VERIFICATION REPORT
PRJSC MODIFIED FATS FACTORY

VERIFICATION OF THE
SUNFLOWER HUSK UTILIZATION FOR STEAM AND ELECTRICITY GENERATION AT THE OIL-EXTRACTION FACTORY CJSC MODIFIED FATS FACTORY

REPORT NO. UKRAINE-VER/0735/2012

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BUREAU VERITAS CERTIFICATION

Date of first issue: 06/03/2013	Organizational unit: Bureau Veritas Certification Holding SAS
Client: PrJSC Modified Fats Factory	Client ref.: Sergiy Tymchenko

Summary:
Bureau Veritas Certification has made the initial and 1st periodic verification of the "Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory" project of PrJSC Modified Fats Factory located in the city of Kirovohrad in Kirovohrad Oblast, 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 Independent 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 Action Requests, Forward Action Requests (CL, 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 generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 68 799 tonnes of CO2 equivalent for the monitoring period from 24/09/2009 to 31/12/2012.

Our opinion relates to the project 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-ver/0735/2012	JI

Project title:
Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory

Work carried out by:
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Bureau Veritas Certification Holding SAS

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24/04/2013	03	43

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Table of Contents *Page*

1 INTRODUCTION

PrJSC Modified Fats Factory (since 02/06/2011, the enterprise registration name has been changed from "CJSC Modified Fats Factory" to "PrJSC Modified Fats Factory" in accordance with Excerpt of United State Register of Legal Entities and Individual entrepreneurs of Ukraine as of 02/06/2011) has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory” (hereafter called “the project”) in the city of Kirovohrad in Kirovohrad Oblast, 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 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:

Svitlana Gariyenchyk Bureau Veritas Certification	Team Leader, Climate Change Lead Verifier
Vyacheslav Yeriomin Bureau Veritas Certification	Team Member, Climate Change Lead Verifier

This verification report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal Technical Reviewer

Leonid Yaskin
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) version 01 dated 30/04/2012 submitted by PrJSC Modified Fats Factory and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), 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.
To address Bureau Veritas Certification corrective action and clarification requests, GreenStream Network revised the MR and resubmitted it on 21/12/2012 as version 2.1.
To address further Bureau Veritas Certification corrective action and clarification requests, the project participants updated the MR and resubmitted it on 19/02/2013 as version 3. After the value of the parameter $\mathbf{EC}_{p,y}$ (The quantity of electricity consumed by the project relevant activity during the year y) had been revised by the project participants, the MR was resubmitted to BVC on 22/04/2013 as version 4 which is deemed final.
The verification findings presented in this report relate to the Monitoring Report version 4 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 15/11/2012 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 PrJSC Modified Fats Factory and Greenstream

Network were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PrJSC Modified Fats Factory	➢ 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
Greenstream Network (CONSULTANT)	➢ Baseline methodology ➢ Monitoring plan ➢ Revision to the 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 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 22 Corrective Action Requests and 10 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

Not applicable

3.2 Project approval by Parties involved (90-91)

The project has the written approval of the Host country (Letter of Approval # 2589/23/7 dated 14/09/2012 of JI project “Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory”, issued by the State Environmental Investment Agency of Ukraine). Written project approval, Declaration of Approval # 2012JI10 dated 12/04/2012 of JI project “Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory”, has been issued by the Ministry of Economic Affairs, Agriculture and Innovation of the Netherlands which is the other Party to the Project. (both documents are mentioned in the Reference section of this report as Category 1 Documents).

The abovementioned written approval is unconditional.
No areas of concern as to project approval by Parties involved were identified.

3.3 Project implementation (92-93)

The implementation of the project is occurring in accordance with the implementation plan established in the registered PDD and presented below:

	Project implementation	
1	Start of the testing operation of the two	24 September, 2009

	husk boilers type of E-16-24-350 DV	
2	Completion of testing the two husk boilers type of E-16-24-350 DV	16 October, 2009
3	Commissioning of the two husk boilers type of E-16-24-350 DV	27 November, 2009

According to the PDD, two husk boilers are installed at PrJSC MFF in Kirovograd, Ukraine. The type of the husk boilers is E 16-24-350 DV, manufactured by CJSC NPP "Ekoenergomash" in Russia. The husk produced by Oil Extraction Plant is combusted in these husk boilers with the purpose to generate carbon-neutral steam. The project activity is designed to combust 27,950 tonnes of husk annual and generates steam. The project activity consumed 89,730 tonnes of husk on dry basis during 24/09/2009-31/12/2012. The testing operation of the project activity started from 24/09/2009 and ended on 16/10/2009. The project was officially commissioned on 27/11/2009. Considering that GHG emission reduction of the project activity has been generated since the testing operation, the start date of the crediting period is defined as 24/09/2009.
The project activity was initially designed to install two husk boilers and one electricity steam generator. However, during the project implementation the installation of the electricity steam turbine was not realized in 2012 as initially planned because of the delay in project financing.
Therefore, emissions reductions related to electricity generation are not taken into consideration in the reported monitoring period.

No areas of concern as to project implementation were identified.

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

The monitoring occurred in accordance with the revised monitoring plan.
Data sources used for calculating emission reductions, such as

- National Inventory Report of Anthropogenic Emissions by Sources and Removals by Sinks of Greenhouse Gases in Ukraine
- Tool to determine the baseline efficiency of thermal or electric energy generation system, version 01
- Steam Flow Rate to Heat Rating calculating tool developed by Spirax-sarco available at
- http://www.spiraxsarco.com/resources/calculators/steam-flow-and-heat-rate/steam-flow-rate-to-heat-rating.asp
- Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site, Version 05.1.0, Table "Data and parameters monitored",
- Sunflower Seed Hulls, Mushroom Growers' handbook 2, Pg. 101 available at: http://www.alohamedicinals.com/book2/chapter-4-02-04.pdf
- ACM 0006 ver.11.2.0
- Husk moisture content laboratory tests provided by the certified laboratories

- National Standard of Ukraine SUNFLOWER HUSK. Specifications. DSTU (7123:2009), by State Consumer Standard Agency of Ukraine (Derzhspozhyvstandart)
- Contracts with natural gas suppliers
- Plant's records
- National emission factor for UES of Ukraine for projects consuming electricity issued by National Environmental Investments Agency of Ukraine for the years 2009-20011
- IPCC 2006 data

are clearly identified, reliable and transparent.

