VERIFICATION REPORT
VEMA S.A.

VERIFICATION OF THE

RECONSTRUCTION OF WATER SUPPLY AND DRAINAGE SYSTEM "LUGANSKVODA LTD."

2nd periodic

for the period January – September 2010

REPORT NO. UKRAINE/0193/2010

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Date of first issue:	Organizational unit:
08/12/2010	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
VEMA S.A.	Fabian Knodel

Summary:

Bureau Veritas Certification has made the 2nd periodic verification for the period January – September 2010 of the JI project "Reconstruction of water supply and drainage system "Luganskvoda Ltd.", project registration reference number UA1000195, project of VEMA S.A. located in Lugansk region, Ukraine, and applying the JI specific approach, on the basis of UNFCCC criteria for the JI, as well as 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 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 Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as per determined 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 ready to generate GHG emission reductions. The GHG emission reduction is calculated without material misstatements, and the ERUs issued totalize 132175 tons of CO_2eq for the monitoring period from 1st January 2010 till 30th September 2010.

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:	
UKRAINE/0193/2010	JI	
Project title: "Reconstruction of water supply and drainage system "Luganskvoda Ltd."		
Work carried out by: Team Leader : Oleg Skoblyk Team Member : Kateryna Zinevych		
Work reviewed by: Ivan Sokolov – Internal technical reviewer		☒ No distribution without permission from the Client or responsible organizational unit
Work approved by: Flavio Gomes – Operational Manager	Bureau Veritas Certification Holding SAS	☐ Limited distribution
Date of this revision: 08/12/2010	**Rev. No.:** 01	**Number of pages:** 50 ☐ Unrestricted distribution

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1 INTRODUCTION

VEMA S.A. has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Reconstruction of water supply and drainage system ”Luganskvoda Ltd.” (hereafter called “the project”) at Lugansk region, Ukraine.

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, as well as the host country criteria.

The verification covers the period from 1st January 2010 to 30th September 2010.

1.1 Objective

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity (AIE) of the monitored reductions in GHG emissions during 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 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 consists of the following personnel:

Oleg Skoblyk

Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Kateryna Zinevych

Bureau Veritas Certification Team Member, Climate Change Verifier

This verification report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal Technical Reviewer

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, a verification protocol was customized for the project, according to the version 01.1 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.

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

2.1 Review of Documents

The Monitoring Report (MR) submitted by VEMA S.A. and additional background documents related to the project design, baseline, and monitoring plan, i.e. country Law, Project Design Document (PDD), Determination Report of the current project prepared by Bureau Veritas Certification Holding SAS No. UKRAINE/0138/2010 rev.01 dated 04/10/2010, 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 for the period from 01/01/2010 to 30/09/2010, version 01 of 13th October 2010 and version 02 of 8th December 2010 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 20-21 October 2010 Bureau Veritas Certification verification team conducted a visit to the project site ("Luganskvoda Ltd.") and performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of "Luganskvoda Ltd." and VEMA 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
"Luganskvoda Ltd."	Organizational structure Responsibilities and authorities Roles and responsibilities for data collection and processing Installation of equipment Data logging, archiving and reporting Metering equipment control Metering record keeping system, database IT management Training of personnel Quality management procedures and technology Internal audits and check-ups
Consultant: VEMA S.A.	Baseline methodology. Monitoring plan,. Monitoring report. Deviations from PDD.

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, 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.

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 5 Corrective Action Requests, and 1 Clarification Request.

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

3.1 Project approval by Parties involved (90-91)

The project obtained approval by the Host party (Ukraine) on 09/11/2010 (Letter of Approval #1808/23/7 issued by National Environmental Investment Agency of Ukraine of 09/11/2010).
Written project approval by the Switzerland (sponsor party) has been issued by the NFP 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 (Letter of Approval # J294-0485 issued by the Federal Office for the Environment FOEN of Switzerland dated 26/10/2010). The project was registered under Track 1 with reference number UA1000195.

The abovementioned written approvals are unconditional.

The identified areas of concern as to Project approval by Parties involved, project participants' response and BV Certification's conclusion are described in Appendix A to this report (refer to CAR 01).

3.2 Project implementation (92-93)

The main objective of the project that is being implemented at "Luganskvoda Ltd." is reduction of electric energy consumption by centralized water supply system in Lugansk region due to its rehabilitation measures, which include replacement and rehabilitation of water pumping equipment and water distribution systems, installation of frequency regulators and optimization of the technological process of water pumping. The reduction of consumption of the electric energy, which is produced in power grid of Ukraine, will lead to the decrease of fossil fuel combustion for electricity production, and as a result to the greenhouse gas emission reduction.

The rehabilitation measures under the project include:

- Replacement of energy intensive pumps by new highly energy efficient ones;
- Optimization of the technological process of water pumping;
- Introduction of automatic air valves on water mains for pressure decrease and improvement of discharge capacity;
- Replacement of water-supply networks;
- Installation of new groups of record keeping devices;
- Introduction of new devices for concealed leakage detection;
- Installation of frequency regulators.

The project operation was started in May 2007 with the first measures on optimization of technological process of water pumping. Because of the fact that implementation measures under the project commenced in 2007, which was determined as a baseline year, in view of conservative approach the emission reductions generated due to these measures were not accounted into the project emissions.

The status of project activity implementation during January – September 2010 is presented in the tables below:

Table 1. Project implementation status during January – September 2010

#	Project measures	Number of units of works performed	Starting date of project measures implementation	Expected date of completion of project implementation measures
1	Rehabilitation of pumping equipment	25 units	18/10/2007	12/2011
2	Replacement of pumping equipment	115 units	05/10/2007	06/2011
3	Optimization of the technological process of water pumping	64 objects	27/05/2007	12/2011
4	Installation of new groups of record keeping devices	23 units	02/11/2007	12/2011
5	Installation of automatic air valves	0 units	28/07/2007	12/2011
6	Installation of frequency regulators	4 units	23/12/2008	12/2011
7	Replacement of water-supply networks	18 339 m	29/11/2007	06/2011

Mainly the project measures are being realized according to the implementation schedule presented in the determined PDD ver.02.

