targu Mures, Romania.
AZOMURES operates three production Lines: NA2, NA3, NA4. AZOMURES production lines use a dual pressure technology operating at 2.6-4 bars ammonia oxidation pressure and 8 bar absorption pressure. Nameplate capacity for the plants is in total 2200 metric tons of nitric acid per day (725 metric tons per day in NA2 and NA3 and 750 metric tons per day in NA4).

Installation of secondary N2O reduction catalyst underneath the primary catalyst precious metal catching and catalytic gauzes package in the ammonium burner as a N2O abatement technology and additional monitoring system was applied at three production lines NA2, NA3, NA4 of AZOMURES plant according to the PDD version 1.6, dated 17 of August 2010 and the Monitoring Plan, described in the PDD version 1.6, as well as Monitoring Report version 6, issued on 15/02/2012 14 2011. Secondary catalysts were installed in all 4 ammonia oxidation reactors of production lines NA2, NA3 and NA4. The secondary catalysts were placed in the appropriate support structure. The gap between the edge of the support structure and inside wall of the ammonia burner was sealed to prevent the process gas by-passing the secondary catalyst. In this way the technology ensures that all gases which pass through the primary catalyst also will pass through the secondary catalyst.

An N2O emission monitoring system is installed in 3 nitric acid lines of the plant, each with its own burner, absorption column and expansion turbine. Each production Line represents a separate nitric acid production unit, independent from each other.
AMS installed at the operating plant is in compliance with the European norm EN14181, which assumes three levels of quality assurance of the measurement systems - QAL1, QAL2 and QAL3.

The current (2nd) project campaign for line NA 2 last from 24/07/2010 to 09/10/2011, for line NA3 from 14/04/2010 to 10/07/2011 and for line NA4 from 11 17/12/2009 to 30/03/2011.

The actual operation of the proposed project is carried out in line with the specified arrangements for each production line, meaning defined procedures for data transfer for Emission Reductions calculation, which are clearly described in the Monitoring Report version 3. Standard maintenance operations were carried out before the start of the current campaign. The equipment and monitoring system operates reliably.

The project activity is completely operational and this has been confirmed during an on-site audit.

3.4 Compliance of the monitoring plan with the monitoring methodology (94-98)

The monitoring occurred in accordance with the monitoring plan included in the PDD version 1.6 regarding which the determination has been deemed final and is so listed on the UNFCCC JI website: http://ji.unfccc.int/UserManagement/FileStorage/8TCXFP1AU7EMGK5J0VQNYDSRO9IWLH

For calculating the emission reductions, key factors, such as: NH3 Flow, Air flow, N2O concentration in the tail gas, Volume of the tail gas flow, Nitric acid flow; Tail gas temperature; Tail gas pressure, Oxidation reactor temperature and pressure influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project, such as reliable operation of the AMS, were taken into account, as appropriate.

Baseline emission factors and project emission factors for emission reduction calculations for Lines NA2, NA3, NA4 has been established on the line-specific basis. The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner. In particular conservative approach has been used in the statistical evaluation, which is applied to the complete data series of N2O concentration as well as to the data series for gas volume flow on every production line on AZOMURES plant. Detailed calculations are described in the Monitoring Report and Calculation models.

The project participants submitted a common Monitoring Report to Bureau Veritas Certification covering all three lines NA2, NA3, NA4. The monitoring periods per component of the project are clearly specified in the monitoring report.

CAR1,2, CL1,3,4,7 which were related with compliance of the monitoring plan with the monitoring methodology, have been resolved efficiently, see Annex 1 for more details.

3.5 Revision of monitoring plan (99-100)

Not applicable.

3.6 Data management (101)

All data collection procedures are implemented in accordance with the monitoring plan, including the quality control and quality assurance procedures. These procedures are listed in the section “References” of this report.
After the end of the project campaign all raw data are being sent to consultancy company Vertis Environmental Finance which is responsible to carry out final emission reduction calculations using Excel based calculation models.

The Measurement equipment (including the Automatic measurement system and the Measurement system) is controlled and calibrated according to the requirements of internal procedures.

CL5,6 which were related with data management, have been resolved efficiently, see Annex 1 for more details.

