VERIFICATION REPORT
ACHEMA, AB

VERIFICATION OF THE
NITROUS OXIDE EMISSION REDUCTION PROJECT AT GP NITRIC ACID PLANT IN AB ACHEMA FERTILIZER FACTORY

MONITORING PERIOD:
25 JANUARY 2010 TO 16 JUNE 2011

REPORT NO. LITHUANIA-VER/0029/2011

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

Report No: LITHUANIA-VER/0029/2011

VERIFICATION REPORT

Date of first issue: 06/09/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: ACHEMA AB	Client ref.: Andrejus Šostakas Head of Innovation Centre

Summary:
Bureau Veritas Certification has made the 2nd periodic verification of the JI Track II Project "Nitrous Oxide Emission Reduction Project at GP Nitric Acid Plant in AB Achema Fertilizer Factory", JI Registration Reference Number 0064, project of ACHEMA AB, located at Jonalaukis village, Rukla county, Jonava region municipality, Lithuania and applying the AM0034 "Catalyst reduction of N2O inside the ammonia burner of nitric acid plants" v02, 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 927 598 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.: LITHUANIA-VER/0029/2011	Subject Group: JI	
Project title: NITROUS OXIDE EMISSION REDUCTION PROJECT AT GP NITRIC ACID PLANT IN AB ACHEMA FERTILIZER FACTORY		
Work carried out by: Tomas Paulaitis: Lead Verifier		
Work reviewed by: Ashok Mammen		
Work approved by: Witold Dzugan		
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1 INTRODUCTION

ACHEMA, AB has commissioned Bureau Veritas Certification to verify the emission reductions of its JI project, the NITROUS OXIDE EMISSION REDUCTION PROJECT AT GP NITRIC ACID PLANT IN AB ACHEMA FERTILIZER FACTORY (hereafter called "the project") located at Jonalaukis village, Rukla county, Jonava region municipality, Lithuania.

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.

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.

The objective of verification can be divided in Initial Verification and Periodic Verification.

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 Lithuanian 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:

Tomas Paulaitis, M.Sci. (chemical engineering)
Bureau Veritas Certification Team Leader, Climate Change Verifier
Tomas Paulaitis is a lead auditor for environment and quality management systems and a lead GHG verifier (EU ETS, JI) with over 6 years of experience and was/is involved in the determination/verification of more than 30 JI projects.

This verification report was reviewed by:

Ashok Mammen
Bureau Veritas Certification, Internal Technical Reviewer
Bureau Veritas Certification Internal reviewer
Dr. Mammen is a lead auditor for environment, safety and quality management systems and a lead verifier and tutor for GHG projects. He has been involved in the validation and verification processes of more than 100 CDM/JI and other GHG 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) submitted by ACHEMA, AB 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.

The verification findings presented in this report relate to the Monitoring Report version 2 dated August 2011 and the project as described in the determined PDD v.10 dated 12/12/2008.

2.2 Follow-up Interviews

On 19-20/07/2011 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 ACHEMA, AB were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
ACHEMA, AB	Organizational structure, responsibilities and authorities Project implementation and technology Training of personnel Quality management procedures Metering equipment control Monitoring record keeping system Environmental requirements Monitoring plan Monitoring report

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 1 Clarification Request.

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

3.1 Remaining issues and FARs from previous verifications

There are no remaining FARs from the previous verification.

3.2 Project approval by Parties involved (90-91)

The written project approval by the Netherlands was issued on 01/06/2010 by the DFP of that Party (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 is unconditional.

3.3 Project implementation (92-93)

The purpose of the project is the reduction of nitrous oxide (N2O) emissions from nitric acid production by utilizing secondary catalyst technology at the nitric acid plant of ACHEMA, AB. The project activity involves the installation of a secondary catalyst to abate Nitrous Oxide N2O inside the ammonia burners once it is formed. N2O is an undesired by-product gas from the manufacture of nitric acid and is formed during the catalytic oxidation of ammonia.

The project is fully implemented according to the description presented in the registered PDD. The secondary catalyst was installed and baseline was started on 05/09/2007. The first project campaign lasted from 16/08/2008 to 26/09/2009 and has already been verified.

The project activity has been completely operational during the second project campaign and the same has been confirmed on-site.

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 regarding which the determination has been deemed final and is so listed on the UNFCCC JI website http://ji.unfccc.int/UserManagement/FileStorage/NRAOCZ2Y7WFEUIKBQ01VGLPDHXM35S.

The excel based calculation tool "Baseline calculation and evaluation V.5.0" is developed to calculate the baseline emission factor and "2nd project line calculation and evaluation V.1.0" is developed to calculate the project campaign emission factor and emission reduction. The tool's operating principles are clearly and transparently described in the monitoring report. Formulas and assumptions were verified and no discrepancies or mistakes found. Default emission reduction factors are not used.

CL 1 was issued with a request to provide statistical tests to compare the average values of the permitted operating conditions with the average values obtained during the baseline determination period.
These statistical tests were performed and provided for verification and were found acceptable to resolve the clarification request.