There were some insignificant deviations from the PDD in the process of implementation of pumping stations modernization and rehabilitation in respect of capacity of the installed pumping equipment and diameters of water supply networks replaced. The change in capacity of installed pumping equipment was caused by the change in demand of water amount which was needed to be supplied to the customers. In some cases there was a deviation in diameters of networks being replaced in comparison to the planned diameters defined at stage of project development caused by production necessity. The detailed information regarding measures implemented and equipment installed during reported period of January-September 2010 by departments and administrations is presented in the Annex 4 to the Monitoring Reports.

The project was operational during the given monitoring period from 01/01/2010 till 30/09/2010.

The starting date of the crediting period did not change and remains the date of first generated emission reduction units, namely: January 01, 2008.

The Monitoring System is in place and operational.

The monitoring equipment such as electricity meters, flow sensors, manometers and others are in place and comply with the industrial standards of Ukraine. All monitoring equipment is covered by the detailed verification (calibration) plan and is verified with periodicity, established by its manufacturer.

The project implementation doesn't provide for any negative impacts on environment. The only impact on environment is dismantled equipment, which will be applied in the future as secondary material and recycled.

"Luganskvoda Ltd." has all necessary permissions, limits and license required by Ukrainian legislation, including permits for "Special water use" for all sites and departments.

Implementation of this project makes it possible to improve servicing of water consumers. Experience of the employees of "Luganskvoda Ltd." and adherence to the norms "On drinking water and drinking water supply" make it possible to minimize occurrence of emergency situations in the course of this project implementation.

The identified areas of concern as to project implementation, project participants response and BV Certification's conclusion are described in Appendix A to this report (refer to CAR 02).

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

The monitoring occurred in accordance with the PDD regarding which the determination has been deemed final and revised monitoring plan which was positively determined in course of the current verification.

For calculating the emission reductions, key factors such as increased demand in water amount to be supplied to the customers, sectoral reform policies in water distribution sector and legislation, influencing the baseline emissions and the activity level of the project 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 appropriately calibrated measuring equipment, the study of standardized

emission factors for the Ukrainian electricity grid are clearly identified, reliable and transparent.
Emission factor used in the calculation of emission reductions (carbon emission factor for electricity grid of Ukraine, taken from "Study "Standardized emission factors for the Ukrainian electricity grid" (Version 5, 02 February 2007) developed by Global Carbon B.V. and verified by TUV SUD Industrie Service GmbH) is selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

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

The identified areas of concern as to the compliance of the monitoring plan with the monitoring methodology, project participants response and BV Certification's conclusion are described in Appendix A to this report (refer to CAR 03).

3.4 Revision of monitoring plan (99-100)

In the course of the 2nd reported monitoring period (01/01/2010 – 30/09/2010) the original monitoring plan described in the registered PDD version 02 was changed by the project participants. As a response to the CAR 03 raised by BV Certification during the 2nd periodic verification (refer to Appendix A) VEMA S.A. submitted the modifications of the monitoring plan for the determination of proposed revisions in respect of improvement the accuracy and completeness of information of the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans. The project participants provided an appropriate justification for the proposed revision.
Because of the fact that original monitoring plan envisaged calculation of project and baseline emissions and emission reductions on the annual basis, the monitoring plan was revised in order to make monitoring process possible for the nine months (3 quarters) of 2010. The formulae for calculation of emissions were adjusted for the monitoring period of 1 month instead of period of 1 year that was in the initial monitoring plan determined in the PDD. This allowed to calculated figures for 9 months (January – September) of 2010. With a purpose of ensuring more accurate results of emission reduction calculation and taking into account the fact that water supply depends on a season of the year, the baseline parameter PPER – specific electricity consumption per water unit in 2007 – was calculated for each month of 2007 and these historical monthly values are used for determining baseline emissions for each specific month of the reporting period. Updated formulas are presented in the Monitoring Report version 2.

Changes that have been implemented do not affect conservativeness of the approach to the emission reductions calculations and procedures of the data collection and archiving.

The Management and Operational Systems are eligible for reliable project monitoring according to the revised plan.

The proposed revision improves the accuracy and 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.

The identified areas of concern as to revision of the monitoring plant, project participants response and BV Certification's conclusion are described in Appendix A to this report (refer to CAR 03).

3.5 Data management (101)

The data and their sources, provided in monitoring reports, are clearly identified, reliable and transparent.

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

The functioning of the monitoring equipment, including its calibration status, is in order.

According to existing legislation "On metrology and metrological activity" all measuring devices in Ukraine shall conform to stated requirements of corresponding standards and be calibrated periodically. Flow meters were calibrated by Lugansk Center of Meters Standardization, Metrology and Certification. Verification of commercial electricity supply meters of "Luganskvoda Ltd." is executed by Luganskstandardmetrology. The project complies with legal requirements to the calibration and verification.

The evidence and records used for the monitoring are maintained in a traceable manner.
The data collection and management system for the project is in accordance with the PDD and revised monitoring plan.

The project and baseline emissions subject to monitoring relate to the electricity consumption by the pumping equipment used for water transportation as this is the only emission source attributable to the current project. The baseline emissions are determined based on historical value of specific electricity consumption per water unit for each month of 2007 (considered as a baseline year) and actual monitored value

of water amount supplied to customers in the reporting period. Parameters which are monitored throughout the crediting period (water supplied to customers and electricity consumption for water transportation) are measured for each separate water distribution system (19 separate divisions are united into 13 independent water supply networks).

“Luganskvoda Ltd.” collects and keeps the data relating to electric energy and acquired water for water-supply in the forms of electric energy and acquired water bills.