3.7 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 2nd periodic verification of the JI Track II Project "JI project aimed at N2O emissions reduction by installation of secondary catalyst inside ammonia oxidation reactors at 3 nitric acid production plants NA2, NA3 and NA4 of Azomures SA, company situated in Targu Mures, Romania", located in Romania which applies the AM0034 "Catalyst reduction of N2O inside the ammonia burner of nitric acid plants" v03. The verification was performed on the basis of UNFCCC criteria and the host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The verification consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of S.C. AZOMURES S.A. is responsible for the preparation of the data on GHG emission and the reported GHG emission reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version 1.6 issued on 17/10/2010. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 6 dated 15/02/2012 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in the approved project design documents. The installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions or misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and monitoring, and its associated documents.

Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period: From 17/12/2009 to 09/10/2011

Line NA2
From 24/07/2010 to 09/10/2011
Emission Reductions (2010): 317 558 t CO2 equivalents
Emission Reductions (2011): 564 071 t CO2 equivalents

Line NA3
From 14/04/2010 to 10/07/2011
Emission Reductions (2010): 542 985 t CO2 equivalents
Emission Reductions (2011): 410 668 t CO2 equivalents

Line NA4
From 17/12/2009 to 30/03/2011
Emission Reductions (2009): 24 478 t CO2 equivalents
Emission Reductions (2010): 472 856 t CO2 equivalents
Emission Reductions (2011): 141 569 t CO2 equivalents

Total Emission Reductions (2009): 24 478 t CO2 equivalents
Total Emission Reductions (2010): 1 333 399 t CO2 equivalents
Total Emission Reductions (2011): 1 116 308 t CO2 equivalents

Total (17/12/2009 to 09/10/2011): 2 474 185 t CO2 equivalents.

5 REFERENCES

Category 1 Documents:
Documents provided by S.C. AZOMURES S.A. that relate directly to the GHG components of the project.

/1/ Project Design Document, version 1.6 dated 17 of August 2010
/2/ Determination Report by Det Norske Veritas Certification AS (DNV), No 2009-1241, revision 02 dated 27 August 2010
/3/ 1st Verification report, issued by Bureau Veritas Certification, No POLAND-VER1/4090732/2010, rev. 06 dated 19/02/2011
/4/ 2rd Monitoring Report version 1 dated 16/11/2011
/5/ 2rd Monitoring Report version 6 dated 15/02/2012
/6/ CALCULATION MODEL's (initial versions provided for verification):
AzoMures L2 EmissionReduction vB1_P2_22.xls, dated 05/12/2011
AzoMures L3 EmissionReduction vB1_P2_21.xls, dated 04/11/2011
AzoMures L4 EmissionReduction vB_Overlap_P2_21.xls, dated 04/11/2011
/7/ CALCULATION MODEL's (final versions):
AzoMures L2 EmissionReduction vB1_P2_23, dated 03/01/2012
AzoMures L3 EmissionReduction vB1_P2_23, dated 03/01/2012
AzoMures L4 EmissionReduction vB_Overlap_P2_22, dated 20/01/2012

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/ AM0034 “Catalyst reduction of N2O inside the ammonia burner of nitric acid plants” v03
/2/ Clarification regarding overlapping monitoring periods under the verification procedure under the joint implementation supervisory committee (version 01)
/3/ EN 14181:2004 Stationary source emissions - Quality assurance of automated measuring systems
/4/ QAL1 Report according to EN ISO 14956 MIR 9000 (N2O) Automated Measuring System, v.0/17 March 2008 issued by Environment SA
/5/ QAL1 Evaluation acc. to DIN EN 14956 fro D-FL 100 flow-meters, issued by DURAG Group on 01 March 2007
/6/ QAL 2 report issued by AIRTEC on 22/01/2009 (NA Line 2)
/7/ QAL 2 report (corrective) issued by AIRTEC on December 2009 (NA Line 2)
/8/ QAL 2 report issued by AIRTEC on 22/01/2009 (NA Line 3)
/9/ QAL 2 report issued by AIRTEC on 22/01/2009 (NA Line 4)
/10/ AST report issued by SGS on October 2009 (NA Lines 2,3,4)
/11/ AST report issued by SGS on December 2010 (NA Lines 2,3,4)
/12/ Certificate of Accreditation for AIRTEC Laboratory regarding confirmation with Standards DINEN ISO/IEC DIN17025 and EN ISO/IEC 17011, registration number DAP-PL-4170.00, valid until 2012-04-01
/13/ Certificate of Accreditation for SGS Laboratory regarding confirmation with Standard ISO, registration number L- 092, valid until 2013-01-05
/14/ Calibration Report according to EN 14181 no. IS-US1-MUC/th/1134941/22.01.2009 for the AMS in line NA2, NA3 and NA4, issued by AIRTEC (QAL2)
/15/ Calibration, verification and maintenance sheet for MIR 9000 N2O Analyzer (in line NA2), s/n 1918, August 2007 to October 2011
/16/ Calibration, verification and maintenance sheet for MIR 9000 N2O Analyzer (in line NA3), s/n 1919, July 2007 to October 2011
/17/ Calibration, verification and maintenance sheet for MIR 9000 N2O Analyzer (in line NA4), s/n 1918, July 2007 to October 2011
/18/ Calibration procedure for MIR 9000 Serie 1918, NA Line 2
/19/ Calibration records of MIR 9000 Serie 1918, NA Line 2
/20/ Calibration procedure for MIR 9000 Serie 1919, NA Line 3
/21/ Calibration records of MIR 9000 Serie 1919, NA Line 3
/22/ Calibration procedure for MIR 9000 Serie 1917, NA Line 4
/23/ Calibration records of MIR 9000 Serie 1917, NA Line 4
/24/ Maintenance sheets for MIR 9000 Series 1917,1918,1919 according to calibration procedure.
/25/ N2O analyzer monitoring procedure
/26/ Operation Manual for D-FL 100 flow-meters issued by DURAG Group
/27/ Copies of the maintenance sheets for production lines: NA2, NA3, NA4
/28/ List of monitoring equipment NA2/NA3/NA4
/29/ Azomures N2O REDUCTION PROJECT – Emission Model DATABOOK – Compliant

