VERIFICATION REPORT
JSC "IVANO-FRANKIVSK CEMENT"

VERIFICATION OF THE
IVANO-FRANKIVSK CEMENT SWITCH FROM WET-TO-DRY CEMENT AND FUEL SAVINGS FOR COAL DRYING

(FOR THE PERIOD 01/01/2011-31/12/2011)

REPORT NO. UKRAINE-VER/0418/2012

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BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-ver/0418/2012

VERIFICATION REPORT IVANO-FRANKIVSK CEMENT SWITCH FROM WET-TO-DRY CEMENT AND FUEL SAVINGS FOR COAL DRYING

Date of first issue:	Organizational unit:
05/03/2012	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
JSC "Ivano-Frankivsk Cement"	Mykola Makoviychuck

Summary:

Bureau Veritas Certification has made the 4th periodic verification of the "Ivano-Frankivsk Cement switch from wet-to-dry cement and fuel savings for coal drying", JI Registration Reference Number UA1000100, project of JSC "Ivano-Frankivsk Cement" located in Yamnitsa village Tysmenytsa District, Ivano-Frankivsk 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 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 142587 tonnes of CO_2 equivalent for the monitoring period from 01/01/2011 to 31/12/2011.

Report No.:	Subject Group:
UKRAINE-ver/0418/2012	JI
Project title:	
Ivano-Frankivsk Cement switch from wet-to-dry cement and fuel savings for coal drying	
Work carried out by:	
Oleg Skoblyk – Team Leader, Lead Verifier Ihor Kachan – Team Member, Lead Verifier Vyacheslav Yeriomin – Team Member, Verifier Serhiy Verteletskiy – Team member, Verifier Trainee	
Work reviewed by:	
Ivan Sokolov - Technical Reviewer	
Work approved by:	
Ivan Sokolov - Operational Manager	

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03/04/2012	02	31

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1 INTRODUCTION

JSC "Ivano-Frankivsk Cement" has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project "Ivano-Frankivsk Cement switch from wet-to-dry cement and fuel savings for coal drying" (hereafter called "the project") at Yamnitsa village Tysmenytsa District, 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 and monitoring plan and 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:

Oleg Skoblyk
Bureau Veritas Certification Team Leader, Climate Change Verifier

Ihor Kachan
Bureau Veritas Certification Climate Change Verifier

Vyacheslav Yeriomin
Bureau Veritas Certification Climate Change Verifier

Serhii Verteletskiy
Bureau Veritas Certification Climate Change Verifier Trainee

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 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 GreenStream Network Plc and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), and Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the Monitoring Report version 03 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 22/02/2012 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of JSC “Ivano-Frankivsk Cement” were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
JSC "Ivano-Frankivsk Cement"	- 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 GreenStream Network Plc	- Monitoring plan - Monitoring report - Deviations from PDD - ERUs calculation model

2.3 Resolution of Clarification, Corrective and Forward Action Requests

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

If the Verification Team, 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 6 Corrective Action Requests, 3 Clarification Requests, and 0 Forward Action Requests.

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

3.1 Remaining issues and FARs from previous verifications

One FAR has been raised during previous verification

FAR01

Please, submit any documented instruction which indicates that the data monitored and required for ERUs calculation (including historical data for baseline emissions estimation) are to be kept for two years after the crediting period.

Response of project participants

The documented instruction which indicates that the data monitored and required for verification are to be kept for two years after the crediting period will be prepared and will be available during the verification.

BV conclusion

Relevant order #142 on monitoring group creation and data keeping has been issued by JSC “Ivano-Frankivsk Cement” on 13/03/2012 and provided to verification team. The issue is closed.

3.2 Project approval by Parties involved (90-91)

Written project approval by the Host Party has been issued by the National Environmental Investment Agency of Ukraine (Letter of Approval

#1220/23/7 dated 14/10/2009). Written approvals by Sponsor Parties has been obtained from the Ministry of Environment Rural and Marine of Spain (Letter of Approval dated 2/12/2009) and the Ministry of Economic Affairs of The Netherlands (Letter of Approval #2009JI15, dated 10/12/2009)

The abovementioned written approval is unconditional.

