



RINA

JOINT IMPLEMENTATION VERIFICATION REPORT

FINAL REPORT

“Methane gas capture and electricity
production at Kubratovo Wastewater
Treatment, Sofia Bulgaria”

Monitoring period: 01/01/2012 to 31/10/2012

Report N° 12-BG-MD-11

Revision N° 1.1



JOINT IMPLEMENTATION VERIFICATION REPORT

Project Title: "Methane gas capture and electricity production at Kubratovo Wastewater Treatment, Sofia, Bulgaria"		Country: BULGARIA	Estimated ERUs (tCO_{2e}) from the PDD: 179,527 (covering 10 months period)	
JI Registration Reference: N°BG1000166		Monitoring period: 01/01/2012 to 31/10/2012	Verified ERUs (tCO_{2e}): 132,390	
Client: Sofiyska Voda AD		Client contact: Mr. Stanislav Stanev		
Report No.: 12-BG-MD-11		Revision: 1.1	Date of this report: 08/12/2012	
Approved by (Final Report):  Roberto Cavanna			Date of approval: 11/12/2012	
Methodology – if applicable				
Number:	Version:	Title:	Scale	SS(s):
		Project Specific Methodology	Large	13
<p>RINA Services S.p.A. (RINA), commissioned by SOFIYSKA VODA, has verified (fourth verification) of the greenhouse gas emission reductions reported for the project activity "Methane gas capture and electricity production at Kubratovo Wastewater Treatment, Sofia, Bulgaria", JI Registration Reference N°BG1000166, for the period 01/01/2012 to 31/10/2012, with regard to the relevant requirements for JI activities. The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable UNFCCC requirements.</p> <p>The project was validated by TUV SUD (Determination report N° 743691 issued on 2006/01/25) /2/ and it was registered on under the JI registration reference N°BG1000166</p> <p>The GHG emission reductions were calculated on the basis of the project specific methodology included in the last version of Monitoring Report ver. 1.2 of 08/12/2012 covering monitoring period from 01/01/2012 to 31/10/2012 /3/.</p> <p>In conclusion, it is RINA's opinion that the project activity "Methane gas capture and electricity production at Kubratovo Wastewater Treatment, Sofia, Bulgaria", in Bulgaria, as described in the last Monitoring Report version 1.2 of 08/12/2012 /3/, meets all relevant requirements for JI activities and all relevant host country criteria and correctly applies the baseline and monitoring JI Project specific methodology. Hence RINA confirms that the project is implemented as without any changes. 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. Hence RINA is able to certify that the emission reductions from the project during the monitoring period 01/01/2012 to 31/10/2012 amount to 132,390 tCO_{2e}</p>				

Work carried out by: Konstantin Rachev	<input checked="" type="checkbox"/> No distribution without permission from the Client or organizational unit responsible <input type="checkbox"/> Strictly confidential <input type="checkbox"/> Unrestricted distribution
--	---

Work verified by (Final Report - Authorized officer signing for the DOE)  Laura Severino	Keywords: Climate Change, Kyoto Protocol, Clean Development Mechanism, Verification, Joint Implementation
---	---



JOINT IMPLEMENTATION VERIFICATION REPORT

Abbreviations

BE	Baseline Emissions
CAR	Corrective Action Request
JI	Joint Implementation Mechanism
VER(s)	Verified Emission Reduction(s)
CH ₄	Methane
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CRT	Coordination and Technical Control Staff
DCI	Certification Division of RINA Services Spa
DFP	Designated Focal Point
AIE	Accredited Independent Entity
JISC	Joint Implementation Supervisory Committee
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of Approval
MoV	Means of Verification
MR	Monitoring Report
NGO	Non-governmental Organization
ODA	Official Development Assistance
PDD	Project Design Document
PE	Project Emission
PP(s)	Project Participant(s)
Ref.	Document Reference
RINA	RINA Services Spa
SS(s)	Sectoral Scope(s)
UNFCCC	United Nations Framework Convention on Climate Change
DVM	Determination and Verification Manual
MOEW	Ministry of Environment and Water
WWTP	Waste Water Treatment Plant