3.5 Revision of monitoring plan (99-100)

Not applicable.

3.6 Data management (101)

The data and their sources, provided in the monitoring report, are clearly identified, reliable and transparent, see Annex 1 101 (a) for more details.

The implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures defined in the JI Manual.

The function of the monitoring equipment, including its calibration status, is in order. The Measurement equipment (including the Automatic measurement system and the Measurement system) is controlled and calibrated according to the requirements of JI MANUAL procedures, AST, drift and precision (QAL3) procedures are implemented according to EN 14181.

The evidence and records used for the monitoring are maintained in a traceable manner. The first level of data control is provided by the data collection system EMI 3000. The second level of data control operates via SCADA system, data from this system is accessible to the Technology

Department Manager, the Nitric Acid Department Manager and the Nitric Acid Technologist.
Every month the software engineer prepares data packages consisting of day reports and daily maintenance for the month and provides them to Deputy Head of the plant.
Deputy Head assisted by consultants performs baseline emission factor EF_{BL} and project emission factor EF_n calculations and calculates emission reduction ER (tCO_2e) during the completed project campaign.

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 "Nitrous Oxide Emission Reduction Project at GP Nitric Acid Plant in AB Achema Fertilizer Factory", located in Lithuania which applies the AM0034 "Catalyst reduction of N2O inside the ammonia burner of nitric acid plants" v02. 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 ACHEMA, AB 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 10 dated 12/12/2008. 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 2.0 dated August 2011 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 25/01/2010 to 16/06/2011

Emission Reductions (year 2010):	609 205	t CO2 equivalents
Emission Reductions (year 2011):	318 393	t CO2 equivalents
Emission Reductions (total):	927 598	t CO2 equivalents.

5 REFERENCES

Category 1 Documents:
Documents provided by ACHEMA, AB that relate directly to the GHG components of the project.

/1/ PDD v. 10, dated 12.12.2008
/2/ Initial and first periodic verification report No. 1253366, version 02, issued by TUV SUD Industries Service GmbH on 27/04/2010
/3/ Second project campaign monitoring report, version 1.0, dated June 2011
/4/ Second project campaign monitoring report, version 2.0, dated August 2011
/5/ Baseline calculation and evaluation V.5.0. 01-07-2011
/6/ 2nd project line calculation and evaluation V.1.0. 01-07-2011

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” v02
/2/ Comparison_of_N2O_emissions_with_IPPC_permit 2nd Project campaign V.1.0.
/3/ IPPC permit No NO 2/15, revised on 30/04/2008
/4/ Information about the gauze supplier and composition for the project campaign (gauze dismantle acts, invoices)
/5/ QAL 2 reports for the AMS
/6/ AST reports for the AMS
/7/ Maintenance and documentation book
/8/ GP JI manual. V2.0. 22-01-2010.pdf
/9/ GP_operation_schedule 20110701
/10/ Comparison_of_N2O_emissions_with_IPPC_permit 2nd Project campaign
/11/ Comments on downtimes (GEB)_20110629
/12/ Statistical tests_V.1.0.

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/ Tomas Krejaras, ACHEMA, Deputy chief of nitric acid plant
/2/ Stasys Pakstys, ACHEMA, Instrumentation department, Managing engineer
/3/ Ausra Januskeviciute ACHEMA, Innovation centre, Project manager
/4/ Ratmiras Voglius, SISTEMATIKA, Automation engineer
/5/ Dr. Claudius Kormann, BASF, Business Development Greenhouse Gas Projects

APPENDIX A: NITROUS OXIDE EMISSION REDUCTION PROJECT AT GP NITRIC ACID PLANT IN AB ACHEMA FERTILIZER FACTORY 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 by the Netherlands was issued on 01/06/2010 by the DFP of that Party (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.	O.K.	O.K.
91	Are all the written project approvals by Parties involved unconditional?	The above mentioned written approval is 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?	Installing a secondary N2O reduction catalyst underneath the primary catalyst precious metal catching and catalytic gauzes package in the ammonium burner as a N2O abatement technology was applied in GP production line of ACHEMA plant in accordance with the PDD (version 10). The secondary catalyst was installed and baseline was started on 05/09/07. The first project campaign lasted from 16/08/2008 to 26/09/2009 and has already been verified.	O.K.	O.K.
93	What is the status of operation of the project during the monitoring period?	The project activity has been completely operational during the second project campaign and the same has been confirmed on-site. The Project duration was 457 days, 402767 HNO_3 was produced with average daily production of 882 t HNO_3 in line with the nominal capacity of 1000 t per day. The previous first campaign lasted 318 days with the average production of 912 t HNO_3. The projected efficiency of the secondary catalyst was 80% N2O abatement. This figure was used as a conservative approach, based on the minimum efficiency guaranteed by the manufacturer. The	O.K.	O.K.

