



VERIFICATION REPORT LITASCO S.A.

VERIFICATION OF THE
GREENHOUSE GASES EMISSIONS REDUCTION DUE TO
MODERNIZATION OF PRODUCTION FACILITIES AT LLC
“KARPATNAFTOHIM”
INITIAL AND FIRST PERIODIC FOR THE PERIOD
11/11/2010 – 31/12/2012

REPORT No. UKRAINE-VER/0582/2012

REVISION No. 02

BUREAU VERITAS CERTIFICATION



VERIFICATION REPORT

Date of first issue: 05/04/2013	Organizational unit: Bureau Veritas Certification Holding SAS
Client: LITASCO S.A.	Client ref.: Nelson da Silva

Summary:
Bureau Veritas Certification has made the initial and 1st periodic verification of the "Greenhouse gases emissions reduction due to modernization of production facilities at LLC "Karpatnaftohim" project of LITASCO S.A. located in Kalush, Ivano-Frankivsk region, Ukraine, and applying 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 monitoring report against 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 planned and described in approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 321 908 tonnes of CO₂ equivalent for the monitoring period from 11/11/2010 to 31/12/2012.

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.: UKRAINE-ver/0582/2012	Subject Group: JI
Project title: Greenhouse gases emissions reduction due to modernization of production facilities at LLC "Karpatnaftohim"	
Work carried out by: <i>E. P.</i> Vyacheslav Yeriomin – Team Leader, Lead Verifier Sergiy Kustovskyy – Team Member, Lead Verifier	
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer Iuliia Pylnova – Technical specialist	
Work approved by: Ivan Sokolov – Operational Manager <i>Ivan Sokolov</i> Bureau Veritas Certification Holding SAS	
Date of this revision: 08/04/2013	Rev. No.: 02
Number of pages: 25	

- No distribution without permission from the Client or responsible organizational unit
- Limited distribution
- Unrestricted distribution



Table of Contents		Page
1	INTRODUCTION	3
1.1	Objective	3
1.2	Scope	3
1.3	Verification Team	3
2	METHODOLOGY.....	4
2.1	Review of Documents	4
2.2	Follow-up Interviews	4
2.3	Resolution of Clarification, Corrective and Forward Action Requests	5
3	VERIFICATION CONCLUSIONS.....	6
3.1	Remaining issues and FARs from previous verifications	6
3.2	Project approval by Parties involved (90-91)	6
3.3	Project implementation (92-93)	6
3.4	Compliance of the monitoring plan with the monitoring methodology (94-98)	7
3.5	Revision of monitoring plan (99-100)	8
3.6	Data management (101)	8
3.7	Verification regarding programmes of activities (102-110)	8
4	VERIFICATION OPINION.....	9
5	REFERENCES	11
	APPENDIX A: VERIFICATION PROTOCOL.....	16



1 INTRODUCTION

LITASCO S.A. has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Greenhouse gases emissions reduction due to modernization of production facilities at LLC “Karpatnaftohim” (hereafter called “the project”) at Kalush, Ivano-Frankivsk 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.

1.1 Objective

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity 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, monitoring plan, monitoring report, 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, corrective and/or forward 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:

Vyacheslav Yeriomin

Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Sergiy Kustovskyy

Bureau Veritas Certification Climate Change Lead Verifier

This verification report was reviewed by:

Ivan Sokolov



Bureau Veritas Certification, Internal Technical Reviewer

Iuliia Pylnova
Bureau Veritas Certification Technical Specialist

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 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 LLC “KT-Energy” and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD) and/or 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 versions 1.0, 2.0, 2.1 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 12/03/2013 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of LLC “KT-Energy” and LLC “Karpatnaftohim” were interviewed (see References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

Interviewed organization	Interview topics
LLC "Karpatnaftohim"	<ul style="list-style-type: none"> ➤ 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 LLC "KT-Energy"	<ul style="list-style-type: none"> ➤ Baseline methodology ➤ Monitoring plan ➤ Monitoring report ➤ Excel spreadsheets

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 Verification Team to assess compliance with the monitoring plan;
- (c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

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



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

3 VERIFICATION CONCLUSIONS

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

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

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 7 Corrective Action Requests and 3 Clarification Requests.