The control of electric energy consumption is carried out by the "Luganskvoda Ltd.” in the following way: current control of electric energy meters’ operation is conducted during design period (design month is determined by the conditions of the contract of electric energy supply). On the day stipulated by the contract (as a rule it is 00 hours 00 minutes on the 1st day of month following the design month) the chief of site or his authorized representative takes the readings of electric energy meters (electric energy meters are the devices, passed state certification, registered under the contractual conditions and jointly sealed by the representatives of power supplying organization and “Luganskvoda Ltd.” subject to execution of act of sealing). Obtained information is delivered by the chief of site to the Department of Chief Engineer. “Report of electric energy meters’ readings” is executed according to the readings of electric energy meters of all sites; engineer involved in electric energy bills provides this Report to the subscriber department of energy supplying organization. Following the “Report of electric energy meters’ readings” subscriber department of energy supplying organization executes “Act of supplied electric energy”, approved by the company’s round seal and hands over such act to the department of “Luganskvoda Ltd.” for confirmation. The representative of “Luganskvoda Ltd.” provides approved “Act of supplied electric energy” to the subscriber department of energy supplying organization, wherein he obtains invoices for payment. All bills for payment are kept by “Luganskvoda Ltd.” in paper form. Monthly report of electric energy consumption should be executed under the form “Electric energy consumption by departments of “Luganskvoda. Ltd.”, on which the annual report of electric energy consumption 11-MTP is draw up, signed by the chief of the department or administration and delivered to principal office of “Luganskvoda. Ltd.”. Annual report of electric energy consumption should be executed under the form 11-MTP by “Luganskvoda Ltd.”, signed by the director of “Luganskvoda Ltd.” and delivered to Lugansk Regional Public Administration.

Control of the water volume transferred to the customers by “Luganskvoda Ltd.” is carried out in the way described below. Water extracted from water objects of “Luganskvoda Ltd.” is accounted by flow meters located at water-lifting pumping stations. Readings are taken every hour and fixed

in logs of established form PID-11. Data about volume of water lifted from second-lifting station for previous day are handed over every day at 00:00 o'clock to control department of each production unit. Persons responsible for statistical reporting under the form 2-TP (water industry) execute the statements on the ground of dispatching record of taken water before 10th day of each month and hand over them to corresponding services of management personnel of "Luganskvoda Ltd.". Report 2-TP (water industry) based on monthly statements is produced every three months to the Lugansk Department of Water Resources after its verification by production-technical department and sales department of management bodies. Payment for water drawn from well is made according to such report.

Structure of monitoring data collection is presented on the Figure 3 in the section C.1.1 of the Monitoring Report.

The project is managed by General Director "Luganskvoda Ltd." and his First Deputy. Director supervises and coordinates activities of all departments. Individual department headed by the chief of the department is responsible for each parameter.

Procedures for detection and elimination of malfunctions at "Luganskvoda Ltd." are sufficiently described in the section B.5 of the Monitoring Report. In case of any malfunctions of the equipment the operator notifies the master of pumping station. If it is impossible to eliminate such malfunction at the same time (absence of necessary detail, breakdown of engine, etc.) the committee is established consisting of 6-7 representatives of technical department, chief engineer, head of shift and leading engineers. The act of defect or breakdown is executed according to the type of malfunction and handed over to the department of "Luganskvoda Ltd." in time; the equipment is repaired. During monitoring period January – September 2010 no emergency situations and technological breakdowns occurred.

All necessary information for monitoring of GHGs emission reductions are stored in paper or/and electronic formats and will be saved till the end of the crediting period and for two years after the last operation with ERUs from the project.

The Monitoring Report rev.02 provides sufficient information on the assigning roles, responsibilities and authorities for implementation and maintenance of monitoring procedures including control of data. The verification team confirms effectiveness of the existing management and operational systems and found them eligible for reliable project monitoring.

The identified areas of concern as to Data management, project participants response and BV Certification's conclusion are described in Appendix A to this report (refer to CAR 04, CAR 05, CL 01).

3.6 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 2nd periodic verification for the period January – September 2010 of the "Reconstruction of water supply and drainage system "Luganskvoda Ltd." project in Ukraine, which applies JI specific approach. The verification was performed on the basis of UNFCCC criteria and 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 monitoring reports, 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 VEMA S.A. is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version 02 and revised monitoring plan. The development and maintenance of records and reporting procedures are 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 02, for the reporting period January – September 2010 as indicated below. Bureau Veritas Certification confirms that the project is implemented as per determined 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.

Bureau Veritas Certification can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions 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 the following statement:

Reporting period: From 01/01/2010 to 30/09/2010

Baseline emissions	: 317977	t CO_2 equivalents;
Project emissions	: 185802	t CO_2 equivalents;
Emission Reductions	: 132175	t CO_2 equivalents.

5 REFERENCES

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

/1/	Monitoring Report for the period from 01/01/2010 to 30/09/2010, version 01, dated 13th of October 2010
/2/	Monitoring Report for the period from 01/01/2010 to 30/09/2010, version 02, dated 8th of December 2010
/3/	Annex 2 “Project and monitoring equipment” (Excel file)
/4/	Annex 3 “Calculation of tCO_2e emission reductions due to electric energy saving in the water supply and drainage system “Luganskvoda Ltd.” (Excel file)
/5/	Annex 4 “Measures that were implemented by the project” (Excel file)
/6/	Annex 5 “Monitoring of the parameters used for GHG emissions calculation” (Excel file)
/7/	PDD “Reconstruction of water supply and drainage system ”Luganskvoda Ltd.”, version 02 dated 04/10/2010
/8/	Determination Report by Bureau Veritas Certification Holding SAS No. UKRAINE/0138/2010 “Reconstruction of water supply and drainage system ”Luganskvoda Ltd.”, rev.01 dated 04/10/2010
/9/	Letter of Approval of the Joint Implementation project “Reconstruction of water supply and drainage system ”Luganskvoda Ltd.” #1808/23/7 issued by National Environmental Investment Agency of Ukraine of 09/11/2010
/10/	Letter of Approval of the project under article 6 of Kyoto protocol (JI) “Reconstruction of water supply and drainage system “Luganskvoda Ltd.” # J294-0485 issued by the Federal Office for the Environment of Switzerland dated 26/10/2010

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

/1/	Information on the availability of permit documentation of "Luganskvoda Ltd." For 2010
/2/	Permission for special water use Separate Division "Southern Administration of "Luganskvoda Ltd.", id.code 35937046, # Ukr 317 Lug, valid from 01/08/2008 till 01/08/2011
/3/	Annex to the Permit for special water use # Ukr 138 Lug “Permitted discharge of pollutants with water reverse” from 01/08/2008 to