with AM0034, Version 03.2

/30/ Integrated Environmental Authorization no. SB 84 dated 30.10.2007 (valid until 31.12.2015)

/31/ Quality Assurance Manual – The Validation of the monitoring of the data according to QAL3 under EN 14181, dated 21 March 2008

/32/ Government Ordinance no. 152/10.11.2005, related to Prevention and integrated Control of Pollution Law

/33/ General maintenance program – 2011

Persons interviewed:

List of persons interviewed during the verification or persons that contributed with other information that are not included in the documents listed above.

/1/ Ioan Soleriu Azomures SA / Technical Director

/2/ Mircea Dudici Azomures SA / Chief of Automation Section

/3/ Marius Gliga Azomures / IT responsible

/4/ Daniel Domanovsky Vertis Finance Kft. / Consultant

APPENDIX A: PROJECT VERIFICATION PROTOCOL

Check list for verification, according to the JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	The written project approval was issued by France on 18/07/2010 by the DFP of that Party (Ministry of Ecology, Energy, Sustainable Development and Sea NL Agency) when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest. This Letter of Approval has been submitted to the secretariat during the determination process already.	O.K.	O.K.
91	Are all the written project approvals by Parties involved unconditional?	Yes, The above mentioned written approval and approval issued by Romania on 10/05/2010 by the DFP of that Party (Ministry of Environment and Forests Romania) are unconditional.	O.K.	O.K.
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	Installation of secondary N2O reduction catalyst underneath the primary catalyst precious metal catching and catalytic gauzes package in the ammonium burner as a N2O abatement technology and additional monitoring system was applied at three production lines NA2, NA3, NA4 of AZOMURES plant according to the PDD version 1.6, dated 17 of August 2010 and the Monitoring Plan, described in the PDD version 1.6, as well as Monitoring Report version 6, issued on 15/02/2012 14 2011. Secondary catalysts were installed in all 4 ammonia oxidation reactors of production lines NA2, NA3 and NA4. The secondary catalysts were placed in the appropriate support structure. The gap between the edge of the support structure and inside wall of the ammonia burner was sealed to prevent the process gas by-passing the secondary catalyst. In this way the technology ensures that all gases which pass through the primary catalyst also will pass through the secondary catalyst.	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		An N2O emission automatic monitoring system (AMS) is installed in 3 nitric acid lines of the plant, each with its own burner, absorption column and expansion turbine. Each production Line represents a separate nitric acid production unit, independent from each other. QAL1 and QAL2 certificates issued for AMS have been reviewed during the previous verification and was found acceptable to recognise that AMS measurement system is installed and is in compliance with European norm EN14181.		
93	What is the status of operation of the project during the monitoring period?	The project was fully operational during the 2nd monitoring period.The dates of the project campaign starting and end were verified accordingly to the records of daily event log and are not overlap with monitoring periods of the previous project campaigns which are already deemed final in accordance with with paragraph 39 of the JI guidelines". LINE NA2 Project campaign 2 FROM: 24/07/2010 TO: 09/10/2011 LINE NA3 Project campaign 2 FROM: 14/04/2010 - 10/07/2011 TO: 17/12/2009 - 30/03/2011 LINE NA4 Project campaign 3 FROM: 17/12/2009 TO: 30/03/2011	O.K.	O.K.
Compliance with monitoring plan				