Emission factors, including default emission factors, such as CO2 emission factor of natural gas; CH4 emission factor for the combustion of biomass residues in the project activity; national emission factor for UES of Ukraine 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 relevant threshold to be classified as JI SSC project is not exceeded during the monitoring period on an annual average basis that is vivid from the Table E.4. of the emission reductions achieved.

The identified areas of concern as to compliance of the monitoring plan with the monitoring methodology, project participants response and BVC's conclusion are described in Appendix A Table 2 (CAR 01, CAR 03, CAR05, CAR06, CL09, CAR20, CAR04, CAR11).

3.5 Revision of monitoring plan (99-100)

During the development of the MR, some of the input data and their sources were updated with the latest valid information. The post-registration changes are listed in Table 2: Difference between the registered PDD and the MR of Section B.2. of the monitoring report. None of them influence the status of the registered PDD.

The project participants provided the description of deviations accompanied with an appropriate justification for the proposed revision.
The proposed revision, as well as, appropriate justification is the following:

	PDD	MR
1.	Monitoring frequency of $NCV_{husk,y}$: every 6 months	Monitoring frequency of $NCV_{husk,y}$: annually
2.	$Q_{husk,y}$ would be achieved by multiplying the weight of sunflower seed that are consumed by the oil production with 14%.	$Q_{husk,y}$ is achieved by multiplying the weight of sunflower seed that are consumed by the oil production with the real husk percentage of the sunflower seed as well as with Moisture Content.

Change in the monitoring frequency for the parameter $NCV_{husk,y}$ doesn't decrease the certainty and reliability of the monitoring plan as the applied value of $NCV_{husk,y}$ in the calculation of the MR is the highest one among the historical test results and IPCC default value. It is also compared with the value given by National Standard of Ukraine for Sunflower Husk. It is conservative. The revised monitoring plan for $Q_{husk,y}$ is considered to be more precise and transparent.

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 monitoring plan, project participants response and BVC's conclusion are described in Appendix A Table 2 (refer to CAR 18).

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 described in Section C. of the MR.

PrJSC Modified Fats Factory has a dedicated team of persons involved in the monitoring procedure and assigned with responsibilities, including but not limited to the collection and record of monitoring data, date report, process supervision and the development of monitoring report.

The monitoring management system functions in line with the PDD. It is presented as a diagram in Table 3 of the MR.

The data is firstly recorded at the production unit and other unit where the original data are generated. The data will be collected and gathered by the relative principals and be further calculated and analyzed by the Chief Power Engineer and Chief Stream Power Sector. If required, the external expert will be recruited to take the calculation and analysis which is a part of the development of the monitoring report. The calculation result and the monitoring report will be submitted to the General Engineer for the review. The General Engineer also takes the responsibility of internal auditing. Any randoms and omissions of the collected data will be identified and deleted from the database with the appropriate judgement.
The function of the monitoring equipment, including its calibration status, is in order. It was checked on site during the verification site visit and can be confirmed by the BVC verification team.

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 data management, project participants response and BVC's conclusion are described in Appendix A Table 2 (refer to CAR02, CL01, CAR21, CAR22, CL04, CL05, CAR19, CL10, CL02, CAR07, CAR08, CAR09, CAR10, CL03, CAR12, CAR13, CAR14, CL06, CL07, CAR15, CAR16, CAR17, CL08).

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 "Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory" 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 PrJSC Modified Fats Factory is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project as per determined changes. 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 4 for the reporting period 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 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 24/09/2009 to 31/12/2009

Baseline emissions	: 3314	tonnes of CO_2 equivalent.
Project emissions	: 161	tonnes of CO_2 equivalent.
Emission Reductions	: 3153	tonnes of CO_2 equivalent.

Reporting period: From 01/01/2010 to 31/12/2010

Baseline emissions	: 19565	tonnes of CO_2 equivalent.
Project emissions	: 785	tonnes of CO_2 equivalent.
Emission Reductions	: 18780	tonnes of CO_2 equivalent.

Reporting period: From 01/01/2011 to 31/12/2011

Baseline emissions	: 24767	tonnes of CO_2 equivalent.
Project emissions	: 874	tonnes of CO_2 equivalent.
Emission Reductions	: 23893	tonnes of CO_2 equivalent.

Reporting period: From 01/01/2012 to 31/12/2012

Baseline emissions	: 23528	tonnes of CO_2 equivalent.
Project emissions	: 555	tonnes of CO_2 equivalent.
Emission Reductions	: 22973	tonnes of CO_2 equivalent.

Total for the Reporting period: From 24/09/2009 to 31/12/2012

Baseline emissions	: 71174	tonnes of CO_2 equivalent.
Project emissions	: 2375	tonnes of CO_2 equivalent.
Emission Reductions	: 68799	tonnes of CO_2 equivalent.

5 REFERENCES

Category 1 Documents:
Documents provided by PrJSC Modified Fats Factory that relate directly to the GHG components of the project.