01/04/2011

/4/ Permit for special water use № Ukr 328 Lug valid from 01/08/2008 to 01/04/2011 issued by State administration of environmental protection in Lugansk region

/5/ Permit for special water use № Ukr 248 Lug valid from 01/01/2008 to 01/01/2012 issued by State administration of environmental protection in Lugansk region

/6/ Permit for special water use № Ukr 603 Lug valid from 01/06/2008 to 01/12/2011 issued by State administration of environmental protection in Lugansk region

/7/ Annex to the Permit for special water use № Ukr 387 Lug "Limit for water usage for 2010 in amount of 487,0 m3 per 1000,0 m3 issued by State administration of environmental protection in Lugansk region

/8/ Permit for special water use № Ukr 383 Lug valid from 01/10/2008 to 01/10/2012 issued by State administration of environmental protection in Lugansk region

/9/ State administration of environmental protection in Lugansk region. Permission for special water use № 461 Lug

/10/ State administration of environmental protection in Lugansk region. Permission for special water use № Ukr 615 Lug

/11/ Annex to the Permit for special water use № Ukr 502 Lug of Separate Division "Krasnoluchskiy department" "Limit for water usage for 2010 in amount of 513,5 m3 per 1000,0 m3 issued by State administration of environmental protection in Lugansk region

/12/ Permit for special water use № Ukr 198 Lug valid from 01/10/2008 to 01/10/2012 issued by State administration of environmental protection in Lugansk region

/13/ Permission for emissions into atmosphere for 2010 of "Luganskvoda Ltd."

/14/ Agreement №169 for the supply of electricity, August 1, 2008

/15/ 2009-2010 Year Report (part 1), consumption and payment of electricity

/16/ Water Supply Scheme of Lugansk region

/17/ Permits for special water use. Issued by the State Department of Environmental Protection in the Lugansk region. Ministry of Environmental Protection of Ukraine.

/18/ Report Svetlychanske Administration "Luganskvoda Ltd."on consumption and payment of electricity in May 2009

/19/ Report for Kirovske department of “Luganskvoda Ltd.” on consumption and payment for electricity in 2009 May

/20/ Contract for delivery of electricity power #169 from 20.08.2008

/21/ List of customer objects and units “Luganskvoda Ltd.”

/22/ Electrical circuit and points of settlement accounting and point of networks distribution from 20.08.2008

/23/ Data for calculated measures of accounting of Customers electricity: SD Bryanskiy department

/24/ Electrical circuit and points of settlement accounting and point of networks distribution of 20.08.2008

/25/ Settlement means details of electric power consumers: SD Pervomaiskiy Department "Luganskvoda Ltd."

/26/ Settlement means details of electric power consumers: SD Pivdenne Upravlinnia "Luganskvoda Ltd."

/27/ Settlement means details of electric power consumers: SD Perevalskiy Department "Luganskvoda Ltd."

/28/ Certificate of carrying a membership division of electricity grid and operational responsibilities of the parties to the contract

/29/ Rank of calculations for the reactive power flowing to the contract of electricity supply of 20.08.2008

/30/ Electrical circuit and points of settlement accounting and point of networks distribution of 20.08.2008

/31/ Supply and payment report for July 2008, all administrations and administrations

/32/ Report (Part 2) Year 2007 of consumption and payment for electricity in November 2007, all administrations and departments “Luganskvoda Ltd.”

/33/ Scheme of transporting water and water-lifting “Luganskvoda Ltd.”

/34/ Methodological manual on providing accounting and water loss regulation

/35/ Special edition № 2 "Water and wastewater management"

/36/ Work register of drinking water pump station "Svetlichnaya"

/37/ Electricity meter data of Svetlichnaya station

/38/ Accounting journal of the daily losses of electricity "Svetlychanskoho Management “Luganskvoda Ltd.” 2010

/39/ Accounting of lifted water Svetlychanskoho LTD "Luganskvoda" 2010

/40/ Operational register "Svetlychanske ACU "Luganskvoda Ltd." 2007

/41/ Water distribution newtworks scheme of Svetlychanskoho management

/42/ Krimskiy plot “Luganskvoda Ltd.” Journal of working of pumping aggregates and accounting of supply and losses of electricity

/43/ Operational register Krimskiy plot LTD "Luganskvoda"

/44/ Alchevskiy department “Luganskvoda Ltd.” pumping station electricity meter #757179, certificate

/45/ Alchevskiy department “Luganskvoda Ltd.” pumping station electricity meter #894250, certificate

/46/ Alchevskiy department “Luganskvoda Ltd.” pumping station electricity meter #375346, certificate

/47/ Alchevskiy department “Luganskvoda Ltd." pumping station electricity meters list

/48/ Krimskiy plot “Luganskvoda Ltd.” flow meters: #09011L, #93055, #77055, #01061L, passports

/49/ Alchevsk department “Luganskvoda Ltd.” operational register

/50/ Alchevsk Management “Luganskvoda Ltd.”, Pumping units journal

/51/ Alchevsk Management "Luganskvoda Ltd." Operating documentation

/52/ Water consumption report for 4 quarter of 2009, National statistic report

/53/ Act #11172 for consumed electricity power for 2009 "Luganskvoda Ltd."

/54/ Order for removal of meters and installation of electricity meters in 2009 "Luganskvoda Ltd."

/55/ User guide for electricity meters "Delta-8010", 2005, «Luganskvoda Ltd.», 2009

/56/ Three phases induction electric meter, passport of 2005, «Luganskvoda Ltd.», 2009

/57/ The list of installed electricity meters, «Luganskvoda Ltd.»

/58/ Act № 2602 of acceptance/replacement/technical review of accounting settlements in electrical installations up to 1000 V

/59/ Reactive energy meter. Passport CE6811

/60/ Electric three-phase multirate meter ET. Passport

/61/ Improvement program of Lugansk region water supply, that is proposed to be financed in 2008 via funds from various sources

/62/ Meeting report of qualifying commission on awarding grades December 25, 2008, «Luganskvoda Ltd.»

/63/ Daily data «Luganskvoda Ltd.» 11.06.2010

/64/ Water consumption balance for 2009, “Luganskvoda Ltd.”