<table>
<tr><th>DVM Paragraph</th><th>Check Item</th><th>Initial finding</th><th>Draft Conclusion</th><th>Final Conclusion</th></tr>
<tr><td>94</td><td>Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?</td><td>The Excel based calculation tool “THE N2O EMISSION REDUCTION CALCULATION MODEL (CALCULATION MODEL) is developed to comply with the methodology AM0034 for “Catalytic reduction of N2O inside the ammonia burner of nitric acid plants” and the monitoring plan.

CALCULATION MODEL was analyzed to ensure that the requirements of the AM0034 and the monitoring plan are fulfilled. The results of this analysis are described in the table below:

<table>
<tr><th>Requirement</th><th>Results</th></tr>
<tr><td>Determination of the permitted operating conditions of the nitric acid plant to avoid overestimation of baseline emissions</td><td></td></tr>
<tr><td>- oxidation temperature and pressure (permitted range from PDD)</td><td>O.K.</td></tr>
<tr><td>- ammonia gas flow rates and ammonia to air ratio input into the ammonia oxidation reactor (permitted range from PDD)</td><td>O.K.</td></tr>
<tr><td colspan="2">Determination of baseline emission factor:</td></tr>
<tr><td>- the monitoring system is to be installed using the European Norm 14181 (2004)</td><td>O.K.</td></tr>
<tr><td>- error readings (e.g. downtime or malfunction) and extreme values are to be automatically eliminated from the output data series by the monitoring system</td><td>O.K.</td></tr>
<tr><td>$BE_{BC} = VSG_{BC} * NCSG_{BC} * 10^{-9} * OH_{BC}$</td><td>O.K.</td></tr>
<tr><td>$EF_{BL} = (BE_{BC} / NAP_{BC}) (1 – UNC/100)$</td><td>CL3</td></tr>
<tr><td>- any N_2O baseline data that are measured during the hours when the operating conditions are outside the permitted range must be eliminated from the calculation of the baseline emission factor.</td><td>O.K.</td></tr>
<tr><td>- the baseline campaign operated inside the permitted range for more than 50% of the duration of the baseline campaign</td><td>O.K.</td></tr>
<tr><td>- concluded with 95% confidence level, that average values of the permitted operating conditions are not different from average values obtained during the baseline determination period</td><td>O.K.</td></tr>
</table>
</td><td>CAR1,2,
CL1,3,4,7</td><td>O.K.</td></tr>
</table>

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion

-impact of regulations	CL7
- the composition of the ammonia oxidation catalyst	O.K.
- campaign length	O.K.
- historic campaign length	O.K.
- baseline campaign length (CLBL)	O.K.
Project Emissions:	
- the monitoring system is to be installed using the guidance document EN 14181	O.K.
- project campaign length (CLBL)	CAR1
- the composition of the ammonia oxidation catalyst	CL1
- error readings (e.g. downtime or malfunction) and extreme values are to be automatically eliminated from the output data series by the monitoring system.	O.K.
PEn = VSG * NCSG * 10-9 * OH	CL4
- derivation of a moving average emission factor	O.K.
- minimum project emission factor	N.A.

CAR1: Monitoring report section 4.3 states, that "Project campaign production of nitric acid has been lower than defined nameplate capacity of 725 tHNO3/day, and thus NAP value for the project campaign emission reductions calculation has been used in its entirety." This approach is not in line with methodology requirement for project campaign length, please correct monitoring report accordingly to the requirement of AM0034 for Project campaign length:

Project Campaign Length(a) Longer Project Campaign If the length of each individual project campaign CLn is longer than or equal to the average historic campaign length CLnormal, then all N2O values measured during the project campaign can be used for the calculation of EF (subject to the elimination of data