/1/ PDD “Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory” version 04.1 dated 23/12/2011
/2/ Determination Report PDD “Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory”, revision 05 dated 10/01/2012
/3/ Monitoring Report “Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory” version 0.1 dated 30/04/2012
/4/ ER calculation excel file version 0.1 dated 30/04/2012
/5/ Monitoring Report “Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory” version 2.1 dated 21/12/2012
/6/ ER calculation excel file version 2.1 dated 21/12/2012
/7/ Monitoring Report “Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory” version 3 dated 19/02/2013
/8/ ER calculation excel file version 3 dated 19/02/2013
/9/ Monitoring Report “Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory” version 4 dated 22/04/2013
/10/ ER calculation excel file version 4 dated 22/04/2013
/11/ Guidance on criteria for baseline setting and monitoring, ver.3
/12/ ACM0006 Consolidated methodology for electricity generation from biomass residues in power and heat plants, ver.11.2.0
/13/ National Inventory Report of Anthropogenic Emissions by Sources and Removals by Sinks of Greenhouse Gases in Ukraine for 1990-2009
/14/ National Inventory Report of Anthropogenic Emissions by Sources and Removals by Sinks of Greenhouse Gases in Ukraine for 1990-2010
/15/ Tool to determine the baseline efficiency of thermal or electric energy generation system, version 01
/16/ Steam Flow Rate to Heat Rating calculating tool developed by Spirax-sarco available at http://www.spiraxsarco.com/resources/calculators/steam-flow-and-heat-rate/steam-flow-rate-to-heat-rating.asp
/17/ Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site, Version 05.1.0, Table "Data and parameters monitored"
/18/ Sunflower Seed Hulls, Mushroom Growers’ handbook 2, Pg. 101 available at: http://www.alohamedicinals.com/book2/chapter-4-02-04.pdf
/19/ ACM 0006 ver.11.2.0

/20/ National Standard of Ukraine SUNFLOWER HUSK. Specifications. DSTU (7123:2009), by State Consumer Standard Agency of Ukraine (Derzhspozhyvstandart)
/21/ NEIA Order #43 of 28/03/2011 National emission factor for UES of Ukraine for projects at 2010
/22/ NEIA Order #63 of 15/04/2011 on National emission factor for UES of Ukraine for projects at 2009
/23/ NEIA Order #75 of 12/05/2011 National emission factor for UES of Ukraine for projects at 2011
/24/ IPCC 2006 volume 2, Table 1.2,
/25/ Letter of Approval # 2589/23/7 dated 14/09/2012 of JI project "Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory", issued by the State Environmental Investment Agency of Ukraine
/26/ Declaration of Approval # 2012JI10 dated 12/04/2012 of JI project "Sunflower Husk Utilization for Steam and Electricity Generation at the Oil-Extraction Factory CJSC Modified Fats Factory", issued by the Ministry of Economic Affairs, Agriculture and Innovation of the Netherlands

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

/1/ Project design on steam boilers type E-16-24-350 DV # 2 and # 3. 59.107.00.00 PP1
/2/ Passport on boiler type E-16-24-350 DV, registration # 1640, fabrication # 8043 (boiler # 3)
/3/ Passport on boiler type E-16-24-350 DV, registration # 1641, fabrication # 8041 (boiler # 2)
/4/ Logbook on accounting of energy resources consumed by Modified Fats Factory (November 2009 – March 2012)
/5/ Certificate dated 23/02/2012 issued to PJSC "Creative" on conformity to ISO 22000:2005
/6/ Certificate dated 19/01/2012 issued to PJSC "Creative" on conformity to ISO 9001:2008
/7/ Research protocol # 841 dated 14/08/2009, issued by Sevastopol Laboratory # 1
/8/ Research protocol # 842 dated 14/08/2009, issued by Sevastopol Laboratory # 1
/9/ Plan for 2012 on training and retraining of MFF boiler-house personnel
/10/ Logbook on training of personnel for 2012
/11/ Report on air pollution by Ellada Private Enterprise
/12/ Technical report dated 24/09/2010 on pre-commissioning works, and environmental and heat engineering testing of CD 13/72 grain drier
/13/ Report dated 22/12/2009 on pollutants registration Ellada Private Enterprise
/14/ Permit # 3510136300-260 dated 31/03/2010 on stationary sources air pollution, valid from 31/03/2010 till 31/03/2015, issued by the Ministry of Environmental Protection of Ukraine

/15/ Report on environmental protection for 2011. Form # 2-ТП (air) (annual)
/16/ Report on environmental protection for I quarter 2012. Form # 2-ТП (air) (per quarter)
/17/ Report on environmental protection for 2009. Form # 2-ТП (air) (annual)
/18/ Report dated 19/05/2010 on conducting internal audit on conformity to ISO 22000:2005 standard
/19/ Report dated 31/01/2011 on conducting internal audit on conformity to ISO 9001:2008 and ISO 22000:2005 standards
/20/ Report dated 17/01/2012 on conducting internal audit on conformity to ISO 9001:2008 and ISO 22000:2005 standards
/21/ Daily report on gas consumption for 14/11/2012
/22/ Photo–ultrasound gas meter type G400 Б2, fabrication # 7293
/23/ Photo–gas volume corrector type OE-VPT-0,68/60, fabrication # 28979
/24/ Logbook on shift changes (gas boilers)
/25/ Logbook on accounting of electricity consumed by Ellada Private Enterprise husk boiler-house. Started 01/11/2009
/26/ Passport # 04.03 dated 04/04/2009 on power meter type Дельта 8010-02, fabrication # 19189. Last calibration date–IV quarter 2008
/27/ Passport # 04.04 dated 04/04/2009 on power meter type Дельта 8010-02, fabrication # 19188. Last calibration date–IV quarter 2008
/28/ Passport # 04.01 dated 04/04/2009 on power meter type ИПСА4У-И672М, fabrication # 026417607. Last calibration date–III quarter 2007
/29/ Passport # 04.02 dated 04/04/2009 on power meter type ИПСА4У-И672М, fabrication # 026354607. Last calibration date–III quarter 2007
/30/ Certificate # 0272 dated 17/05/2007 on training accomplishing (Yurii Popelnytskyi)
/31/ Certificate # 94-01 dated 09/04/2010 on training accomplishing (Oleksandr Zhyvykh)
/32/ Certificate # 350 dated 24/04/2003 on worker qualification (Oleksandr Makarov)
/33/ Photo–meter type ИПСА4У-И672М, fabrication # 026417607
/34/ Photo–meter type ИПСА4У-И672М, fabrication # 026354607
/35/ Report on environmental protection for 2010. Form # 2-ТП (air) (annual)
/36/ Regime card on steam boiler type E-16-24-350 DV, boiler # 2
/37/ Regime card on steam boiler type E-16-24-350 DV, boiler # 3
/38/ Statement on cross-checking of electricity consumption per tariffs differentiated by time periods for September 2012
/39/ Statement on cross-checking of electricity consumption per tariffs differentiated by time periods for June 2012
/40/ Agreement # П-01/2527-ТГ/2011 dated 06/07/2011 on natural gas distribution
/41/ Additional agreement # 3 dated 28/12/2011 to the Agreement # П-01/2527-ТГ/2011 dated 06/07/2011 on natural gas distribution
/42/ Additional agreement # 4 dated 22/03/2012 to the Agreement # П-01/2527-ТГ/2011 dated 06/07/2011 on natural gas distribution
/43/ Additional agreement # 5 dated 10/05/2012 to the Agreement # П-01/2527-ТГ/2011 dated 06/07/2011 on natural gas distribution
/44/ Additional agreement # 2 dated 28/10/2011 to the Agreement # П-01/2527-ТГ/2011 dated 06/07/2011 on natural gas distribution