3.3 Project implementation (92-93)

Before the project implementation cement manufacturing on JSC “Ivano-Frankivsk Cement” was based on three wet kilns.
The old wet kiln, with a 160 000 tonne clinker capacity, was decommissioned as part of the project activity while other two kilns are remained in operation while their production levels are gradually reduced as the dry kiln replaces their capacity. In addition to the wet-to-dry switch, this component of the project also results in a capacity expansion of more than 500 000 tonnes of clinker.
The new kiln affects the whole production process, especially
a) crushing, storage, grinding and drying of raw materials,
b) raw meal silo and kiln feed system
c) the preheater, calciner and clinker cooler.
The project implementation results in energy consumption (and carbon emissions from fuel combustion per tonne of clinker) reduction compared with the wet process. Process changes in coal drying utilize waste heat from the new dry kiln to eliminate the need to use natural gas for the purpose of drying.
The dry kiln was put in operation in July of 2008 and the process of utilization of waste heat for drying coal that is used as fuel source in the kiln started in December of 2008. In 2011 the project continued to reduce the emissions resulting from the manufacturing at the Ivano-Frankivsk Cement location. The project improved efficiency of use of natural gas and electricity at the enterprise and thus leaded to decrease of harmful emissions.
The dry kiln was in exploitation during the whole monitoring period excluding the time needed for equipment maintenance. It was evidenced by the production-technological reports provided onsite (see the List of the Documents checked)

During the monitoring period new secondary mill has been installed in complex with dryer-crusher. The secondary ball mill was put into operation 30/08/2011. This mill supply milled raw materials only to dryer-crusher and dry kiln #3, so, mill hasn’t influence on project baseline. Electricity consumption of this mill is covered by dryer-crusher power metering system, so changes in monitoring equipment is not needed.

CAR01 and CL01 and their resolutions/conclusions applicable to project implementation are listed in the APPENDIX A: VERIFICATION PROTOCOL (Table 2) below.

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

The monitoring occurred in accordance with the monitoring plan changed by the project developer. Project design corrections is adequate and described in the section E.6 of the Monitoring Report.

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.
Key monitoring activities for each subproject are sufficiently described in the MR and no deviations from the monitoring algorithm were detected. The monitoring points, including parameter monitored, monitoring equipment and information concerning its calibration interval are clearly described in the section D 1.2 of the MR and completely correspond to the ones prospected in the determined PDD.

The 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.

CAR02-CAR04, CL02, CL03 and their resolutions/conclusions applicable to project compliance of the monitoring are listed in the APPENDIX A: VERIFICATION PROTOCOL (Table 2) below

3.5 Revision of monitoring plan (99-100)

The project developer provides revision of the monitoring plan. The proposed revision is adequate substantiated and improves the accuracy and applicability of the information been collected compare with the initial monitoring plan without changing the conformity of the applicable rules and regulations on establishing the monitoring plan.

The change of initial monitoring plan is the use in calculations carbon dioxide emission factors for coal, natural gas, heavy fuel oil burning and electricity consumed from the grid in accordance with the “National GHG Inventory Report” developed by National Environment Investment Agency of Ukraine.

The changes that were introduced don’t affect the conservative approach to emission reduction calculation and the procedure for data monitoring and collecting.

The management system is suitable for reliable monitoring of the project according to the proposed revision.

3.6 Data management (101)

A detailed records management system has been established at Ivano-Frankivsk Cement to record and document all required data. The monitoring information flow for each parameter to be monitored is sufficiently described in the section C of the MR. The records management system includes paper records maintained by staff of the laboratory and production staff as well as electronic records maintained by the departments.

Data collection and manipulation for the monitoring plan are the responsibility of four departments within the enterprise (Power and Electrical Department, Engineering and Metrologist Department, Laboratory, Shift man, shop economist and superintendant). The reporting procedures reflect the monitoring plan completely. The complete data is stored electronically and documented. The necessary procedures have been defined in the internal procedures.

The data and their sources, provided in the 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. 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.

CAR05, CAR06 and their resolutions/conclusions applicable to project compliance of the monitoring are listed in the APPENDIX A: VERIFICATION PROTOCOL (Table 2) below

3.7 Verification regarding programmes of activities (102-110)

"Not applicable"

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 4th periodic verification of the "Ivano-Frankivsk Cement switch from wet-to-dry cement and fuel savings for coal drying" Project in Yamnitsa village Tysmenytsa District, Ivano-Frankivsk Region, Ukraine, which applies the 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 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 JSC "Ivano-Frankivsk Cement" 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 1.4. 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 03 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 01/01/2011 to 31/12/2011

Baseline emissions	: 1044393	tonnes of CO2 equivalent.
Project emissions	: 901806	tonnes of CO2 equivalent.
Emission Reductions	: 142587	tonnes of CO2 equivalent.