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		from the Ammonia/Air analysis, see above); (b) Shorter Project Campaign If CLn < CLnormal, recalculate EFBL by eliminating those N2O values that were obtained during the production of tonnes of nitric acid beyond the CLn (i.e. the last tonnes produced) from the calculation of EFn. CAR2: There is stated in the PDD that permitted ammonia to air ratio ranges for NA2 is 11.1% 12.5%, but 9,0-11,5 percent range is used in the CALCULATION MODEL. Please correct ammonia to air ratio in Line 2 CALCULATION MODEL accordingly to ratio defined in the PDD. CL1: Ammonia oxidation catalyst supplier and composition is changed in a project campaign to a composition not used in the baseline campaign (there is mayor change in Line 3 and minor change in Line 2), and for this kind of changes PDD requires: „In case of change of composition of a primary catalyst in future Azomures will demonstrate to a verifier: • commercial – price, lease contract tenure, other terms and conditions Etc. • technical – NO yield, operating parameters, impact on N2O formation., and • composition – conformity with industry standards Reasons justifying such eventual change within the JI project framework“. Please provide this justification in the monitoring report. CL3: Please provide formulas and initial data used to calculate AMS uncertainty level in the CALCULATION MODEL sheet SUMMARY cell K141. CL4: Please, clarify how function coefficients a and b of the regression line are defined in case for Line 2 in the CALCULATION MODEL after the date of the latest QAL2 test. See CL5 also. Note: clarification was provided by Daniel is		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		accepted, but please provide this explanation in the monitoring report. CL7: There is stated in the monitoring report section 3.5 "Regulatory baseline emissions factor", that "There are no regulatory limits of N2O whether defined as mass or concentration limits existent in Romania". Please provide information whether there are any requirements in the valid IPCC permit also.		
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	See 94 above.	O.K.	O.K.
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	The CALCULATION MODEL is designed in such a way, that all automatic links are implemented inside the spreadsheet and the model performs emission reduction calculations automatically. All assumptions and references to the original data sources are clearly demonstrated, e.g. monitoring data, calibration parameters, nameplate capacity, the limit of extreme values, except for CL2: CL2: There is a statement in the monitoring report that "Operating hours defined as hours, when nitric acid production at least 0.1 tHNO3 and oxidation temperature at least 600°C occurred". Please clarify, why 640 °C is defined as minimum temperature in the CALCULATION MODEL sheet Summary, cell C185.	CL2	O.K.
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	Emission factors are calculated using CALCULATION MODEL. Formulas and assumptions were verified and no discrepancies or mistakes found. Default emission reduction factors are not used.	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	See 94 above.	O.K.	O.K.
Applicable to JI SSC projects only				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis? If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?	Not applicable.	O.K.	O.K.
Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	Not applicable.	O.K.	O.K.
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	Not applicable.	O.K.	O.K.
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	Not applicable.	O.K.	O.K.
Revision of monitoring plan				
Applicable only if monitoring plan is revised by project participant				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	Not applicable.	O.K.	O.K.
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without	Not applicable.	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	changing conformity with the relevant rules and regulations for the establishment of monitoring plans?			
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	All data collection procedures are implemented in accordance with the monitoring plan. The daily event register and N2O monitoring data (all raw data) are collected in an Excel file. After the end of the project campaign all campaign data are sent to Vertis Environmental Finance who prepares the CALCULATION MODEL.	O.K.	O.K.
101 (b)	Is the function of the monitoring equipment, including its calibration status, in order?	The European Norm EN 14181 stipulates three levels of quality assurance tests (QAL) and one annual functional test for Automated Measuring Systems which are recommended to be used as guidance regarding the selection, installation and operation of the Automated Measuring Systems under this Monitoring Methodology: 1. (QAL1). Application of tested Automated Measuring System (evaluation according to DIN EN ISO 14956). Calculation of Automated Measuring System uncertainty before installation according to EN ISO 14956. Findings: QAL 1 certificate for the AMS is issued on 17 March 2008 issued by Environment was reviewed and validated during the first verification already. 2. (QAL 2). Installation and Calibration of the Automated Measuring System according to the Standard Reference Measurement Method (SRM), determination of the measurement uncertainty/variability of the Automated Measuring System and inspection of the compliance with the prescribed measurement uncertainties. Findings: LINE NA2: QAL2 test providing regression lines and the combined uncertainty as further used in the model was performed in February 5 – 8, 2008 by company Airtec holding the ISO 17025	CL5, CL6	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		accreditation. During the AST test performed in August 3 – 6, 2009 by company SGS holding the ISO 17025 accreditation the NA2 tail gas flow measurement failed to pass the AST test. Azomures thus ordered and performed the corrective NA2 tail gas flow measurement QAL2 test in November 2 – 4, 2009 done by company SGS holding the ISO 17025 accreditation. New corrected regression lines and the combined uncertainty resulting from the corrective QAL2 test are applied to the Azomures raw data from date of the failed AST test, i.e. from August 2009. During AST test in November 1, 2010 done by company SGS holding the ISO 17025 accreditation the NA2 measurements passed the test. LINE NA3: QAL2 test providing regression lines and the combined uncertainty as further used in the model was performed in July 9 – 11, 2008 by company Airtec holding the ISO 17025 accreditation. During AST tests in August 3 – 6, 2009 and November 3, 2010 done by company SGS holding the ISO 17025 accreditation the NA3 measurements passed the test. LINE NA4: QAL2 test providing regression lines and the combined uncertainty as further used in the model was performed in February 25 28, 2008 by company Airtec holding the ISO 17025 accreditation. During AST tests in August 3 – 6, 2009 and October 28, 2010 done by company SGS holding the ISO 17025 accreditation the NA4 measurements passed the test. 3. (QAL 3). Continuous quality assurance through the local operator/manager (drift and accuracy of the Automated Measuring System, verification management and documentation). <u>Findings:</u> Monitoring maintenance procedure in the scope of QAL3 is implemented effectively, including checking according to CUSUM		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		scheme in accordance with *Quality Assurance Manual – The Validation of the monitoring of the data according to QAL3 under EN 14181*, dated 21/05/2008. Other monitoring equipment is also controlled and calibrated according to *General maintenance programme*. CL5: Please include in the monitoring report the summary of the all applicable QAL2 and AST test reports and provide these reports for verification. CL6: The measurement range for the calibration function validity is 2000 ppm (or 3920 mg/m3) for N2O concentration measurements. The part of N2O values exceeds the measurement range for the calibration function validity during the baseline campaigns, hence please prove the calibration function validity according to the requirements of EN 14181, section 5 for the baseline campaigns.		
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	Raw data, entered to the CALCULATION MODEL was checked and compared with the data stored in the Data logger. It is validated that all data are used in traceable manner.	O.K.	O.K.
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	Yes, see 101 (a) above.	O.K.	O.K.
Verification regarding programs of activities (additional elements for assessment)				
102	Is any JPA that has not been added to the JI PoA not verified?	Not applicable.	O.K.	O.K.
103	Is the verification based on the monitoring reports of all JPAs to be verified?	Not applicable.	O.K.	O.K.
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	Not applicable.	O.K.	O.K.
104	Does the monitoring period not overlap with	Not applicable.	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	previous monitoring periods?			
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	Not applicable.	O.K.	O.K.
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE: (a) Describe its sample selection, taking into account that: (i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as: − The types of JPAs; − The complexity of the applicable technologies and/or measures used; − The geographical location of each JPA; − The amounts of expected emission reductions of the JPAs being verified; − The number of JPAs for which emission reductions are being verified; − The length of monitoring periods of the JPAs being verified; and − The samples selected for prior verifications, if any?	Not applicable.	O.K.	O.K.
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	Not applicable.	O.K.	O.K.
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to	Not applicable.	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification?			
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	Not applicable.	O.K.	O.K.
110	If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing?	Not applicable.	O.K.	O.K.