/65/ Flowmeter, "Luganskvoda Ltd.", passport

/66/ Technical report on the topic: emissions calculation of pollutants into the atmosphere from technological equipment LTD "Luganskvoda"

/67/ Ministry for environmental protection of Ukraine , registration certificate 20.01.2007, "Luganskvoda Ltd "

/68/ Contract № 438 for implementation of works 23.11.2009 for developing of dust-cleaning equipment

/69/ South department "Luganskvoda Ltd.", water flowmeter #36118721, passport

/70/ South department, Verhunska PNS, "Luganskvoda LTD ", electricity meter # 3204636, # 1657215, # 3384616, # 1784992, # 2N02614, # 1784992, # 2024792, # 1656547,# 2D24792, # 2820021, # 19102419, passports

/71/ Accounting journal of implementation plan for water supply South Division, «Luganskvoda Ltd.», 01.06.2010

/72/ Accounting journal of implementation plan for water efficiency of plots and water intakes of main department, «Luganskvoda Ltd.», 2009

/73/ List of pumping station equipment of 2-nd lift, Novosvilovskiy water intake, Lobachevskiy water intake

/74/ Act of putting the equipment into operation, South Division «Luganskvoda Ltd.», 6.03.2009

/75/ Verification certificate of measuring instrument, ultrasound flow meter, «Luganskvoda Ltd.»

/76/ List of measuring devices in usage and are supposed to verify in 2010, «Luganskvoda Ltd.»

/77/ Manometer passport on South administration, Petrovskiy area.

/78/ Act of measuring inner pressure of RU pipeline, South administration on Petrovskiy p.s. «Luganskvoda Ltd.»

/79/ Calculation of default device to the flow meter, Petrovska p.s. «Luganskvoda Ltd.»

/80/ Passport on a standard aperture of angular selection pressure drop № 2130 Petrovska p.s. «Luganskvoda Ltd.»

/81/ Meeting report of qualifying commission, southern management «Luganskvoda Ltd.»2008. (Verification of workers knowledge with training)

/82/ Novosvetlovskii main water-pipe passport, subdivision of south management LTD "Luganskvoda "

/83/ Artesian wells passport № 64, 1957

/84/ Pollution charges tax payment, LTD "Luganskvoda "

/85/ Data of wastes' compound and properties which are forming, and also the level of danger for environment and human health, LLC "Luganskvoda "

/86/ Information about regulatory allowable amount of waste formation LLC "Luganskvoda "

/87/ Documents where extras volumes are stated in order to receive permission on pollutants into the air from stationary sources, LLC "Luganskvoda "

/88/ Scheme of water distribution units at the site of Novosvetlovskoy pumping station of 2nd lift

/89/ Journal of working of pumping aggregates of Novosvitlovska p.s. 2-nd lift, LLC “Luganskvoda”

/90/ Operational journal of pumping aggregates of Novosvitlovska p.s. 2-nd lift, «Luganskvoda Ltd.»

/91/ Register of defects and problems with electrical equipment of Novosvitlovska p.s. 2-nd lift, «Luganskvoda Ltd.»

/92/ Working guidance of pumping station mechanic engineer, 2008

/93/ Examination results on occupational safety of of Novosvitlovska p.s. 2-nd lift, «Luganskvoda Ltd.» (Syrenko A.I.)

/94/ Lutuhinskiy plot, «Luganskvoda Ltd.» , pump #477535, passport

/95/ Lutuginskiy area water-pipe building scheme «Luganskvoda Ltd.»

/96/ Electricity supply scheme of Lutuginskii department production area «Luganskvoda Ltd.»

/97/ Flow meter,Lutuhinskiy area, Lutuhinskiy department «Luganskvoda Ltd.», passport

/98/ Accounting journal of daily electricity of Lutuhinskiy area, Lutuhinskiy department «Luganskvoda Ltd.»

/99/ Register of pump aggregates work on the Lutunginskii water-pipe of Lutuginskii production area

/100/ Flow meter,Lutuhinskiy area, Lutuhinskiy department «Luganskvoda Ltd.» #9205, passport

/101/ Manual for frequency converters MDE

/102/ List of installed electricity meters in South Department «Luganskvoda Ltd.» 01.01.2010

/103/ Water use report for II quarter 2010 Luganskiy department, Lutuhinskiy department, South department «Luganskvoda Ltd.»

/104/ Act of putting a pumping equipment into operation, Khoroshanskiy, Jashikovskiy water intake 2010

/105/ Consolidated action plan on energy saving on «Luganskvoda Ltd.»

/106/ Thematic plan and an education program for machinists of pumping stations and aggregates, «Luganskvoda Ltd.»

/107/ Existing organizational structure of «Luganskvoda Ltd.»

/108/ Agreement №169 for the supply of electricity, August 1, 2008

/109/ 2009-2010 Year Report (part 1), consumption and payment of electricity

/110/ Permits for special water use. Issued by the State Department of Environmental Protection in the Lugansk region. Ministry of Environmental Protection of Ukraine.

/111/ Form of the statistical state accounting of 11-MTP for "Company" Luganskvoda " (2007 year)

/112/ Decree "On approval of the procedure for of tariffs on services in the centralized water-supply and overflow-pipe""

/113/ Methodology of branch technological standards of drinking water use at the companies of water supply and drainage industry of Ukraine

/114/ Krimskiy plot "Luganskvoda Ltd." manometer, passport

/115/ Krimskiy plot "Luganskvoda Ltd." pump #2 IN #43041, passport

/116/ Krimskiy plot "Luganskvoda Ltd." flow meter, passport

/117/ Svetlychanska pumping station "Luganskvoda Ltd." Pump INV № 10001, documentation

/118/ Svetlychanska pumping station "Luganskvoda Ltd." Pump INV № 43134, documentation

/119/ Svetlychanska pumping station "Luganskvoda Ltd." electricity meter, passport

/120/ Svetlychanska pumping station "Luganskvoda Ltd." electricity meter №1656590, passport

/121/ Svetlychanska pumping station "Luganskvoda Ltd." electricity meter №255734, passport

/122/ Svetlychanska pumping station "Luganskvoda Ltd." electricity meter №63832095, passport

/123/ Svetlychanska pumping station "Luganskvoda Ltd." electricity meter №63832098, passport

/124/ Water intake and water usage by "Luganskvoda Ltd." for 12 months of 2008, compiled using the form 2PT VODGOS

/125/ Certificate of commissioning of the frequency regulator for electric motor #2 at the pumping station LVVAUSh. Approved by chief engineer Kovalev P.P. of Separate Division “Lugansk Administration of “Luganskvoda Ltd.”