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

3.1 Remaining issues and FARs from previous verifications

No FARs were raised as a result of determination.

3.2 Project approval by Parties involved (90-91)

Written project approval by Ukraine # 3917/23/7 dated 19/12/2012 has been issued by the State Environmental Investment Agency of Ukraine.

The written project approval by Switzerland, the other Party involved, has been issued by the Federal Office for the Environment FOEN of Switzerland (Letter of Approval No.J294-0485 dated 23/11/2012).

The abovementioned written approvals are unconditional.

The identified areas of concern as to the project approval by Parties involved, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CAR 01).

3.3 Project implementation (92-93)

Project activity foresees the replacement of diaphragm cell technology with more energy efficient membrane cell technology for caustic soda production by construction membrane electrolysis unit with the capacity of 200 thousand tonnes per annum (new membrane electrolysis plant). The project is initiated in order to optimize energy resource consumption by the enterprise and to reduce greenhouse gases emissions.



Caustic soda (sodium hydroxide, NaOH) is a reagent used in the chemical industry, petrochemical industry, paper manufacturing, textile manufacturing and other industries as well as in the color metallurgical sector.

Before proposed project implementation caustic soda at LLC "Karpatnaftohim" was produced using diaphragm cell technology. Within this process saturated brine (sodium chloride solution) enters the anode compartment of the cell, where chlorine gas is liberated. The function of the diaphragm is to separate the brine from the caustic solution at the cathode side, which is also where hydrogen gas is released. Diaphragm cell technology supposes consumption of relatively high amounts of heat energy and electricity and thus causes relatively high emissions of greenhouse gases into the atmosphere.

The decision about project implementation has been made on 14th of November, 2005 taking into account the possibility of attracting additional investment using Kyoto Protocol's flexible mechanisms. Project implementation lasted during 2005-2010 and the new chlorine and caustic soda production facilities (membrane electrolysis unit or membrane electrolysis plant) have been put into operation at 11th of November, 2010.

Within the framework of proposed project implementation the existed chlorine and caustic soda production unit #2 with the capacity of 125 000 tonnes per annum has been taken out from operation at the 1st of August 2006 and the chlorine and caustic soda production unit #1 with the capacity of 66 000 tonnes per annum has been taken out from operation at 1st of June 2008 (both units were using diaphragm cell technology).

The realization of the project has been completed in 2010. The project has generated emission reductions during 2010-2012. However, the workshop included in the project boundaries is not operational since September, 2012 due to economic reasons. The resuming of operation is expected in the near future.

The identified areas of concern as to the project implementation, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CARs 02, 03, CL 01).

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

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



For calculating the emission reductions, key factors 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 are clearly identified, reliable and transparent.

Emission factors, including default emission factors, are 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 responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CARs 04, 05, 07, CL 02).

3.5 Revision of monitoring plan (99-100)

Since the monitoring plan was not revised the section is not applicable.

3.6 Data management (101)

The data and their sources, provided in monitoring report, 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.

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 monitoring plan.

The identified areas of concern as to the data management, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CAR 06, CL 03).

3.7 Verification regarding programmes of activities (102-110)

Not applicable



4 VERIFICATION OPINION

Bureau Veritas Certification has performed the initial and 1st periodic verification of the “Greenhouse gases emissions reduction due to modernization of production facilities at LLC “Karpatnaftohim” 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 the monitoring report against the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of LLC “KT-Energy” 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 Plan indicated in the final PDD version 2.2. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 2.1 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or misstatements. Our opinion relates to the project’s GHG emissions and resulting GHG 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, with a reasonable level of assurance, the following statement:

Reporting period: From 11/11/2010 to 31/12/2012

For the period from 11/11/2010 to 31/12/2010

Baseline emissions	: 59604	tonnes of CO ₂ equivalent
Project emissions	: 40342	tonnes of CO ₂ equivalent
Emission Reductions	: 19262	tonnes of CO ₂ equivalent