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion

CAR1: Monitoring report section 4.3 states, that "Project campaign production of nitric acid has been lower than defined nameplate capacity of 725 tHNO3/day, and thus NAP value for the project campaign emission reductions calculation has been used in its entirety." This approach is not in line with methodology requirement for project campaign length, please correct monitoring report accordingly to the requirement of AM0034 for Project campaign length: Project Campaign Length(a) Longer Project Campaign If the length of each individual project campaign CLn is longer than or equal to the average historic campaign length CLnormal, then all N2O values measured during the project campaign can be used for the calculation of EF (subject to the elimination of data from the Ammonia/Air analysis, see above); (b) Shorter Project Campaign If CLn < CLnormal, recalculate EFBL by eliminating those N2O values that were obtained during the production of tonnes of nitric acid beyond the CLn (i.e. the last tonnes produced) from the calculation of EFn.	94	Mistake is corrected in the text section of the line NA3 report regarding comparison of the project campaign HNO3 production against the historic production. Reason of shorter baseline campaign on line NA4 (in comparison to possible length of 275,871 based on the line's historic length) is in the overlapping approach. If you look at the dates Azomures installed the monitoring system on this line in April 2007 and immediately started doing the measurements. Campaign on the line was in its middle at that time. Campaign was completed in March 2008 and new campaign started immediately on the next day and measurements continued. During course of this campaign the secondary catalyst was installed on August 2008. It means that the baseline campaign from the measurement point of view had to be stopped on the day of instalment of the secondary catalyst. By that time production of HNO3 from April 2007 through August 2008 was 213,874 tHNO3, i.e. there was not more HNO3 produced from April 2007 (instalment of the monitoring system) through August 2008 (instalment of the secondary catalyst).	Revised Monitoring report version 6 was found in accordance with AM0034requirements for Project campaign length, hence CAR1 is closed.