/126/ Working commission certificate about readiness of object’s completed construction dated 29/11/2001. The replacement of the section of main water conduit Malogvardiysk-Volodarsk, diameter - 600 mm

/127/ Working commission certificate about readiness of object’s completed construction dated 27/05/2007. Perevalsk city, WS water intake point. Technical re-equipping and reconstruction of the water-pumping station.

/128/ Certificate of commissioning #4701 of the pump unit ECV-10-120-40 well #26, dated 7/10/2007. The pump worked for 2640 hours.

/129/ Equipment commissioning certificate, Lutuginskiy department of "Luganskvoda Ltd.", of 18/10/2007. Cutting of the rotor wheel to the design diameter.

/130/ Certificate of commissioning of the pump type NC-24, South administration of "Lugansvoda Ltd.", dated 05/10/2007.

/131/ Certificate of commissioning of the ultrasonic flow meter UVR-011 on the pumping stations “Kurgan”, Rovno Department of “Luganskvoda Ltd.” Dated 02/11/2007.

/132/ Working commission certificate about readiness of object’s completed construction dated 28/07/2007. Svitlychanska pumping station, 2nd lifting, pumping station of the 3rd lifting, Stahanov town. Installation of the automatic air valve at the water-supply pipe, D 1000mm

/133/ The report on fuel, heat power and electric power consumption for January-December 2007 of the administration “Western filtration station” of “Luganskvoda Ltd.”. Form #11-MTP, approved by the Ukrainian State Committee Decree 27/07/2007 #256

/134/ The report on fuel, heat power and electric power consumption for January-December 2007 of the Lutuginskiy administration of “Luganskvoda Ltd.”. Form #11-MTP, approved by the Ukrainian State Committee Decree 27/07/2007 #256

/135/ The report on fuel, heat power and electric power consumption for January-December 2007 of the Southern Administration of “Luganskvoda Ltd.”. Form #11-MTP, approved by the Ukrainian State Committee Decree 27/07/2007 #256

/136/ Certificate of the object's readiness to exploitation # 38 of 10/11/2010. "Major repair of the water supply network of the Rodakovo village, Lugansk city

/137/ Order for provision of services on technical maintenance and repair with Statement of work acceptance # VO-1/35-127 of 18/10/2010. Commissioning of the pump TVS 8.4-2 W 1502 #46079208-1 at the water intake point #1-1a of Lugansk city

/138/ Order # VO-1/4-127 of 16/09/2010 on technical support service and overhaul with Statement of work acceptance. Commissioning of the pump Z 6602. L6W40T405 #00086 at the water intake point #1 of Lugansk city

/139/ Certificate of equipment commissioning of 25/03/2010 on Kotsyubynskyy Street 3, Lugansk. Name of equipment: frequency converter, model: VFD185F43A, Type: DELTA, Release date: 2009 , Serial number: W 9460089

/140/ Certificate of equipment individual testing of the frequency converter dated 25/03/2010. Provided at pumping station on 3, Kotsyubynskyy Str., Lugansk

/141/ Certificate of equipment commissioning of 30/03/2010. Name of equipment: frequency converter, Model: VFD075F43V, Type: DELTA, Release date: 2009 , Serial number: W 9420033, location – 1st city district, d1, Sverdlova Str., Lugansk

/142/ Certificate of equipment individual testing (testing of bilateral inlet pump impeller type1D 1250-125, serial # 104, installed on p/aggregate #3) of 30/03/2010. Provided in PS, 1st city district, 1S bld., Sverdlova, Lugansk

/143/ Certificate of equipment individual testing of 02/02/2010. Provided at pumping station of 1-st U lift of "Luganskvoda Ltd.", separate division "Alchevsk administration". Testing of the pump centrifugal 2-side input type 1D1250-125, ref. number 104, installed at the pumping unit #3.

/144/ Certificate of equipment commissioning of 02/02/2010. Type of equipment: impeller pump, model: D-1250-65-125, Type: D, Release date: 18/11/2009, Serial number: # 104. Located on Lenina Str, 52-b, Petrovskoe city, Lugansk region

/145/ Certificate of equipment individual testing (testing of bilateral inlet pump impeller type 1D 1250-125, serial # 105, installed on pumping unit #7) of 02/02/2010. Provided in PS of 1-st U lifting of "Luganskvoda LTD." SD "Alchevskyi department"

/146/ Certificate of equipment commissioning of 02/02/2010. Name of equipment: impeller pump, model: D-1250-65-125, Type: D, Release date: 18/11/2009 , Serial number: # 105, Located on Lenina Str, 52-b, Petrovskoe city, Lugansk region

/147/ Certificate of the object's readiness to exploitation, # 31 of 07/06/2010, Lugansk city. "Reconstruction of the main conduit D = 900 mm "Alchevsk-Petrovske", Alchevsk city, Perevalskiy district

/148/ Certificate of the object's readiness to exploitation, # 30 of 07/06/2010, Lugansk city. "Emergency areas replacement of the main conduit D = 1000 mm "Alchevsk-Petrovske", Alchevsk city, Perevalskiy district

/149/ Certificate of the object's readiness to exploitation, # 19 of 11/01/2010, Lugansk city. "Major overhaul of street plumbing networks of Antratsyt city", Antratsyt city

/150/ Certificate of the object's readiness to exploitation, # 20 of 01/03/2010, Lugansk city. "Restoring of water systems functioning D= 400 mm to Dubovske village of Antratsyt city", Antratsyt city

/151/ Certificate of object availability to exploitation, # 39 of 10/11/2010, Lugansk city. "The main overhaul of plumbing networks of Svetlichanskyi department", Brianka city, Popasnianskyi district