/45/ Additional agreement # 1 dated 30/09/2011 to the Agreement # П-01/2527-ТГ/2011 dated 06/07/2011 on natural gas distribution
/46/ Additional agreement dated 01/07/2011 to the Agreement # 02-12299/10 dated 01/12/2009 on natural gas transportation
/47/ Additional agreement # 4 dated 01/04/2011 to the Agreement # 02-12299/10 dated 01/12/2009 on natural gas transportation
/48/ Additional agreement # 3 dated 01/02/2011 to the Agreement # 02-12299/10 dated 01/12/2009 on natural gas transportation
/49/ Agreement # 02-12299/10 dated 01/12/2009 on natural gas transportation
/50/ Agreement # 02-12299/08 dated 01/01/2008 on natural gas transportation
/51/ Agreement # 13К dated 08/07/2010 on natural gas transportation
/52/ Additional agreement dated 15/05/2012 to the Agreement # 13К dated 08/07/2010 on natural gas transportation
/53/ Additional agreement # 1 dated 07/07/2012 to the Agreement # 13К dated 08/07/2010 on natural gas transportation
/54/ Passport on gas volume corrector type ОЕ-VPT-0,68/60, fabrication # 28979. Last calibration date–29/05/2012
/55/ Passport on ultrasound gas meter type G400 Б2, fabrication # 7293. Last calibration date–14/09/2012
/56/ Schedule on commercial gas meters state calibration for 2012
/57/ Passport on gas volume corrector type ОЕ-VPT-0,68/60, fabrication # 28978. Last calibration date–13/09/2012
/58/ Calibration protocol dated 13/09/2012 gas volume corrector type ОЕ-VPT-0,68/60, fabrication # 28978
/59/ Calibration protocol dated 29/05/2012 gas volume corrector type ОЕ-VPT-0,68/60, fabrication # 28979
/60/ Agreement # 143 dated 02/12/2011 on providing metrological services
/61/ Agreement # 63-11 dated 20/12/2011 on providing metrological services
/62/ Acceptance-transmitting statements on natural gas supply and transportation for 2009
/63/ Acceptance-transmitting statements on natural gas supply and transportation for 2010
/64/ Acceptance-transmitting statements on natural gas supply and transportation for 2011
/65/ Acceptance-transmitting statements on natural gas supply and transportation for January-October 2012
/66/ List of measurement equipment mounted at Ellada Private Enterprise boiler-house
/67/ List of measurement equipment mounted at Ellada Private Enterprise gas separation unit
/68/ List of measurement equipment in operation at PJSC “Creative” Oil-Extraction Factory and to be calibrated in 2012
/69/ Job description for department managers on metrological services
/70/ Protocol # 2 dated 23/10/2009 of commission session on health and fire safety knowledge testing
/71/ Protocol # 2-a dated 23/10/2009 of commission session on health and fire safety knowledge testing