JOINT IMPLEMENTATION VERIFICATION REPORT

Table of Contents		Page
1	INTRODUCTION.....	5
1.1	Objective	5
1.2	Scope	5
1.3	Verification team	5
2	METHODOLOGY.....	5
2.1	Review of documents.....	6
2.2	Follow-up interviews.....	6
2.3	Resolution of clarification, corrective and forward action requests.....	76
3	VERIFICATION CONCLUSIONS	7
3.1	Project approval by Parties involved (90-91)	87
3.2	Project implementation (92-93).....	87
3.3	Compliance of the monitoring plan with the monitoring methodology (94-98).....	87
3.4	Revision of monitoring plan (99-100)	8
3.5	Data management (101)	8
3.6	Verification regarding programmes of activities (102-110)	98
4	VERIFICATION OPINION.....	109
5	REFERENCES.....	1140
	Appendix A: Verification Protocol	12

JOINT IMPLEMENTATION VERIFICATION REPORT

1 INTRODUCTION

SOFIYSKA VODA AD has commissioned RINA to verify the emissions reductions of its JI project “Methane gas capture and electricity production at Kubratovo Wastewater Treatment, Sofia, Bulgaria” (hereafter called “the project”) at Kubratovo, Sofia, Bulgaria.

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 the periodic independent review and ex post determination by the Designated Operational Entity of the monitored reductions in GHG emissions during 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 is defined as an independent and objective review of the project design document, the project’s baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

1.3 Verification Team

The verification team and the technical reviewers consist of the following personnel:

Role	Last Name	First Name	Country
Team Leader JI	Rachev	Konstantin	Bulgaria
Technical Reviewer	Severino	Laura	Italy
Technical Reviewer in training	Alfieri	Felice	Italy

2 METHODOLOGY

Verification was conducted using RINA procedures in line with the requirements specified in the JI Guideline, the latest version of the JI Determination and Verification Manual, and relevant decisions of the COP/MOP and applying standard auditing techniques.

The verification consisted of the following three phases:

- Desk review;
- On-site assessment;
- The resolution of outstanding issues and the issuance of the final verification report and certification.

In order to ensure transparency, a verification protocol was customized for the project, according to the 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, 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.

JOINT IMPLEMENTATION VERIFICATION REPORT

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

2.1 Review of Documents

The Monitoring Report (MR), ver. 1.0 of 12/11/2012, ver. 1.1 of 27/11/2012 and ver.1.2 of 08/12/2012 /3/ submitted by SOFIYSKA VODA and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD) /1/, Approved CDM methodology (if applicable) and/or Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an DOE as well as monitoring excel sheets /4/ were reviewed.

The verification findings presented in this report are related to the Monitoring Report /3/ and project as described in the determined PDD /1/.

2.2 Follow-up Interviews

On 23/10/2012 RINA performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of SOFIYSKA VODA were interviewed and the main topics of the interviews are summarized in Table 1.

	Date	Name and Role	Organization	Topic
/a/	23/10/2012	Mr. Jelyaz Rangelov, Waste Water Treatment Plant Manager	SOFIYSKA VODA AD	Continuing monitoring equipment and measurement Calibration and maintenance of the used monitoring equipment Roles, responsibilities and legal environmental requirements – amendments WWTP technical details
/b/	23/10/2012	Mrs. Bojanka Brankova – Specialist Process Management	SOFIYSKA VODA AD	Project specific documentations and monitoring of the main data Data collecting and archiving
/c/	23/10/2012	Mr. Victor Milkov, Project consultant	Green Carbon Bulgaria	GHG Emission reduction estimation and calculations. Baseline and Project emission estimations; Monitoring Report consultation

Table 1 Interview topics

JOINT IMPLEMENTATION VERIFICATION REPORT

Interviewed organization	Interview topics
SOFIYSKA VODA AD	<ul style="list-style-type: none"> ❖ Continuing monitoring equipment and measurement; ❖ Calibration and maintenance of the used monitoring equipment; ❖ Roles, responsibilities and legal environmental requirements - amendments; ❖ Project specific documentations and monitoring of the main data; ❖ Organization scheme and responsibilities - amendments; ❖ Data collecting and archiving; ❖ GHG Emission reduction estimation and calculations. Baseline and Project emission estimations; ❖ Waste Water Treatment Plant and Digesters consultation ❖ Social and Environmental Responsibilities
(LOCAL Stakeholder)	During the fourth verification no local stakeholder were consulted
CONSULTANT: Green Carbon	<ul style="list-style-type: none"> ❖ GHG Emission reduction estimation and calculations. Baseline and Project emission estimations; ❖ Monitoring Report consultation

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 RINA positive conclusion on the GHG emission reduction calculation.