5 REFERENCES

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

/1/ Project Design Document "Ivano-Frankivsk Cement switch from wet-to-dry cement and fuel savings for coal drying" version 1.4 dated 26/08/2009
/2/ Monitoring Report "Ivano-Frankivsk Cement switch from wet-to-dry cement and fuel savings for coal drying" version 1.0 dated 25/01/2012
/3/ Monitoring Report "Ivano-Frankivsk Cement switch from wet-to-dry cement and fuel savings for coal drying" version 02 dated 21/03/2012
/4/ Monitoring Report "Ivano-Frankivsk Cement switch from wet-to-dry cement and fuel savings for coal drying" version 03 dated 03/04/2012
/5/ ERUs calculation model "2011 IFC Data - calculations 02 02 2012"
/6/ ERUs calculation model "2011 IFC Data - calculations 22 03 2012 ob"
/7/ Letter of Approval #1220/23/7 dated 14/10/2009 issued by National Environment Investment Agency
/8/ Letter of Approval #2009JI15 dated 10/12/2009 issued by Dutch Ministry of Economic Affairs
/9/ Letter of Approval dated 02/12/2009 issued by Ministry of Environment Rural and Marine of Spain

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

/1/ JSC "Ivano-Frankivsk Cement " technological scheme
/2/ Statement #163 on State metrological attestation of ASCMPC, dated 24/11/2010 valid till 24/11/2010
/3/ Protocol #1 to Statement #163 on State metrological attestation of ASCMPC, dated 24/11/2010
/4/ Protocol #2 to Statement #163 on State metrological attestation of ASCMPC, dated 24/11/2010
/5/ Passport and calibration certificates of power meters Landys Gir #94 916 174 i #94 344 587
/6/ Passport and calibration certificate of power meter Landys Gir #94 977 009
/7/ Passport and calibration certificate of power meter Landys Gir #94 977 010
/8/ Passport and calibration certificate of power meter Landys Gir #94 977 013
/9/ Passport and calibration certificate of power meter Landys Gir #94 977 026
/10/ 11-mtp form for 2011 year
/11/ Form 24 – electric energy for 2011 year
/12/ 1-tep form, heat energy supply, for 2011 year
/13/ Statement on acceptance of secondary mill 10x4,2 installation 30/08/2011
/14/ Order #191 on Statement on acceptance of secondary mill 10x4,2 installation 30/08/201 confirmation

/15/ List of JSC “Ivano-Frankivsk Cement” measuring equipment, which must be calibrated, 31/01/2011
/16/ List of JSC “Ivano-Frankivsk Cement” measuring equipment, which must be calibrated, 08/02/2011
/17/ Statement on JSC “Ivano-Frankivsk Cement” metrology and standardization service
/18/ Statement on JSC “Ivano-Frankivsk Cement” metrological service
/19/ Order #174 dated 14/09/2007 On measuring equipment responsible persons assignment
/20/ Head of PJSC “Ivano-Frankivsk Cement” metrology department job description
/21/ Head metrologist of PJSC “Ivano-Frankivsk Cement” job description
/22/ Natural gas consumption on PJSC “Ivano-Frankivsk Cement” January 2011
/23/ Natural gas consumption on PJSC “Ivano-Frankivsk Cement” February 2011
/24/ Natural gas consumption on PJSC “Ivano-Frankivsk Cement” March 2011
/25/ Natural gas consumption on PJSC “Ivano-Frankivsk Cement” April 2011
/26/ Natural gas consumption on PJSC “Ivano-Frankivsk Cement” May 2011
/27/ Natural gas consumption on PJSC “Ivano-Frankivsk Cement” June 2011
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/33/ Natural gas consumption on PJSC “Ivano-Frankivsk Cement” December 2011
/34/ Passport and calibration certificates of gas meter G1600 type LG-K-200-1/30-1,6-1, fabr. #10187
/35/ Passport and calibration certificates of gas meter Universal #1352
/36/ Passport and calibration certificates of pressure meter MIDA 13P #08425338
/37/ Passport and calibration certificate gas meter DELTA 2050/100 fabr.# K4795304.04
/38/ Passport and calibration certificates of gas meter Universal #9052
/39/ Passport and calibration certificates of pressure meter MIDA 13P #08425335
/40/ Passport and calibration certificates scales VPP PS-100 #0203
/41/ Manual for thenzometric wagon scales
/42/ Passport and calibration certificates scales VC PS-150 #0204
/43/ Passport and calibration certificate coal dust scales MULTIKOR K-40 #Z953103 37 04 2007
/44/ Statement on clinker control weighing for kiln #3, dated 02/10/2011
/45/ Statement on clinker control weighing for kiln #2, dated 18/10/2011
/46/ Statement on clinker control weighing for kiln #3, dated 29/08/2011
/47/ Statement on clinker control weighing for kiln #1, dated 19/08/2011
/48/ Statement on clinker control weighing for kiln #2, dated 17/08/2011
/49/ Statement on clinker control weighing for kiln #1, dated 27/04/2011
/50/ Statement on clinker control weighing for kiln #3, dated 25/01/2011
/51/ Letter #01/1826 dated 21/09/07 On workers trainings
/52/ Kiln #3 with secondary mill work and maintains training program
/53/ Kiln #1 fuel consumption and fuel calorific value for 2011 year
/54/ Kiln #2 fuel consumption and fuel calorific value for 2011 year