/72/ Protocol # 18 dated 22/10/2010 of commission session on health and fire safety knowledge testing
/73/ Protocol # 19 dated 22/10/2010 of commission session on health and fire safety knowledge testing
/74/ Certificate AA # 018445 from Unified State Register of Enterprises and Organizations – PJSC Modified Fats Factory
/75/ Certificate ААБ # 113659 from Unified State Register of Legal Entities and Individual Entrepreneurs– PJSC Modified Fats Factory
/76/ Accreditation certificate issued to Sevastopol Laboratory # 1 by Deutsche Akkreditierungsstelle GmbH German Accreditation Body, valid till 22/06/2013
/77/ Attestation certificate # РИ-010/09 issued to Sevastopol Laboratory # 1 dated 02/04/2009, valid till 02/04/2012, issued by Sevastopol Scientific and Production Centre for Standardization, Metrology and Certification
/78/ Recognition certificate # 09.61068.184 dated 31/03/2009 of testing laboratory (Sevastopol Laboratory # 1), issued by Russian Maritime Register of Shipping
/79/ Accreditation certificate # САВЛ 221-3-206-08 dated 28/08/2012, issued to Sevastopol Laboratory # 1 issued by Russian Maritime Register of Shipping
/80/ Letter # 09/81 dated 01/11/2012 on physical and chemical parameters content change
/81/ Agreement # П-01/2627-ПГ/2012 dated 01/10/2012 on natural gas supply
/82/ Agreement # П-07/11 dated 20/12/2011 on natural gas supply
/83/ Agreement # 04 dated 26/06/2012 on natural gas supply
/84/ Agreement # П-01/21-КГ/2010 dated 01/02/2010 on natural gas supply
/85/ Husk and natural gas consumption by boiler house (October 2009-March 2012)
/86/ Logbook: Husk and natural gas consumption by boiler house (November 2009-March 2012)
/87/ National Standard of Ukraine for Husk (technical regulations). DSTU 7123:2009
/88/ NCV Moisture content test report by Laborelec dated 24/05/2012
/89/ Research protocol # 948/11dated 09/11/2011 (NCV Moisture content), issued by Sevastopol Laboratory # 1
/90/ Agreement dated 28/01/2011 between PJSC “Creative Group” and CKD PRAHA DIZ
/91/ Passport on gas meter Kurs-01 G 650-B, fabrication # 4892 (last calibration date–30/09/2010)
/92/ Passport on three-phase inducing power meters
/93/ Order # 131 dated 15/07/2011 on archiving information needed for monitoring
/94/ Order # 254 dated 04/12/2012 on archiving information needed for monitoring
/95/ Order # 253 dated 04/12/2012 on accounting of energy resources consumption and production
/96/ Photo–power meter type Дельта 8010-02, fabrication # 19188
/97/ Photo–power meter type Дельта 8010-02, fabrication # 19189
/98/ Calibration statement dated 31/10/2012 on weight hopper type SPC-Alfa
/99/ Order # 166 dated 12/11/2012 on the calibration of SPS Alfa weight hopper-1
/100/ Order # 26 dated 20/02/2012 on the calibration of SPS Alfa weight hopper-2
/101/ Annex # 4 to the Agreement # 13/к dated 08/07/2010. Schedule on power equipment readings
/102/ Invoice # 13К/1 on consumed electricity dated 01/06/2012

/103/ Invoice # 13К/1 on consumed electricity dated 03/05/2012
/104/ Invoice # 13К/1 on consumed electricity dated 01/08/2012
/105/ Invoice # 13К/1 on consumed electricity dated 03/09/2012
/106/ Manual on power meter type Дельта 8010-02

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/ Sergei Timchenko – Technical Director, Creativ Industrial Group
/2/ Andrei Ishchenko – Head of Steam Shop, PE “Ellada”
/3/ Viktor Vasiliev – Lead Engineer, Metrologist, Creativ Industrial Group
/4/ Anatolii Klevetenko – Head of the Technological Deapartment, Creativ Industrial Group
/5/ Viktor Khadzhilii - Deputy Technical Director, Creativ Industrial Group
/6/ Vadim Lobov – Chief Energy Engineer, PE “Ellada”
/7/ Marina Cherepanova – Environmental Protection Engineer, Creativ Industrial Group
/8/ Tatiyana Rybalko – Head of Quality Service, Creativ Industrial Group
/9/ Vitalii Pustovoit – Chief of Boiler Shops, PrJSC Modified Fats Factory
/10/ Tatiyana Naumenko – Boiler Shop Chief Machinist, PrJSC Modified Fats Factory
/11/ Dmytrii Gubarev – Boiler Shop Machinist, PrJSC Modified Fats Factory
/12/ Boris Levchenko – Deputy Chief of Boiler Shops, PrJSC Modified Fats Factory