If the Verification Team, in 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 AIE 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.

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

2.4 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 0 Corrective Action Requests, 1 Clarification Requests, and 0 Forward Action Requests.

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

JOINT IMPLEMENTATION VERIFICATION REPORT

2.5 Project approval by Parties involved (90-91)

Written project approvals by Bulgarian Ministry of Environment and Water from August 2007 /5/ and the Approval from the State of the Netherlands from July 2007 /6/ have been issued by the DFP of that Party 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 approvals are unconditional.

2.6 Project implementation (92-93)

The project implementation date is described in the PDD /1/ and in the Monitoring Report /3/, section B /3/. In section is documented a list of major JI Project stages.

During the fourth verification of this project and during the on-site visit in the WWTP it can be stated that the installations worked without interruption strictly according with all technological procedures. No amendments in the technology and in the installation during 2012 were found. No amendments in the measuring and monitoring equipment and procedures are also found.

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

The monitoring occurred in accordance with the monitoring plan included in the registered PDD /1/ regarding which the determination has been deemed final and is so listed on the UNFCCC JI website.

For calculating the emission reductions, key factors, such as measurement of the waste water flow and Biochemical Oxygen Demand (BOD) reduced; measurement of biogas production; measurement of electricity displaced and emission from leaked methane and methane from landfill influencing the baseline and project emissions and the emissions as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating emission reductions, such as emission factors and continuous monitoring software (Scada Program) and database are clearly identified, reliable and transparent /4/.

Emission factors is selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice. The EF is approved from MOEW and it is publically available at http://www3.moew.government.bg/files/file/Climate/Climate_Change_Policy_Directorate/IETM/Joint_Implementation/JI_documents/Baseline_CEF_Summary.pdf .

The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner /3/ and /4/.

2.8 Revision of monitoring plan (99-100)

During the fourth verification period no deviations from the registered PDD /1/ have been made inside the project boundary.

2.9 Data management (101)

The data and their sources, provided in Monitoring report /3/, are clearly identified, reliable and transparent.

The implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures. These procedures are mentioned in the section "References" of this report.

The function of the monitoring equipment, including its calibration status, is in order from /10/ to /20/.

The evidence and records used for the monitoring /3/; /4/ and /21/ are maintained in a traceable manner. Through SCADA Program and monitoring system all data from different meters which are continuously

JOINT IMPLEMENTATION VERIFICATION REPORT

measured and control rooms are transmitted directly on screen at Process manager chief's office and is treated by the staff of the department. The appointed staffs that have the necessary competence and skills carry out the monitoring of the project. The data collection and management system for the project is in accordance with the monitoring plan. All data collection provided in excel sheets /4/ has been verified and found that the process of data collection and storage is reliable.

2.10 Verification regarding programmes of activities - Not applicable

JOINT IMPLEMENTATION VERIFICATION REPORT

3 VERIFICATION OPINION

RINA Service Spa (RINA) has performed 4th verification of the emission reductions reported for the project activity “Methane gas capture and electricity production at Kubratovo Wastewater Treatment, Sofia, Bulgaria” in Bulgaria, JI Registration Reference N° BG1000166, for the period 01/01/2012 to 31/10/2012, with regard to the relevant requirements for JI activities.

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 project participants of the “Methane gas capture and electricity production at Kubratovo Wastewater Treatment, Sofia, Bulgaria” project are responsible for:

- the preparation of greenhouses gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered project design document from July 2005 /1/
- the development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project

It is RINA’s opinion that the GHG emission reduction stated in the monitoring report version 1.2 of 08/12/2012 for the “Methane gas capture and electricity production at Kubratovo Wastewater Treatment, Sofia, Bulgaria” project in Bulgaria for the period 01/01/2012 to 31/10/2012 are fairly stated. The GHG emission reductions were calculated correctly on the basis of the Project Specific Monitoring Methodology and the monitoring plan contained in the registered PDD.

Hence RINA is able to certify that the emission reductions from the project during the monitoring period 01/01/2012 to 31/10/2012 amount to **132,390tCO_{2e}**.