For the period from 01/01/2011 to 31/12/2011

Baseline emissions	: 474841	tonnes of CO ₂ equivalent
Project emissions	: 302147	tonnes of CO ₂ equivalent
Emission Reductions	: 172694	tonnes of CO ₂ equivalent



VERIFICATION REPORT

For the period from 01/01/2012 to 31/12/2012

Baseline emissions	: 359474	tonnes of CO ₂ equivalent
Project emissions	: 229522	tonnes of CO ₂ equivalent
Emission Reductions	: 129952	tonnes of CO ₂ equivalent

Total for the monitoring period.

Baseline emissions	: 893919	tonnes of CO ₂ equivalent
Project emissions	: 572011	tonnes of CO ₂ equivalent
Emission Reductions	: 321908	tonnes of CO ₂ equivalent



5 REFERENCES

Category 1 Documents:

Documents provided by LITASCO S.A. that relate directly to the GHG components of the project.

- /1/ PDD "Greenhouse gases emissions reduction due to modernization of production facilities at LLC "Karpatnaftohim" project of LITASCO S.A. version 2.2 dated 29/11/2012
- /2/ Monitoring Report for 11/11/2010-31/12/2012 "Greenhouse gases emissions reduction due to modernization of production facilities at LLC "Karpatnaftohim", version 1.0 dated 01/03/2013.
- /3/ Monitoring Report for 11/11/2010-31/12/2012 "Greenhouse gases emissions reduction due to modernization of production facilities at LLC "Karpatnaftohim", version 2.0 dated 20/03/2013.
- /4/ Monitoring Report for 11/11/2010-31/12/2012 "Greenhouse gases emissions reduction due to modernization of production facilities at LLC "Karpatnaftohim", version 2.1 dated 02/04/2013.
- /5/ Emission reduction calculation for LLC "Karpatnaftohim", excel file
- /6/ Letter of Approval #3917/23/7 for the project "Greenhouse gases emissions reduction due to modernization of production facilities at LLC "Karpatnaftohim" issued by State Environmental Investment Agency of Ukraine dated 19/12/2012.
- /7/ Letter of Approval of the JI project "Greenhouse gases emissions reduction due to modernization of production facilities at LLC "Karpatnaftohim" # J294-0485 issued by the Federal Office for the Environment of Switzerland dated 23/11/2012.

Category 2 Documents:

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

- /1/ Technical report on chlorine production unit for January 2010
- /2/ Technical report on caustic soda and chlorine production using membrane method unit for November 2010
- /3/ Technical report on caustic soda and chlorine production using membrane method unit for December 2010
- /4/ Technical report on caustic soda and chlorine production using membrane method unit for October 2010
- /5/ Order # 418-KH dated 30/09/2010 on production process commissioning
- /6/ Statement # 544 dated 09/09/2010 on object operation readiness
- /7/ Technical report on caustic soda and chlorine production using membrane method unit for January 2011
- /8/ Technical report on caustic soda and chlorine production using membrane method unit for February 2011
- /9/ Technical report on caustic soda and chlorine production using



- membrane method unit for March 2011
- /10/ Technical report on caustic soda and chlorine production using membrane method unit for April 2011
 - /11/ Technical report on caustic soda and chlorine production using membrane method unit for May 2011
 - /12/ Technical report on caustic soda and chlorine production using membrane method unit for June 2011
 - /13/ Technical report on caustic soda and chlorine production using membrane method unit for July 2011
 - /14/ Technical report on caustic soda and chlorine production using membrane method unit for August 2011
 - /15/ Technical report on caustic soda and chlorine production using membrane method unit for September 2011
 - /16/ Technical report on caustic soda and chlorine production using membrane method unit for October 2011
 - /17/ Technical report on caustic soda and chlorine production using membrane method unit for November 2011
 - /18/ Technical report on caustic soda and chlorine production using membrane method unit for December 2011
 - /19/ Technical report on caustic soda and chlorine production using membrane method unit for January 2012
 - /20/ Technical report on caustic soda and chlorine production using membrane method unit for February 2012
 - /21/ Technical report on caustic soda and chlorine production using membrane method unit for March 2012
 - /22/ Technical report on caustic soda and chlorine production using membrane method unit for April 2012
 - /23/ Technical report on caustic soda and chlorine production using membrane method unit for May 2012
 - /24/ Technical report on caustic soda and chlorine production using membrane method unit for June 2012
 - /25/ Technical report on caustic soda and chlorine production using membrane method unit for July 2012
 - /26/ Technical report on caustic soda and chlorine production using membrane method unit for August 2012
 - /27/ Technical report on caustic soda and chlorine production using membrane method unit for September 2012
 - /28/ Technical report on caustic soda and chlorine production using membrane method unit for October 2012
 - /29/ Technical report on caustic soda and chlorine production using membrane method unit for November 2012
 - /30/ Technical report on caustic soda and chlorine production using membrane method unit for December 2012
 - /31/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for December 2010
 - /32/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for November 2010