APPENDIX A: 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 holds the LoAs from both Parties involved: 1. LoA No.2589/23/7 of 14/09/2012 issued by the State Environmental Investment Agency of Ukraine (DFP in Ukraine) 2. Declaration of Approval Ref: 2012JI10 of 12/04/2012 issued by Ministry of Economic Affaires, Agriculture and Innovation (DFP in the Netherlands)	OK	OK
91	Are all the written project approvals by Parties involved unconditional?	All the written project approvals by Parties involved 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?	On the whole, the project has been implemented in accordance with the PDD regarding which the determination has been deemed final. Under the project activity two husk boilers were planned to be installed at PrJSC Modified Fats Factory (MFF) in Kirovograd, Ukraine. The husk generated by the Oil Extraction Plan (OEP) is to be combusted in these husk boilers with the purpose to meet the energy demand of both MFF and OEP and to generate carbon-neutral steam. The project activity will combust 27,950 tonnes of husk annually and generate steam. The project activity was initially designed to install two husk boilers and one electricity steam generator. However, during the project implementation the installation of the	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		electricity steam turbine was not realized in 2012 as initially planned because of the delay in project financing. Therefore, emissions reductions related to electricity generation are not taken into consideration in the reported monitoring period.		
93	What is the status of operation of the project during the monitoring period?	Both husk boilers are commissioned on planned time and fully operational.	OK	OK
Compliance with monitoring plan				
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The monitoring occurred in accordance with the revised monitoring plan. Please, see sections 99(a) and 99 (b) of the present protocol. **CAR 01.** Please delete from the MR p.1 the phrase concerning the approach applied as misleading and irrelevant **CAR 03.** Please remove from the MR Sections B.2.1, B.2.2, B.2.3, B.2.5, B.2.6 as irrelevant for this type of project. **CAR 05.** Please don't mention baseline net GHG removals by the sinks in the column "Purpose of data" contained in the tables of parameters (Section D.2. of the MR) as irrelevant for this type of the project. **CAR 06.** According to the monitoring methodology	CAR01 CAR03 CAR05 CAR06	OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		used by the PPs quantity of biomass residues of category *n* used in the project activity during the year *y* is to be measured with weight meters. Please make corrections in the table of parameters. Please also demonstrate the way the moisture content was adjusted to determine the quantity of dry biomass.		
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?	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	OK	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	Data sources used for calculating emission reductions, among them • National Inventory Report of Anthropogenic Emissions by Sources and Removals by Sinks of Greenhouse Gases in Ukraine • Tool to determine the baseline efficiency of thermal or electric energy generation system, version 01 • Steam Flow Rate to Heat Rating calculating tool developed by Spirax-sarco available at • http://www.spiraxsarco.com/resources/calculators/steam-flow-and-heat-rate/steam-flow-rate-to-heat-rating.asp • Tool to determine methane emissions avoided	CL09 CAR20	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		from disposal of waste at a solid waste disposal site, Version 05.1.0, Table "Data and parameters monitored", • Sunflower Seed Hulls, Mushroom Growers' handbook 2, Pg. 101 available at: http://www.alohamedicinals.com/book2/chapter-4-02-04.pdf • ACM 0006 ver.11.2.0 • Husk moisture content laboratory tests provided by the certified laboratories • National Standard of Ukraine SUNFLOWER HUSK. Specifications. DSTU (7123:2009), by State Consumer Standard Agency of Ukraine (Derzhspozhyvstandart) • Contracts with natural gas suppliers • Plant's records • National emission factor for UES of Ukraine for projects consuming electricity issued by National Environmental Investments Agency of Ukraine for the years 2009-20011 • IPCC 2006 data are clearly identified, reliable and transparent **CL 09.** Please provide more specific reference to the National Standard applied for the project parameter Q_{husk}. **CAR 20.** Please provide the list of Third Parties		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		involved in the project, including the fuel and electricity suppliers, companies conducting maintenance and calibration of the project equipment, as well as laboratory tests.		
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	Emission factors, including default emission factors used for calculating the emission reductions, such as CO_2 emission factor of natural gas; CH_4 emission factor for the combustion of biomass residues in the project activity; national emission factor for UES of Ukraine , are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice. **CAR 04.** National value for the weighted average CO_2 emission factor of natural gas is available and should be applied in calculations. Please, take into account that changes of this kind made to the MP normally lead to its revision. **CAR11.** The value of the national emission factor for UES of Ukraine was calculated in accordance with the methodology approved by the Order No. 39 of 21/03/2011 issued by the National Environmental Investments Agency of Ukraine. Please make respective corrections to the table of parameters in the MR. The value of this parameter for the year 2012 should be taken as of 2011 as it is prescribed by the SEIA. Please make corrections to the table of	CAR04 CAR11	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		parameters and calculations as well.		
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 reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner	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 estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?	The relevant threshold to be classified as JI SSC project is not exceeded during the monitoring period on an annual average basis that is vivid from the Table E.4. of the emission reductions achieved.	OK	OK
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
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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?			
Revision of monitoring plan				
Applicable only if monitoring plan is revised by project participant				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	The proposed revisions to the monitoring plan along with the justification for them are listed in Section B.3. of the MR **CAR 18.** The deviation referring to the calculation of the baseline parameter Q_{husk} described in Section D.2. of the MR leads to the revision of the monitoring plan. Besides, there is no explanation for the recalculation method of the moisture content into dry residue. The quantity of operational hours and the value of the boiler load capacity taken by the PPs for the calculations as well as the data sources and documented evidences are not provided.	CAR18	OK
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 revisions improve 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	The implementation of data collection procedures is in	CAR02	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	accordance with the monitoring plan, including the quality control and quality assurance procedures **CAR 02.** According to the data on energy resources accounting contained in the boiler house log book presented to the verifiers during the site visit, the project activity consumed 77505,5 tonnes of husk during the claimed monitoring period (NB! The data for the husk consumed in November 2009 refers to the whole month). This differs from the amount of husk consumed for the same period that is presented in MR Section A.1. **CL 01.** Please remove personal data from Figure 3 and extend it so as to include all persons in charge of the monitoring activities along with the detailed description of their responsibilities. **CAR 21**. Please provide in the MR the description of the procedure for collecting, analysing, reporting and archiving the data subject to monitoring.	CL01 CAR21 CAR22	OK OK OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, in order?	The function of the monitoring equipment, including its calibration status, is in order **CL 04.** Please provide a scanned copy of passport for a gas meter. **CL 05.** Please provide the copies of passports for	CL04 CL05 CAR19 CL10	OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		electricity meters that were not available at the verification site visit. **CAR 19.** Please amend the MR with a separate section providing the table of monitoring equipment specifying its type, installation date, serial/inventory number, the level of uncertainty/ accuracy class, calibration period, the last calibration date. **CL 10**. Please provide passports for Delta electricity meters.		
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 **CL 02.** Please provide explanation as for the use of the fraction of methane captured at the SWDS and flared, combusted or used in another manner, the manner it was visually observed as well as any document that could evidence the fact of that observation. **CAR 07.** The quantity of biomass residues presented in the operational logbooks during the site visit differs from the ones in the MR. Please make these data consistent and adjust calculations accordingly. **CAR 08.** Please make reference to the new version of the National Inventory Report 1990-2010 as the currently valid one.	CL02 CAR07 CAR08 CAR09 CAR10 CL03 CAR12 CAR13 CAR14 CL06 CL07 CAR15 CAR16 CAR17 CL08	OK OK OK OK OK OK OK OK OK OK OK OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 09. The data presented in the MR for the parameter $FC_{i,j,y}$ differ from the one presented in PDD. Please check it and make consistent. The quantity of natural gas consumed that is presented in the MR differs much from the one in the operational log books presented to the verification team during the site visit. Please check this issue, make respective corrections to the table of parameters and calculations. **CAR 10.** The data presented in the MR for the parameter ECp,y differ from the one presented in PDD. Please check it and make consistent. Please provide the documented evidence for the electricity consumed during the monitoring period as it was not available during the site visit and thus, was not presented to the verification team **CL 03.** The value of the parameter $NCV_{husk,y}$ couldn't be acknowledged by the verification team as the results of laboratory analyses conducted in accordance with the MP set in the determined PDD, were not available. The contracts concluded with a reputable laboratory as well as the its accreditation scopes were not presented either. **CAR 12.** Along with the total emission reductions		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		presented in Section E.4. of the MR the ERs break down for each year of the monitoring period is to be presented as well. **CAR 13.** The project emission presented in Section E.4. differ from the total project emissions in Table3 (Section E.2.). Please correct the mistake. **CAR 14.** The value of ERs estimated ex-ante in the PDD presented in Section E.5. of the MR differs from the same value in the determined PDD. Please check this issue and make due corrections. **CL 06.** Please provide an order on keeping and archiving the project data **CL 07.** Please provide a documented evidence on the class of the energy consumption for the plant. **CAR 15.** Please make the required corrections mentioned above in the present protocol and make the data submitted in the MR consistent with the ones in the ERs calculation file. **CAR 16.** The emission reductions calculation for the year 2010 presented in Section E.4. of the MR is incorrect, consequently the total ERs amount is incorrect as well.		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Please make respective corrections throughout the MR and excel file. **CAR 17.** According to the registered PDD, the monitoring frequency for the NCV husk is every 6 month. Considering CL02 the value of the parameter for the whole monitoring period can't be evidenced. Please provide the valid evidences, otherwise the monitoring frequency is to be revised that in its turn will lead to the revision of the monitoring plan. **CL 08.** Please specify the fuel type in the tables of project parameters $NCV_{i,y}$ and $FC_{i,j,y}$		
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	Except for the deviations occurred in the data monitoring frequency and described in the respective section of the MR, the data collection and management system for the project are in accordance with the monitoring plan	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	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
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
104	Does the monitoring period not overlap	N/A	N/A	N/A