/152/ Certificate of the object's readiness to exploitation, # 38 of 10/11/2010, Lugansk city. "The main overhaul of plumbing networks of Rodakovo village", Brianka city, Popasnianskyi district

/153/ Certificate of the object's readiness to exploitation, # 38 of 10/11/2010, Lugansk city. "The main overhaul of drain on Frunze Street in Lugansk city", Lugansk city

/154/ Certificate of the object's readiness to exploitation, # 38 of 10/11/2010, Lugansk city. "Restore of water supply network D = 1000 mm of Svetlichanska service water pump station of 2-nd lift to the 3-rd lift pump station in Stakhanov city", Stakhanov city

/155/ Protocol of the internal audit execution at "Luganskvoda Ltd." enterprise # 099 of 10/03/2010

/156/ Protocol of the internal audit execution at "Luganskvoda Ltd # 100 of 11/06/2010

/157/ Protocol of the internal audit execution at "Luganskvoda Ltd # 101 of 14/09/2010

/158/ Report on fuel use, heat power and electric energy use for January-September 2010. "Luganskvoda LTD", "Western Filtration Station" administration

/159/ Report on fuel use, heat power and electric energy use for January-September 2010 at “Luganskvoda LTD”

/160/ Report on fuel use, heat power and electric energy use for January-September 2010 at “Luganskvoda LTD” Southern Separate Division

/161/ Report on fuel use, heat power and electric energy use for January-September 2010. “Luganskvoda LTD”, Lutuginskyi department

/162/ Report on electric energy consumption of "Luganskvoda LTD." for 2007 as per water raised

/163/ Report on electric energy consumption by departments of "Luganskvoda LTD." for 9 months 2010 as per water raised

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/ Anchishkin A.G. – Head of energy and mechanical services

/2/ Tsygoev A.M. – Main power engineering specialist

/3/ Tkachenko O.M. – Deputy of main power engineering specialist

/4/ Pavlenko E.M. – Engineer

/5/ Movchan S.V. – Head of Production and Technical Department

/6/ Shyngareva I.I. – Hydro geologist

/7/ Sleta U.N. – Lead engineer

/8/ Ivanova G.V. – Lead engineer

/9/ Pryadko V.B. – Head of Slavyanoserbsk division

/10/ Vandin A.I. – Operator of Slavyanoserbsk pumping station

/11/ Mognyakov D.N. – Chief Engineer of Lutugino division

/12/ Pryadko V.B. – Head Krasnolimanskaya pumping station

/13/ Kashyntsev A.V. – Operator of Krasnolimanskaya pumping station

/14/ Didenko A.P. – Head of Slavyanoserbsk pumping station of the third lift

/15/ Bashlyakova S.L. – Operator of Slavyanoserbsk pumping station

/16/ Artsev A.V. – Head of Slavyanoserbsk lift pumping station of the fourth lift

/17/ Shetinina I.V. – Operator of Slavyanoserbsk pumping station

/18/ Apostolaka S.P. – JI Consultant of VEMA S.A.

/19/ Vorobyov E.V. – JI Consultant of VEMA S.A.

APPENDIX A: VERIFICATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

VERIFICATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
Project approvals by Parties involved					
90	Has the NFPs 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 project has been approved by both Host Party (Ukraine) as well as sponsor Party (Switzenland). The Letter of Approval 1808/23/7 issued by the National Environmental Investment Agency of 09/11/2010 and	**CAR 01**. Please provide the information about project registration in the MR.	The project was registered under Track 1 with a project reference number UA1000195. The required information was included to the 2nd version of MR.	CAR 01 is closed based on the provided information in the MR ver.2.

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		the Letter of Approval J294-0485 issued by Federal Office the Environment FOEN of Switzerland of 26/10/2010 were presented to the verification team. However, no information on project registration was included in MR ver.1.			
91	Are all the written project approvals by Parties involved unconditional?	See cl.90 above	See cl.90 above	See cl.90 above	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?	The project is being implemented in accordance with the determined PDD. There were some insignificant deviations from the PDD in respect of capacity of the	N/a	N/a	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		installed pumping equipment caused by the change in demand of water amount supplied to the customers. In some cases there was a deviation in diameters of networks being replaced in comparison to the planned diameters defined at stage of project development caused by production necessity.			
93	What is the status of operation of the project during the monitoring period?	Mainly the project measures are being realized according to the implementation schedule presented in the determined PDD	**CAR 02**. Please provide in the MR the information regarding implementation status of all project measures envisaged in the PDD.	All required corrections were made and additional information provided and presented in the revised MR ver. 2.	CAR 02 is closed based on due amendments made to the 1st version of

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		ver.02. The first rehabilitation measures under the project started at the end of 2007. During the monitoring period January-September 2010 the project was operational and generated emission reduction units, although full completion of installation of all project measures is planned for the end of 2011. The MR does not include the information on status of implementation of some project measures, namely installation of new			the MR.

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		groups of record keeping devices and installation of automatic air valves. Thus, CAR 02 was raised.			
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?	There are few deviations to the monitoring plan included in the determined PDD. The CAR was raised as to the revision of the monitoring plan. Refer to the cl.99 (a) and 99 (b) of this protocol.	See cl.99 (a) and 99 (b) below	See cl.99 (a) and 99 (b) below	OK See cl.99 (a) and (b) below.
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	For calculating the emission reductions, key factors such as increased demand in water amount to be supplied to the customers,	N/a	N/a	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	account, as appropriate?	sectoral reform policies in water distribution sector and legislation, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were 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?	Yes, data sources used for calculating emission reductions or enhancements of net removals are clearly identified, reliable and transparent.	N/a	N/a	OK
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or	Yes, emission factors, including default emission	N/a	N/a	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	factors, if used for calculating the emission reductions or enhancements of net removals, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice. The default emission factor used in the current project is carbon emission factor for electricity consumption which is taken from the study «Ukraine – estimation of new CEF calculation», verified by TUV SUD Industrie Service GmbH.			