/55/ Kiln #3 fuel consumption and fuel calorific value for 2011 year
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/61/ Kiln electricity consumption for 2011 year
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/65/ Power meters Landys Gir #94 344 587 and #94 977 010
/66/ Elegas commutation module
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/69/ Logbook of fuel net calorific value checking
/70/ Accreditation certificate #2T062 dated 16/06/2010 on JSC “Ivano-Frankivsk Cement” measuring laboratory, valid till 16/06/2013
/71/ Logbook #25 on coal input control
/72/ Logbook #29 on alternative fuel input control
/73/ Logbook #16 on raw material chemical analysis
/74/ Roentgen-spectrometer Thermo ARL 9800 XP
/75/ Roentgen-spectrometer Thermo ARL 9800 XP operator workplace
/76/ Roentgen-spectrometer Thermo ARL 9900 XP #178
/77/ Logbook #75 on dry clinker production technological control
/78/ Statement on attestation #1855/m automatic calorimeter R4-12Mn fabric. #066
/79/ Periodically attestation program on JSC “Ivano-Frankivsk Cement” testing facilities for 2011 year
/80/ Periodically calibration program on JSC “Ivano-Frankivsk Cement” measuring equipment for 2011 year
/81/ Gas meter DELTA 2050/100 #K4795304.04
/82/ Pressure meter MIDA 13P #08425338
/83/ Gas meter LGK-200-1/30-1,6-1
/84/ Coal dust batchers
/85/ Coal dust batcher Shenk V007080.A01
/86/ Coal dust batcher Shenk V007982.A01
/87/ Coal dust supply system
/88/ Kiln #3 operator workplace
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/90/ Passport and calibration certificates of gas meter G1600 type LG-K-200-1/30-1,6-1, fabr. #6129
/91/ Passport and calibration certificates of pressure meter MIDA 13P #08425338
/92/ Calibration certificates of pressure meter MIDA 13P #04416315
/93/ Pressure thermoconverter TCMU-0289 #001 calibration certificate
/94/ Pressure thermoconverter TCMU-0289 #001 calibration certificate
/95/ Passport and calibration certificate gas meter DELTA 2050/100 fabr.# 2675504003
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/97/ Passport and calibration certificates of pressure meter MIDA 13P #07419082
/98/ Pressure thermoconverter TCMU-0289 #112697 calibration certificate
/99/ Gas measuring devices list, changed in 2011 year
/100/ Production report on turnover and odds of materials, semi-fabricated materials and finished goods December 2011
/101/ Production report on turnover and odds of materials, semi-fabricated materials and finished goods November 2011
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/164/ Coal mill work report for November 2011
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/167/ Kiln #3 work report for August 2011
/168/ Main and alternative fuel consumption of kiln #3 for August 2011
/169/ Coal mill work report for August 2011

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/ Oleg Yarema – Head of Technical Production Department
/2/ Vasyl Kalyn – Head of Metrology Department
/3/ Petro Kardash – Vice-Head of Power Department
/4/ Lesia Ivantsiv – Technologist
/5/ Iryna Heviuk – Head of Chemical Laboratory
/6/ Tetiana Hnyp - Economist
/7/ Iuliia Isupova-Samoteikina – representative of “Green Stream Plc”