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	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 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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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 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

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
CAR 01. Please delete from the MR p.1 the phrase concerning the approach applied as misleading and irrelevant	94	The phrase concerning the JI specific approach has been deleted from page 1 of MR.	The issue is closed based on the due correction made to the MR.
CAR 02. According to the data on energy resources accounting contained in the boiler house log book presented to the verifiers during the site visit, the project activity consumed 77505, 5 tonnes of husk during the claimed monitoring period (NB! The data for the husk consumed in November 2009 refers to the whole month). This differs from the amount of husk consumed for the same period that is presented in MR Section A.1.	101 (a)	The husk consumption in MR has been corrected in line with the operational log, i.e. 4,991 tonnes in 2009, 29,037 tonnes in 2010, 34,842 tonnes in 2011 and 30,306 tonnes in 2012. It is further adjusted with the moisture content to calculate $Q_{husk,y}$. The operational log and the summary have been submitted to auditor.	CAR 02 is closed based on the corrections made to the MR and the documented evidences submitted for verification
CAR 03. Please remove from the MR Sections B.2.1, B.2.2, B.2.3, B.2.5, B.2.6 as irrelevant for this type of project.	94	MR has been revised as pre requested.	CAR 03 is closed.
CL 01. Please remove personal data from Figure 3 and extend it so as to include all persons in charge of the monitoring activities along with the detailed description of their responsibilities.	101 (a)	The information of the personal has been moved out from Figure 3. In addition, Figure 3 is revised to present the whole monitoring team. The role of these positions in the monitoring system has been described in Section C of MR.	CL01 is closed.
CAR 04. National value for the weighted average CO2 emission factor of natural gas is available and should be applied in calculations. Please,	95 (c)	National Inventory Report of Anthropogenic Emissions by Sources and Removals by Sinks of Greenhouse Gases	CAR 04 is closed based on the explanation provided.

take into account that changes of this kind made to the MP normally lead to its revision.		in Ukraine for 1990-2010 has replaced the previous reference of $EF_{FF,y,f}$ in MR. The new reference applies the same value of $EF_{FF,y,f}$ as the previous reference.	
CL 02. Please provide explanation as for the use of the fraction of methane captured at the SWDS and flared, combusted or used in another manner, the manner it was visually observed as well as any document that could evidence the fact of that observation.	101 (c)	The parameter f, Fraction of methane captured at the SWDS and flared, combusted or used in another manner, refers to the practical situation of Kirovograd Municipal Landfill Site where the husk would be disposed in absence of the project activity. During the first monitoring period, there isn't any methane captured and used in Kirovograd Municipal Landfill Site. Therefore the value of f is zero.	CL 02 is closed based on the explanation provided.
CAR 05. Please don't mention baseline net GHG removals by the sinks in the column "Purpose of data" contained in the tables of parameters (Section D.2. of the MR) as irrelevant for this type of the project.	94	Section D.2 has been revised as per requested.	CAR 05 is closed based on the required correction made to the MR.
CAR 06. According to the monitoring methodology used by the PPs quantity of biomass residues of category n used in the project activity during the year y is to be measured with weight meters. Please make corrections in the table of parameters. Please also demonstrate the way the moisture content was adjusted to determine the quantity of dry biomass.	94	*PP's response #1:* The quantity of biomass residues (on dry-basis) have been adjusted with the moisture content in the ER calculation spreadsheet. 4 NCV/ moisture content Test reports have been submitted to auditor. The National Standard of Ukraine for Husk is applied to cross-check the moisture content of husk which addresses the maximal moisture content should be	*Conclusion on Response #1:* CAR 06 is not closed. For further reference, please, see CL 03 and CAR 18. *Conclusion on response # 2:* CAR 06 is closed.