CAR2: There is stated in the PDD that permitted ammonia to air ratio ranges for NA2 is 11.1% 12.5%, but 9,0-11,5 percent range is used in the CALCULATION MODEL. Please correct ammonia to air ratio in Line 2 CALCULATION MODEL accordingly to ratio defined in the PDD.	94	Permitted ammonia to air ratio on line NA2 is corrected to 12.5% ratio, i.e. increased the upper limit from 11.5% to 12.5%.The minimum m ratio is corrected to 0 % since ACM0034 methodology defines requirements for max. ratio values only. CALCULATIPON MODELS were revised accordingly.	Revised CALCULATIONS MODELS were reviewed, max. ammonia to air ratio values was find the same as defined in the PDD. This revision has resulted changes in to the total emission reduction: Line NA2: from 882 987 to 881 629 t CO_2 equivalents Line NA3: from 968 062 to 953 653 CO_2 equivalents Line NA3: from 616 941 to 638 903 CO_2 equivalents

CL1: Ammonia oxidation catalyst supplier and composition is changed in a project campaign to a composition not used in the baseline campaign (there is mayor change in Line 3 and minor change in Line 2), and for this kind of changes PDD requires: „In case of change of composition of a primary catalyst in future Azomures will demonstrate to a verifier: • commercial – price, lease contract tenure, other terms and conditions Etc. • technical – NO yield, operating parameters, impact on N2O formation., and • composition – conformity with industry standards Reasons justifying such eventual change within the JI project framework“. Please provide this justification in the monitoring report.	94	Suppliers of primary catalysts for Azomures Johnson Matthey and Heraeus issued statements confirming that their installed primary catalysts do not have any proven impact on formation of N2O in comparison against catalysts used during baseline campaign. Both statements are asking that composition of primary catalysts would not be published in the public available monitoring report. Therefore introduction of the sign “n.a.” was entered into the tables T2 in the revised monitoring report version 6.	Heraeus statement dated 09/01/2012 and Johnson Matthey statement dated 23/01/2012 were provided for verification team. Clear declaration is provided in both statements that any catalyst pack supplied for Azomures have had no effect on the emission levels of N2O. Both Baseline and Project catalyst compositions are in accordance with typical composition provided in the *Best Available Techniques for Pollution Prevention and Control in the European Fertilizer Industry*, issued by European Fertilizer Manufacturers’ Association on 2000: „ ... the catalyst typically consists of several woven or knitted gauzes formed from wire containing about 90% platinum alloyed with rhodium for greater strength and sometimes containing palladium. Taking into account circumstances described above, CL1 is closed.

CL2: There is a statement in the monitoring report that "Operating hours defined as hours, when nitric acid production at least 0.1 tHNO3 and oxidation temperature at least 600°C occurred". 600 °C temperature level is defined in PLANT MANUAL also as temperature of the operation start. Please, clarify why temperature 704 °C is defined as minimum temperature in the CALCULATION MODEL sheet Summary, cell C185.	95 (b)	This discrepancy is corrected and the monitoring report version 6 defines same temperature threshold value of 640 °C as in the model. Choice of this value is expert choice of project developer to define operating hour as an hour when nitric acid production at least 0.1 tHNO3 and oxidation temperature at least 640°C occurred. Operating hours are calculated only for purpose of the JI project documentation. Nitric acid plant before the JI project start was not using any automatic calculation of operating hours per campaign. Choosing these two criteria (i.e. temperature and production) make sure that calculation of operating hours reflects the reality.	Theoretical reaction temperature is around 500 K (or 780 C), but this choice of values can be accepted taking into account there is second conservative trigger used (HNO3 flow level should be at least at least 0,1 t) to identify production hours, hence CL2 is closed.
CL3: Please provide formulas and initial data used to calculate AMS uncertainty level in the CALCULATION MODEL sheet SUMMARY cell K141.	94	Clarification clarified in more details in the text of the monitoring reports on pages 6. As you can see in the explanations, the NA2 and NA4 reports actually contained only separate UNC values calculated for N2O concentration and for tail gas flow. These separate UNC values can be found in sections 7.5 and tables 10.5 of these NA2 and NA4 QAL2 test reports. Values you saw in the model are result of calculation of separate UNC values for N2O concentration and tail gas flow in the reports. NA3 report contained calculation of total AMS UNC in its section 10.7, but this calculation was wrong. We have used the correct value (3.185% instead of 2.44%) which is both correct and conservative.	Provided information was checked with UNC values and calculations provided in the QAL2 reports and were found correct, UNC value used for NA3 is revised using conservative approach, hence CL3 is closed.