APPENDIX A: COMPANY PROJECT VERIFICATION PROTOCOL

VERIFICATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	The project was approved by the Host Party (Letter of Approval #1220/23/7 dated 14/10/2009 issued by State Environmental Investment Agency of Ukraine) and the Sponsor Parties (Letter of Approval #2009JI15 dated 10/12/2009 issued by Dutch Ministry of Economic and Letter of Approval dated 02/12/2009 issued by Ministry of Environment Rural and Marine of Spain)	OK	OK
91	Are all the written project approvals by Parties involved unconditional?	All written project approvals are unconditional	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?	*CAR01* During the site-visit was detected that new secondary ball mill was installed in addition to dryer-crusher that used in project activity. Please change project design and monitoring plan. *CL01* The monitoring Report indicates that project emissions for capacity expansion were negligible higher than baseline emissions. Please explain	CAR01 CL01	OK
93	What is the status of operation of the	The project equipment (dry kiln #3 with auxiliary	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	project during the monitoring period?	equipment) is in work during monitoring period. Project developer provides information on technical disasters with dry kiln #3 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?	The monitoring occurred in accordance with the monitoring plan included in the determined PDD, which is publicly available on the UNFCCC JI website	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?	*CAR02* Monitoring Report indicates that oil waste has used as a fuel in project. During the site-visit was detected that JSC "Ivano-Frankivsk Cement" keep fuel oil M-100. Please add relevant corrections in the monitoring report and check value of CO2 emission factor. *CAR03* Please explain next differences between calculations and checked during site-visit data: - value of produced clinker (900100 tons of cement with 90,57% of clinker in plant reports and 897 288 tons of clinker in Excel calculations) - MgO, CaO content in clinker (MgO - 0,973, CaO – 65,207 in plant reports and *Clinker-*	CAR02 CAR03	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Cement Forecast in Excel spreadsheet)		
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	Data sources used for calculation emission reduction are clearly identified, reliable and transparent	OK	OK
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	*CAR04* Please provide emission factors values in line with National Inventory Report. *CL02* JSC "Ivano-Frankivsk Cement" uses mix of different types of coals. Please clarify chose of CO2 emission factor value	CAR04 CL02	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?	The calculation of emission reduction is based on conservative assumptions and the most plausible scenarios in a transparent manner. *CL03* Please clarify zero values of baseline emissions ***B14_BEkiln,y*** for 2008-2010 years in ***SUMMARY (exist cap.)*** in Excel calculations.	OK	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	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?			
Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	Not applicable	Not applicable	Not applicable
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	Not applicable	Not applicable	Not applicable
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	Not applicable	Not applicable	Not applicable
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?	The monitoring plan was revised by the project developer. The project developer provides justification of the revision in the section E.6 of the Monitoring Report	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 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	OK	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 the monitoring plan, including the quality control and quality assurance procedures	OK	OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	The function of the monitoring equipment is in order. Monitoring equipment is in calibration interval. *CAR05* Please provide in the monitoring report more detailed description of project measuring equipment, including serial number and date of calibration/replacement	CAR05	OK
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	OK	OK
101 (d)	Is the data collection and management system for the project in accordance	The data collection and management system of the project is in accordance with the monitoring	CAR06	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	with the monitoring plan?	plan. *CAR06* Please note in the monitoring report that the data monitored and required for ERUs calculation will be kept during two years after the last ERUs transfer		
Verification regarding programs of activities (additional elements for assessment)				
102	Is any JPA that has not been added to the JI PoA not verified?	Not applicable	Not applicable	Not applicable
103	Is the verification based on the monitoring reports of all JPAs to be verified?	Not applicable	Not applicable	Not applicable
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	Not applicable	Not applicable	Not applicable
104	Does the monitoring period not overlap with previous monitoring periods?	Not applicable	Not applicable	Not applicable
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	Not applicable	Not applicable	Not applicable
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE: (a) Describe its sample selection, taking into	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	account that: (i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as: − The types of JPAs; − The complexity of the applicable technologies and/or measures used; − The geographical location of each JPA; − The amounts of expected emission reductions of the JPAs being verified; − The number of JPAs for which emission reductions are being verified; − The length of monitoring periods of the JPAs being verified; and − The samples selected for prior verifications, if any?			
107	Is the sampling plan ready for publication through the secretariat	Not applicable	Not applicable	Not applicable