Reporting period: From 01/01/2012 to 31/10/2012

Baseline emissions	: 153,940t CO _{2e}
Project emissions	: 21,550t CO _{2e}
Emission Reductions	: 132,390t CO_{2e}

TOTAL Emission Reductions : 132,390t CO_{2e}

JOINT IMPLEMENTATION VERIFICATION REPORT

4 REFERENCES

Category 1 Documents:

Documents provided by Type the name of the company that relate directly to the GHG components of the project.

- /1/ Sofiyska Voda AD: PDD “Methane gas capture and electricity production at Kubratovo Wastewater Treatment, Sofia, Bulgaria” from July 2005
- /2/ Sofiyska Voda AD: Determination Report No. 743691, Revision 00 from 2006-01-25, issued by TUV SUD Industrie Service GmbH
- /3/ Sofiyska Voda AD: Monitoring Report of JI Project - “Methane gas capture and electricity production at Kubratovo Wastewater Treatment, Sofia, Bulgaria”, ver. 1.0 of 12/11/2012, ver. 1.1 of 27/11/2012 and ver. 1.2 of 08/12/12
- /4/ Sofiyska Voda AD: Emission reduction estimation excel files: 20121110_SD6_MR2012_ER_SV_ver1.0 and 20121208_SD6_MR2012_ER_SV_ver1.1

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- /5/ Ministry of Environment and water of Bulgaria Letter of approval, issued during August 2007
- /6/ State of the Netherlands Letter of Approval, issued during July 2007
- /7/ RINA: Third Period Verification Report № 12-BG-MD-09, ver. 1.1 dated of 01/05/2012 covering period from 01/01/2011 to 31/12/2011
- /8/ Sofiyska Voda AD: Company schemes, diagrams and Company Monitoring Instructions
- /9/ Sofiyska Voda AD: Technical descriptions on used measurement devices
- /10/ Drager: Protocol No.20110613-002/13.06.2011 for periodic check of measurement equipment – gas analyzer, flow meter system Awite
- /11/ Drager: Protocol No.20111208-012/08.12.2011 for periodic check of measurement equipment – gas analyzer, flow meter system Awite
- /12/ Drager: Protocol No.20120608-013/08.06.2012 for periodic check of measurement equipment – gas analyzer, flow meter system Awite
- /13/ Sofiyska Voda AD: Laboratory accreditation certificate – valid up to 28.02.2014
- /14/ Sofiyska Voda AD: Internal calibration certificate № 4/18.06.2010 of Oximeter “Oxi 730”
Internal calibration certificate № 7/08.03.2012 of Oximeter “Oxi 730”
- /15/ National Electric Company (NEK): Electricity meter periodical exchange protocol – serial number 02364831, exchanged on 29/12/2008
- /16/ National Electric Company (NEK): Electricity meter periodical exchange protocol – serial number 02364856, exchanged on 06/02/2009
- /17/ Bulgarian Institute of Metrology: Protocol 175-VG-OP/20.10.11 for periodic check of flow meter, primary setting tank N1 (number DM 41F-00250) at plant inlet
- /18/ Bulgarian Institute of Metrology: Protocol 175-VG-OP/20.10.11 for periodic check of flow meter, primary setting tank N2 (number DM 41F-00251) at plant inlet
- /19/ Bulgarian Institute of Metrology: Protocol 175-VG-OP/20.10.11 for periodic check of flow meter, primary setting tank N3 (number DM 41F-00248) at plant inlet
- /20/ Bulgarian Institute of Metrology: Protocol 175-VG-OP/20.10.11 for periodic check of flow meter, primary setting tank N4 (number DM 41F-00249) at plant inlet
- /21/ National Electric Company and Sofiyska Voda monthly meter reading protocols for sold electricity covering period of January 2012; February 2012; March 2012; April 2012; May 2012; June 2012; July 2012; August 2012; September 2012 and October 2012
- /22/
- /23/
- /24/