CL4: Please, clarify how function coefficients a and b of the regression line are defined in case for Line NA2 in the CALCULATION MODEL after the date of the latest QAL2 test.		During the AST test on line NA2 the tail gas flow measurement failed to pass the test and so new corrective QAL2 test for the NA2 tail gas measurement was ordered and performed in November 2009. This corrective QAL2 test resulted in new regression lines formatted in a different way than the initial QAL2 report from 2008 issued by different company. The 2009 QAL2 report had not provided the new regression lines but actually the correction factor of 0.902 to be applied to the initial regression lines. In order to be able to apply this correction into the model we have introduced into the emission reductions calculation model this simple mathematical operation: AMS_new = 0.902 * AMS_old + 0.0 So by saying that c = 0.902 we can say that we are looking for a modified a_new and b_new that we can use in our models so that the following is true: c * AMS_old = a_new + b_new * (AMS_old - a_old)/b_old Or c * (a_old + b_old * mA) = a_new + b_new * mA Which is true if we choosea_new = c * a_oldb_new = c * b_old.	Clarification was reviewed and found sufficient to explain how coefficients a and b of the regression line are defined in case for Line NA2.Hence CL 4 is closed.

CL5: Please include in the monitoring report the summary of the all applicable QAL2 and AST test reports and provide these reports for verification.	101 (b)	Information on dates of applied QAL2 and AST tests is included in the sections 6.1. of monitoring report (second paragraph).	References in the revised monitoring report version 6 where checked with QAL2 and AST test reports which were provided for verification and were found correct and transparent. These test reports are listed in the verification report section 5, CL5 is closed.

CL6: The measurement range for the calibration function validity is 2000 ppm (or 3920 mg/m3) for N2O concentration measurements. The part of N2O values exceeds the measurement range for the calibration function validity during the baseline campaigns, hence please prove the calibration function validity according to the requirements of EN 14181, section 5 for the baseline campaigns.	101 (b)	Model uses as the maximum N2O concentration limit (based on the 2008 QAL2 report) the 2,200 ppmV value (i.e. measurement range as defined in the QAL2 report + 10% as defined in the EN14181). PpmV value translates into the mg value as defined in sections 3.3.3 of 2008 QAL2 reports and also in the model as follows: 3,929 mg/m3 = 2000 ppmv * 1000 * 44.0128 g/mol * 44.6150 mol/m3 Final top limit value is then defined as 3929 * 1.1 which is 10 percent above the highest measurement stated in the QAL2 report. Reason why Azomures N2O concentration analysers started providing capped N2O concentration values is not clear to Azomures personnel. This cap was installed most likely by technician of the Airtec laboratory performing in February 2008 QAL2 tests in Azomures. This technician does not work with the laboratory anymore, as the laboratory informed us, and it is not possible to identify exact reason of this change. From the JI project point of view it is important to note that this change to the analysers limited highest recorded N2O concentration values and thus also the baseline emission factor and so this change was conservative.	10 percent rule which results to 4320 mg/m3 maximum measurement range is in line with EN14181 section 5 requirements. Instead of this maximum permissible measurement range 3800 mg/m3 cap was used. Since this approach is conservative, CL6 is closed.

CL7: There is stated in the monitoring report section 3.5 “Regulatory baseline emissions factor”, that “There are no regulatory limits of N2O whether defined as mass or concentration limits existent in Romania”. Please provide information whether there are any requirements in the valid IPCC permit also.	94	There is stated in the revised monitoring report section 3.5 “Regulatory baseline emissions factor”, that “There are no regulatory limits of N2O whether defined as mass or concentration limits existent in Romania and there are no limits defined in the Azomures IPPC permit.	This information was proved during site visit, hence CL7 is closed.