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

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CAR01 During the site-visit was detected that new secondary ball mill was installed in addition to dryer-crusher that used in project activity. Please change project design and monitoring plan.	92	The installation of the new equipment does not affect the project baseline and the monitoring plan. Please refer to the explanation given in the Letter 01/341-09/01 as of 15/03/2012 from PJSC "Ivano-Frankivskcement". The copy of the Letter is provided in the supporting documents. Appropriate information was also added to the section B.1 of the Monitoring Report.	The issue is closed based on Appropriate information and corrections provided.
CAR02 Monitoring Report indicates that oil waste has used as a fuel in project. During the site-visit was detected that JSC "Ivano-Frankivsk Cement" keep fuel oil M-100. Please add relevant corrections in the monitoring report and check value of CO2 emission factor.	95(a)	Monitoring report was updated to specify the fuel oil, type of M-100.	The Monitoring report was corrected by project developer. The issue is closed

CAR03 Please explain next differences between calculations and checked during site-visit data: - value of produced clinker (900100 tons of cement with 90,57% of clinker in plant reports and 897 288 tons of clinker in Excel calculations) MgO, CaO content in clinker (MgO - 0,973, CaO – 65,207 in plant reports and *Clinker-Cement Forecast* in Excel spreadsheet)	95(a)	In 2011, a total volume of clinker produced by the three kilns was 897 288 t while only 815 223.087 t of clinker were used for cement production. The difference was sold to outside consumers. MgO content in clinker: the difference was caused by rounded annual values of MgO content in the plant reports. Excel calculation spreadsheet was corrected to correspond to the plant reports' values. CaO content in clinker: the value of 65,54% calculated in the Excel spreadsheet is correct and it corresponds to the plant records. It should not be 65,207%.	The issue is closed based on Appropriate information and corrections provided.
CAR04 Please provide emission factors values in line with National Inventory Report.	95(c)	The National Inventory Report emission factors were applied. The monitoring report and the calculation EXCEL file were corrected appropriately.	MR was checked. Issue is closed.
CAR05 Please provide in the monitoring report more detailed description of project measuring equipment, including serial number and date of calibration/replacement	101(b)	Monitoring report was corrected to reflect detailed description of project measuring equipment including serial numbers and calibration/replacement dates.	MR was checked. Issue is closed.

CAR06 Please note in the monitoring report that the data monitored and required for ERUs calculation will be kept during two years after the last ERUs transfer	101(d)	The Monitoring Report section C.1 was updated to include the reference to Order # 142 from 13/03/2012 on keeping the data monitored and required for ERUs calculation during two years after the last ERUs transfer. Also please find the copy of the Order #142 in the supporting documents.	MR was checked. Issue is closed.

CL01 The monitoring Report indicates that project emissions for capacity expansion were negligible higher than baseline emissions. Please explain	92	The corrected monitoring report now states that the project emissions for capacity expansion were *slightly lower* than ***sector wide*** baseline emissions. The sector wide baseline emissions are calculated based on the quantity of cement production in the wide sector to take into account the capacity expansion in the baseline to be compared then with the project emissions for capacity expansion. If project emissions for the capacity expansion are lower than the sector wide baseline emissions then emission reductions for the capacity expansion are included, otherwise, they are excluded. In 2011, the project emissions for the capacity expansion are lower than the sector wide baseline emissions and the emission reductions for the capacity expansion are included.	The issue is closed based on Appropriate information and corrections provided.

CL02 JSC "Ivano-Frankivsk Cement" uses mix of different types of coals. Please clarify chose of CO2 emission factor value	95(c)	Grades of coal used at JSC "Ivano-Frankivsk Cement" during 2011 are of the same type of coal which is black coal. Since no local emission factor data available for the grades of coal used, the emission factor for black coal stated in Ukraine's National Inventory Report of GHG Sources and Sinks 1990 to 2009 was applied: *http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/5888.php* According to Ukraine's National Inventory Report of GHG Sources and Sinks 1990 to 2009, Page 401, Table P2.32, Category 1.A.2.f (Other branches of industry and construction), the emission factor for black coal of 25,3 tC/TJ was applied.	The issue is closed based on Appropriate information and corrections provided.
CL03 Please clarify zero values of baseline emissions ***B14_BEkiln,y*** for 2008-2010 years in ***SUMMARY (exist cap.)*** in Excel calculations.	95(d)	The parameter values for 2008 - 2010 were removed from the Excel spreadsheet. It does not affect 2011 calculations. Please refer to 2011 calculation data only.	The issue is closed based on Appropriate information and corrections provided.