APPENDIX A: VERIFICATION PROTOCOL

TABLE 1 REQUIREMENTS CHECK LIST

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approval by the 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?	Yes, Letter of approval of Bulgarian Ministry of Environment and Water /5/ from August 2007 and the the State of the Netherlands /6/ during July 2007 have been issued and verified		OK
91	Are all the written project approvals by Parties involved unconditional?	Yes, bought Letters of approval are unconditional.		OK
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?	Yes, the project is been implemented as described in the registered PDD /1/. During 2012 no changes in the production was found. The producing process was carried on as per the technology plan. No amendments were found.		OK
93	What is the status of operation of the project during the monitoring period?	During 2012 all the project installations in the WWTP have been worked without interruption strictly according with all technological procedures.		OK
Compliance with monitoring plan				
94	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?	Yes, the project monitoring plan in MR /3/ for fourth verification covering 2012 was according with the registered PDD /1/.		OK
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	The monitoring plan is based on an on-line measurement and data collection from the used software (Scada Program) and company databases. Then all the data are put in excel sheet. All of the used monitoring methods and data were verified during the on-site visit of the company and founded reliable /3/; /4/; /21/.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	Company used different monitoring software for collecting the required monitoring data. All the data is incorporated in Scada Program. All data and sources are very well identified, reliable and transparent /3/; /4/; /21/.		OK
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 and all fixed data used are reliable and reasonable. The given information in the MR /3/ is also sufficient.		OK
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?	Yes, the calculation of emission reduction is based on conservative manner /4/.		OK
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?	n/a		
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?	n/a		
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	n/a		
98	If the monitoring is based on a monitoring	n/a		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
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?	n/a		
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?	n/a		
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 from the laboratory and different sections of the installations will be transferred in paper and electronic form to Process manager, Mrs. Bojanka Brankova. The data will be summarized in Excel sheets by her /4/. Primary data in electronic (Excel) and paper form as well as final Excel sheets will be archived by her. Through SCADA control and monitoring system all data from different meters and control rooms are transmitted directly on screen at Process manager chief’s office and is treated by the staff of the department. Mrs. Brankova as well as other staff is responsible for monitoring management. The staff responsibilities are identify and documented in the MR. During the on-site visit the appointed staff clearly demonstrated his accountability and awareness for collecting and reporting the required data.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	During the on-site visit were checked all measuring devices calibration records /10-20/. All devices were calibrated from authorized laboratory and regarding Bulgarian laws. All necessary protocols were physically available and checked. There is no deviation found. In the MR /3/ is documented a table providing information for used measuring equipment and calibrating procedures from /10/ to /20/.		OK
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	Yes, all the documentation concerning monitoring equipment and data is in good traceable manner.		OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	The used measuring monitoring hardware and software was found adequate. The used data management system gives evidence and allows for verifications of the emission reduction data calculations. All the data collection and emission reduction estimation /4/ correspond to the monitoring plan for 2012 /1/ and /3/. The documentation is reliable. However a CL is documented.	CL-1	OK
Verification regarding programs of activities (additional elements for assessment)				
102	Is any JPA that has not been added to the JI PoA not verified?	n/a		
103	Is the verification based on the monitoring reports of all JPAs to be verified?	n/a		
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	n/a		
104	Does the monitoring period not overlap with previous monitoring periods?	n/a		
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	n/a		
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE:	n/a		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<p>(a) Describe its sample selection, taking into account that:</p> <p>(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:</p> <ul style="list-style-type: none"> - 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? 			
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	n/a		
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?	n/a		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	n/a		
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?	n/a		

TABLE 2 RESOLUTIONS OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Response by project participants	Verification team conclusion
<u>Clarification action request №1</u> The presented value estimated in ex-ante of registered PDD, in section E.5 does not correspond to the real one documented in the PDD	101 (d)	The value is corrected in section E.5 and in the title page taking into consideration that the present monitoring period is 10 months from 01.01.2012 to 31.10.2012.	The value is corrected in section E.5 and in the title page taking into consideration the present monitoring period (10 months). This CL is closed.
<u>Clarification action request №2</u> Data in table E.2. are not transparently provided in the ER worksheet, but are included in the Monitoring Report. Moreover data are provided in the ER sheet as for 2012. Data should be aggregated monthly and yearly as for MR so PP is required to be transparent in the ER spreadsheet the period for emission reduction calculation.		The MR and Excel sheets have been updated as requested.	The Table E.2 is added in the ER spread sheet. The monitoring period is clarified in the ER spread sheet. Please refer to excel sheet “20121208_SD6_MR2012_ER_SV_ver1.1” and to MR ver. 1.2 of 08/12/2012 This CL is closed

TABLE 3 FORWARD ACTION REQUEST

Forward action request	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
None			