VERIFICATION REPORT

- /33/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for October 2010
- /34/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for January 2011
- /35/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for February 2011
- /36/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for March 2011
- /37/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for April 2011
- /38/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for May 2011
- /39/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for June 2011
- /40/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for July 2011
- /41/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for August 2011
- /42/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for September 2011
- /43/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for October 2011
- /44/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for November 2011
- /45/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for December 2011
- /46/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for January 2012
- /47/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for February 2012
- /48/ Technical report on hydrocarbons production unit for February 2012
- /49/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for March 2012
- /50/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for April 2012
- /51/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for May 2012
- /52/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for June 2012
- /53/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for July 2012
- /54/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for August 2012
- /55/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for September 2012
- /56/ Technical report on pyrolysis, compressing and pyrolysis gas



- separation workshop for October 2012
- /57/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for November 2012
- /58/ Technical report on pyrolysis, compressing and pyrolysis gas separation workshop for December 2012
- /59/ Form # 11-МТП (annual). Report on fuel, heat and electricity consumption for 2012
- /60/ Form # 11-мтп (ser) (annual). Secondary energy resources generation and consumption for 2012
- /61/ Form # 11-МТП (fuel) (annual). Actual fuel consumption needed for certain types of goods production and works performance 2012
- /62/ Form # 11-МТП (annual). Report on fuel, heat and electricity consumption for 2011
- /63/ Form # 11-МТП (fuel) (annual). Actual fuel consumption needed for certain types of goods production and works performance 2011
- /64/ Form # 11-мтп (ser) (annual). Secondary energy resources generation and consumption for 2011
- /65/ Form # 11-МТП (annual). Report on fuel, heat and electricity consumption for January-December 2010
- /66/ Form # 11-МТП (fuel) (annual). Actual fuel consumption needed for certain types of goods production and works performance 2010
- /67/ Form # 11-мтп (ser) (annual). Secondary energy resources generation and consumption for 2010
- /68/ Passport on multifunctional power meter type ZFB 410, fabrication # 72554186
- /69/ Passport on multifunctional power meter type ZFB 410, fabrication # 72738575 (last calibration date–31/05/2011)
- /70/ Passport on multifunctional power meter type ZFB 410, fabrication # 73113337 (last calibration date–31/05/2011)
- /71/ Passport on multifunctional power meter type ZFB 410, fabrication # 72554180 (last calibration date–31/05/2011)
- /72/ Photo–multifunctional power meter type ZFB 410, fabrication # 72554180
- /73/ Photo–multifunctional power meter type ZFB 410, fabrication # 72738575
- /74/ Photo–multifunctional power meter type ZFB 410, fabrication # 72738581
- /75/ Photo–level meter APR 2000 ALW, fabrication # 10073202
- /76/ Photo–level meter APR 2000 ALW, fabrication # 11070400
- /77/ Photo–level meter APR 2000 ALW, fabrication # 10073203
- /78/ Photo–level meter APR 2000 ALW, fabrication # 10073201
- /79/ Photo–level meter APR 2000 ALW, fabrication # 11071761
- /80/ Photo–level meter APR 2000 ALW, fabrication # 10073205
- /81/ Photo–vortex heat energy flow meter type Optiswirl 4070, fabrication # 8/348989
- /82/ Passport on vortex heat energy flow meter type Optiswirl 4070, fabrication # 8/348990 (last calibration date–21/09/2012)