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
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	N/a	N/a	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	N/a	N/a	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	N/a	N/a	N/a
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?	N/a	N/a	N/a	N/a

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
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?	In the course of the 2nd monitoring period (01/01/2010 – 30/09/2010) the original monitoring plan described in the registered PDD version 02 was changed by the project participants. The deviations relate to the periodicity of the emission reduction calculation which was changed from a year to a month in order to make monitoring process possible for the nine months (3 quarters) of 2010. As far as the deviations were	**CAR 03**. The monitoring plan in the determined PDD provides for the annual periodicity of emission reduction calculations, while the monitoring period in the current MR is 9 months, which means that original MP was revised. In this regard please submit the revised MP as well as justification for all modifications made; please also correct the information in section A.8 of the MR respectively.	Because of the fact that original monitoring plan envisaged calculation of project and baseline emissions and emission reductions on the annual basis, the monitoring plan was revised in order to make monitoring process possible for the nine months (3 quarters) of 2010. The formulae for calculation of variables were adjusted for the monitoring period of 1 month instead of period of 1 year that was in the	The appropriate justification of the proposed revision of the monitoring plan was provided. The CAR 03 was closed based on made amendments and sufficient information provided.

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		not sufficiently described and justified, the CAR has been raised.		initial monitoring plan determined in the PDD. With a purpose of ensuring more accurate results of emission reduction calculation and taking into account the fact that water supply depends on a season of the year, the baseline parameter PPER – specific electricity consumption per water unit in 2007 – was calculated for each month of 2007 and these historical monthly values are used for determining baseline emissions for each specific month of the reporting period.	

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
				Updated formulas are presented in the Monitoring Report version 2.	
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?	The proposed revision improves 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. See cl.99 (a) above.	See 99 (a) above	See 99 (a) above	OK
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 implementation of data collection procedures is in accordance with	**CAR 04**. Information regarding recording frequency of the monitored parameters indicated in the Annex1 of the MR does not	Information regarding recording frequency of the monitored	The issue is closed based on due corrections

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		the PDD and revised monitoring plan, including the quality control and quality assurance procedures. However, the information regarding recording frequency of the monitored parameters in the MR is inappropriate.	correspond to the PDD and is inappropriate taking into account revised monitoring period (cl.99 (a) of this protocol). Please make the information consistent. **CL 01**. Please provide evidences of the performed internal audits and check-ups as to the present JI project being implemented at the "Luganskvoda Ltd." during the monitoring period at hand (January – September 2010) according to the internal audit procedure described in the MR (e.g., audit reports or other records confirming internal audits/checking–ups execution and finding revealed).	parameters was corrected and made consistent with the PDD and revised monitoring plan. During the monitoring period January – September 2010 three internal audits of the JI project monitoring system at "Luganskvoda Ltd." were conducted by the project developers "VEMA S.A.". The audits were carried out in accordance with the plan described in the section C.3 of the MR and established quarterly	provided in the 2nd version of the MR. CL 01 is closed based on appropriate information and supporting evidences provided.

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
				frequency. The protocols of the executed audit were provided to the verifiers.	
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	Yes, The function of the monitoring equipment, including its calibration status, is in order. According to existing legislation "On metrology and metrological activity" all measuring devices in Ukraine shall conform to stated requirements of corresponding standards and be calibrated periodically. Flow meters were calibrated by Lugansk Centre of	**CAR 05**: Some dates of last calibrations/verifications of the metering equipment (indicated in the Annex 2 (Excel file) to the MR do not correspond to the due calibration frequency. Please correct/clarify.	The information on meters' last calibration date in the Annex 2 has been verified and corrected appropriately. The status of calibration of used metering equipments is in order.	The issue is closed based on due amendments made to the MR and Annexes.

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		Meters Standardization, Metrology and Certification. Verification of commercial electricity supply meters of «Luganskvoda Ltd.» is executed by Luganskstandard metrology. The project complies with legal requirements to the calibration and verification. However, some dates of last calibrations/verifications indicated in the Annex 2 (Excel file) to the MR do not correspond to the due calibration frequency.			

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	The evidence and records used for the monitoring are maintained in a traceable manner. «Luganskvoda Ltd.» collects and keeps the data relating to electric energy and acquired water for water-supply in the forms of electric energy and acquired water bills. All necessary information for monitoring of GHGs emission reductions are stored in paper or/and electronic formats and will be saved till the crediting period and for two years after the last	N/a	N/a	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		operation with ERUs from the project.			
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	The data collection and management system for the project is in accordance with the PDD and revised monitoring plan. The verification team confirms effectiveness of the existing management and operational systems and found them eligible for reliable project monitoring.	N/a	N/a	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	N/a	N/a	N/a
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/a	N/a	N/a	N/a

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	N/a	N/a	N/a	N/a
104	Does the monitoring period not overlap with previous monitoring periods?	N/a	N/a	N/a	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	N/a	N/a	N/a
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	N/a	N/a	N/a	N/a

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	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	N/a	N/a	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	N/a	N/a	N/a

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	N/a	N/a	N/a	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	N/a	N/a	N/a

APPENDIX B: VERIFICATION TEAM

The verification team consists of the following personnel:

Oleg Skoblyk, Specialist (Power Management)

Climate Change Lead Verifier

Bureau Veritas Ukraine Health, Safety and Environmental Department project manager

He has graduated from National Technical University of Ukraine 'Kyiv Polytechnic University" with specialty Energy Management. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered). He performed over 10 audits since 2008. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the validation of 20 JI projects.

Kateryna Zinevych, M.Sci. (environmental science)

Climate Change Verifier

Bureau Veritas Ukraine Health, Safety and Environmental Department project manager

Kateryna Zinevych has graduated from National University of Kyiv-Mohyla Academy with the Master Degree in Environmental Science. She has experience at working in a professional position (analytics) involving the exercise of judgment, problem solving and communication with other professional and managerial personnel as well as customers and other interested parties at analytical centre "Dergzovnishinform" and "Burea Veritas Ukraine" LLC. She has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. She has successfully completed Climate Change Verifier Training Course and she participated as verifier in the determination/verification of 26 JI projects.

The report was reviewed by:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)

Internal Technical Reviewer, Climate Change Lead Verifier, Bureau Veritas Certification Holding SAS Local Climate Change Product Manager for Ukraine

Acting CEO Bureau Veritas Black Sea District

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Course and he was involved in the determination/verification over 60 JI/CDM projects.