<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></td><td></td><td>actual efficiency during the second project campaign reached up to 84%. The efficiency during the first project campaign was 88%.</td><td></td><td></td></tr>
<tr><td colspan="5">Compliance with monitoring plan</td></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 “Baseline calculation and evaluation V.5.0” is developed to calculate the baseline emission factor and “2nd project line calculation and evaluation V.1.0“ is developed to calculate the Project campaign emission factor and emission reduction. The tool’s operating principles are clearly and transparently described in the monitoring report. Formulas and assumptions were verified and no discrepancies or mistakes found. Default emission reduction factors are not used.
<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>O.K.</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</td><td>O.K.</td></tr>
</table></td><td>CL1</td><td>O.K.</td></tr>
</table>

<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></td><td></td><td>
<table>
<tr><td>the baseline emission factor.</td><td></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>CL1</td></tr>
<tr><td>-impact of regulations</td><td>O.K.</td></tr>
<tr><td>- the composition of the ammonia oxidation catalyst</td><td>O.K.</td></tr>
<tr><td>- campaign length</td><td>O.K.</td></tr>
<tr><td>- historic campaign length</td><td>O.K.</td></tr>
<tr><td>- baseline campaign length (CLBL)</td><td>O.K.</td></tr>
<tr><td colspan="2">Project Emissions:</td></tr>
<tr><td>- the monitoring system is to be installed using the guidance document EN 14181</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>PEn = VSG * NCSG * 10-9 * OH</td><td>O.K.</td></tr>
<tr><td>- derivation of a moving average emission factor</td><td>O.K.</td></tr>
<tr><td>- minimum project emission factor</td><td>N.A.</td></tr>
</table>
CL1 is issued: please, provide statistical tests to compare with 95 % confidence interval the average values of the permitted operating conditions with the average values obtained during the baseline determination period.
</td><td></td><td></td></tr>
<tr><td>95 (a)</td><td>For calculating the emission reductions or enhancements of net removals, were key factors,</td><td>Not applicable.</td><td>O.K.</td><td>O.K.</td></tr>
</table>

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	The excel based calculation tool "Baseline calculation and evaluation V.5.0" is developed to calculate the baseline emission factor and "2nd project line calculation and evaluation V.1.0" 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.	O.K.	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?	Baseline and project emission factors are calculated using excel based calculation tools. Formulas and assumptions were verified and no discrepancies or mistakes were found. Default emission reduction factors are not used.	O.K.	O.K.
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?	Not applicable.	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.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 changing conformity with the relevant rules and regulations for the establishment of monitoring plans?	Not applicable.	O.K.	O.K.
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?	The evidence and records used for the monitoring are maintained in a traceable manner. The first level of data control is provided by the data collection system EMI 3000. The second level of data control operates via SCADA system, data from this system is accessible to the Technology Department Manager, the Nitric Acid Department Manager and the Nitric Acid Technologist. Every month the software engineer prepares data packages consisting of day reports and daily maintenance for the month and	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		provides them to Deputy Head of the plant. Deputy Head assisted by consultants performs the baseline emission factor EFBL and project emission factor EFn calculations and calculates emission reduction ER (tCO2e) during the completed project campaign.		
101 (b)	Is the function of the monitoring equipment, including its calibration status, in order?	AST was performed by AIRTEC (ISO 17025 certified lab) from August 30 to September 1, 2010 and AMS operation status was confirmed as normal without any malfunctions. At the same time QAL2 tests were performed for volume flow, pressure and temperature because the measuring equipment of stack gas volume flow was changed on 10/06/ 2010. The new calibration function was established and has been used correctly for calculations since 10/06/2010. All measurement devices of the Distributed control system (DCS) are checked and calibrated according to the established calibration plan.	O.K.	O.K.
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	See 95 (b) above	O.K.	O.K.
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	The data collected in the electronic form are stored in the EMI3000 system computer which contains two hard discs with mirror function (RAID0), additional data are stored in the external hard disc drive, which is installed in the control room of GP department. The data collected in the electronic form are printed from the EMI 3000 system computer every day and are stored in the office of GP department.	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	Not applicable.	O.K.	O.K.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	enhancements of removals generated by each JPA?			
104	Does the monitoring period not overlap with previous monitoring periods?	Not applicable.	O.K.	O.K.
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.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to 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?	Not applicable.	O.K.	O.K.
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
CL1: Please, provide statistical tests to compare with 95 % confidence interval the average values of the permitted operating conditions with the average values obtained during the baseline determination period.	94	The statistical tool is developed and the results are provided for verification, the summary of the statistical analysis is provided in the revised monitoring report version 2.0 (page 13).	The statistical "t-test" methodology was chosen to prove the hypothesis that the value of average values of the permitted operating conditions, indicated in the PDD, and the average of all values obtained during the baseline period are the same. Calculated "t-criterions"for all permitted conditions (OT1, OT2, OT3, OT4, OP, AFR, AIRF) are below the standard t-criterion values, therefore, the hypothesis is approved and CL1 is closed.