- /83/ Passport on vortex heat energy flow meter type Optiswirl 4070, fabrication # 8/348989 (last calibration date–21/09/2012)
- /84/ Passport on level meter APR 2000 ALW, fabrication # 11070400 (last calibration date–28/05/2012)
- /85/ Passport on level meter APR 2000 ALW, fabrication # 10073202 (last calibration date–28/05/2012)
- /86/ Passport on level meter APR 2000 ALW, fabrication # 10073203 (last calibration date–28/05/2012)
- /87/ Passport on level meter APR 2000 ALW, fabrication # 10073201 (last calibration date–28/05/2012)
- /88/ Passport on level meter APR 2000 ALW, fabrication # 11071761 (last calibration date–28/05/2012)
- /89/ Passport on level meter APR 2000 ALW, fabrication # 10073205 (last calibration date–28/05/2012)
- /90/ Form # 2-ТП (air) (annual). Environmental protection report for 2012
- /91/ Form # 2-ТП (water) (per quarter). Report on water consumption for IV quarter 2012
- /92/ Form # 1-wastes (annual). Report on wastes handling for 2012

Persons interviewed:

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

- /1/ V.Kysylchak – chief engineer of LLC “Karpatnaftohim”
- /2/ E.Maslov – Head of technical department of LLC “Karpatnaftohim”
- /3/ A.Andriiv – Deputy head of technical department of LLC “Karpatnaftohim”
- /4/ O.Izdryk – Acting head of project department of LLC “Karpatnaftohim”
- /5/ O.Pukish – Senior foreman of LLC “Karpatnaftohim”
- /6/ O.Yamnych – Lead engineer technologist of LLC “Karpatnaftohim”
- /7/ I.Ivanova – Head of personnel preparation department of LLC “Karpatnaftohim”
- /8/ Y.Bumbu – Head engineer of ecological calculations of of LLC “Karpatnaftohim”
- /9/ M.Shlapak – JI consultant, LLC “KT-Energy”



VERIFICATION REPORT

APPENDIX A: VERIFICATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	<u>Corrective Action Request (CAR) 01.</u> No Letter of Approval from Ukraine was provided to the AIE. Please provide this document.	CAR 01	OK
91	Are all the written project approvals by Parties involved unconditional?	See CAR 01 above	OK	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?	<u>Corrective Action Request (CAR) 02.</u> Please specify the sectoral scope of the JI project in the MR. <u>Corrective Action Request (CAR) 03.</u> Please provide the reference to the project listed on the UNFCCC JI website.	CAR 02 CAR 03	OK OK
93	What is the status of operation of the project during the monitoring period?	<u>Clarification Request (CL) 01.</u> In section A.4 it is stated that the project is	CL 01	OK



VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		operational, however during site visit it was recognized that the enterprise did not operate for several months. Please display this fact in the monitoring report.		
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?	See CAR 03, CL 01.	OK	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 project taken into account, as appropriate?	Yes, all relevant key factors were taken into account, as appropriate.	OK	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	<u>Corrective Action Request (CAR) 04.</u> Please provide the data sources for parameters listed in Table B.2.3-1 and Table B.2.3-3 of the MR. <u>Corrective Action Request (CAR) 05.</u> Please provide the names for all tables in the Monitoring Report.	CAR 04 CAR 05	OK OK



BUREAU
VERITAS

VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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?	<u>Clarification Request (CL) 02.</u> Please provide the references to the documents mentioned as data sources in Table B.2.3-2 of the MR.	CL 02	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?	<u>Corrective Action Request (CAR) 07.</u> The values of hydrogen consumption provided in the MR do not correspond with those specified in the technical reports. Please make the corrections in the MR and calculation file.	CAR 07	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	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



**BUREAU
VERITAS**

VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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
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
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	N/A	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	N/A	N/A
Data management				



VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	<u>Clarification Request (CL) 03.</u> Please clarify what kind of data will be kept for 2 years after the last ERUs transaction. Please also provide the examples of such monthly reports.	CL 03	OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, in order?	<u>Corrective Action Request (CAR) 06.</u> On p.11 of the MR level meter reg. # 10073201 was mentioned to times. Please make the corrections.	CAR 06	OK
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	Yes, the evidence and records used for the monitoring are maintained in a traceable manner	OK	OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	See CL 03, CAR 06 above.	OK	OK
Verification regarding programmes of activities (additional elements for assessment)				
102	Is any JPA that has not been added to the JI PoA not verified?	N/A	OK	OK
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/A	OK	OK
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	N/A	OK	OK
104	Does the monitoring period not overlap	N/A	OK	OK



VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	with previous monitoring periods?			
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	N/A	OK	OK
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE: (a) Describe its sample selection, taking into account that: (i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as: - The types of JPAs; - The complexity of the applicable technologies and/or measures used; - The geographical location of each JPA; - The amounts of expected emission reductions of the JPAs being	N/A	N/A	N/A



VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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
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
109	Is the sampling plan available for submission to the secretariat for the JISC ex ante assessment? (Optional)	N/A	N/A	N/A
110	If the AIE learns of a fraudulently	N/A	N/A	N/A



BUREAU
VERITAS

VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarification and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
<u>Corrective Action Request (CAR) 01.</u> No Letter of Approval from Ukraine was provided to the AIE. Please provide this document.	90	Letter of Approval has been provided to verification team.	Letter of Approval from Ukraine was provided to the AIE. Issue is closed



VERIFICATION REPORT

<u>Corrective Action Request (CAR) 02.</u> Please specify the sectoral scope of the JI project in the MR.	92	The sectoral scope of the JI project has been specified in the monitoring report (see section A.3).	CAR is closed.
<u>Corrective Action Request (CAR) 03.</u> Please provide the reference to the project listed on the UNFCCC JI website.	92	The reference has been provided in the monitoring report (see section A.2).	Issue is closed
<u>Corrective Action Request (CAR) 04.</u> Please provide the data sources for parameters listed in Table B.2.3-1 and Table B.2.3-3 of the MR.	95 (b)	Data sources have been indicated in the monitoring report.	CAR is closed based on the amendments to the MR.
<u>Corrective Action Request (CAR) 05.</u> Please provide the names for all tables in the Monitoring Report.	95 (b)	The names of all tables have been added throughout the monitoring report.	Issue is closed.
<u>Corrective Action Request (CAR) 06.</u> On p.11 of the MR level meter reg.#10073201 was mentioned to times. Please make the corrections.	101 (b)	Corrected.	CAR is closed.
<u>Corrective Action Request (CAR) 07.</u> The values of hydrogen consumption provided in the MR do not correspond with those specified in the technical reports. Please make the corrections in the MR and calculation file.	95 (d)	Corrected. The values of the amount of hydrogen combusted for heat energy generation under the project scenario have been updated in the monitoring report in line with the data of technical reports. The calculation of emissions reduction has been updated accordingly.	CAR is closed.



VERIFICATION REPORT

<u>Clarification Request (CL) 01.</u> In section A.4 it is stated that the project is operational, however during site visit it was recognized that the enterprise did not operate for several months. Please display this fact in the monitoring report.	93	Section A.4 of the monitoring report has been updated.	CL is closed based on the corrections in the MR
<u>Clarification Request (CL) 02.</u> Please provide the references to the documents mentioned as data sources in Table B.2.3-2 of the MR.	95 (c)	References have been added to the monitoring report.	Issue is closed.
<u>Clarification Request (CL) 03.</u> Please clarify what kind of data will be kept for 2 years after the last ERUs transaction. Please also provide the examples of such monthly reports.	101 (a)	Clarified in the monitoring report (see section B.3). Examples of monthly reports prepared according to the monitoring procedure established at the enterprise have been provided to the verification team.	CL is closed.