		12%. *PP's response #2:* Please refer to the response of CAR17.	
CAR 07. The quantity of biomass residues presented in the operational logbooks during the site visit differs from the ones in the MR. Please make these data consistent and adjust calculations accordingly.	101 (c)	The husk consumption in MR has been corrected in line with the operational log, i.e. 4991.6 tonnes in 2009, 29,037 tonnes in 2010, 34,842 tonnes in 2011 and 30,306 tonnes in 2012. It is further adjusted with the moisture content to calculate $Q_{husk,y}$.	CAR 07 is closed based on the corrections made to the MR.
CAR 08. Please make reference to the new version of the National Inventory Report 1990-2010 as the currently valid one.	101 (c)	National Inventory Report of Anthropogenic Emissions by Sources and Removals by Sinks of Greenhouse Gases in Ukraine for 1990-2010 has replaced the previous reference.	CAR 08 is closed based on the replacement made to the MR.
CAR 09. The data presented in the MR for the parameter FCi,j,y differ from the one presented in PDD. Please check it and make consistent. The quantity of natural gas consumed that is presented in the MR differs much from the one in the operational log books presented to the verification team during the site visit. Please check this issue, make respective corrections to the table of parameters and calculations.	101 (c)	The registered PDD provides the ex-ante value of $FC_{i,j,y}$ as 0. MR has been corrected in consistent with PDD, where $FC_{i,j,y}$ is 0. The operational log (refer to CAR02) presents the natural gas consumption of the whole boiler house where the existing natural gas boilers still work. $FC_{i,j,y}$ is 0 in the revised MR. Because of the method of ER calculation by the registered PDD, the fossil fuel consumption by the project activity won't make impact on the ER calculation.	CAR 09 is closed.

CAR 10. The data presented in the MR for the parameter ECp,y differ from the one presented in PDD. Please check it and make consistent. Please provide the documented evidence for the electricity consumed during the monitoring period as it was not available during the site visit and thus, was not presented to the verification team	101 (c)	*PP's response #1:* The registered PDD provides the ex-ante electricity consumption as 1,084 MWh/a which was calculated by multiplying the total installed capacity with the estimated working hours. The installed capacity is always much large than the real working capacity. According to the registered PDD, the ex post electricity consumption shall be calculated by multiplying the realised electricity consumed by the boiler room with the share related with the proposed project (420.1/705.54). The original record of the realised electricity has been submitted to auditor, as well as the calibration reports of the 4 electricity meters. *PP's response #2:* Photos of these 4 electricity meters were taken on-site and submitted to auditor. It is reliable that these meters are functional under the proper operation. Please notice that only Meter 3 and Meter 4 are relative with the project activity. In addition, the operational log of electricity meters during April-Dec 2012 has been submitted to auditor.	*Conclusion on response # 1:* CAR 10 is not closed as there is no evidence presented to make verification opinion as for the proper operation of the monitoring equipment. *Conclusion on response # 2:* CAR 10 is closed based on the evidences presented.

CAR11. The value of the national emission factor for UES of Ukraine was calculated in accordance with the methodology approved by the Order No. 39 of 21/03/2011 issued by the National Environmental Investments Agency of Ukraine. Please make respective corrections to the table of parameters in the MR. The value of this parameter for the year 2012 should be taken as of 2011 as it is prescribed by the SEIA. Please make corrections to the table of parameters and calculations as well.	95 (c)	The reference of $EF_{EG,GR,2012}$ has been corrected. The calculation result is corrected.	CAR 11 is closed based on the required correction made to the MR.
CL 03. The value of the parameter $NCV_{husk,y}$ couldn't be acknowledged by the verification team as the results of laboratory analyses conducted in accordance with the MP set in the determined PDD, were not available. The contracts concluded with a reputable laboratory as well as the its accreditation scopes were not presented either.	101 (c)	*PP's response #1:* 5 NCV/ moisture content Test reports have been submitted to auditor. The National Standard of Ukraine for Husk is applied to cross-check the NCV of husk which addresses the minimal NCV should be 15 TJ/Gg. According to the registered PDD, NCV will be tested every 6 months. The test reports are adjacent with the certificate of the lab and the contract. *PP's response 2:* In the MR, the monitoring frequency of $NCV_{husk,y}$ is reset as annually. The deviation has been prescribed in Section B.2 and B.3 of the MR. 4 NCV/moisture content Test Reports have been submitted to auditor. On 14 Aug 2009, two tests were taken in	*Conclusion on response #1:* Among the NCV/ moisture content Test reports submitted by the PPs for verification there are 2 that arise the following request : 1. Presented as for 22Jun 2010, the report actually was issued on 12 August 2009 and thus can't be considered valid. 2. As for report dated 09/11/2011, it can't be considered valid for two reasons: - it was prepared for PJSC "Kyrovogradoliya" ; no justification on this issue was presented by the PPs - the time period between the submission of husk for analysis and test report issued makes 7

		parallel. Another two test reports were taken on 25 Feb 2011 and 13 April 2012.	months. *Conclusion on response #2:* Issue is closed based on the amendments made to the MR and the documentary evidences presented.
CAR 12. Along with the total emission reductions presented in Section E.4. of the MR the ERs break down for each year of the monitoring period is to be presented as well.	101 (c)	The table in section E.4 has been revised as per requested.	The ERs break down was provided. The issue is closed.
CAR 13. The project emission presented in Section E.4. differ from the total project emissions in Table3 (Section E.2.). Please correct the mistake.	101 (c)	The omission has been corrected.	The issue is closed.
CAR 14. The value of ERs estimated ex-ante in the PDD presented in Section E.5. of the MR differs from the same value in the determined PDD. Please check this issue and make due corrections.	101 (c)	*PP's Response #1:* The ex-ante ER in Section E.5 is consistent with the determined PDD. The determined PDD provides the annual ER as 4,462 in 2009, 19,843 in 2010, 21,775 in 2011 and 23,859 in 2012. The MR serves the monitoring period of 2009, 2010, 2011 and the 1st three months of 2012. Thus, the total ex-ante ER in the determined PDD is 52,045 tCO2. *PP's Response #2:* The first monitoring period is extended to 31/12/2012. The ex-ante ER and ex post ER have been updated accordingly.	CAR 14 is closed based on the explanation provided. No further explanations are required.

CL 04. Please provide a scanned copy of passport for a gas meter.	101 (b)	The copies of passport of gas meter have been submitted to auditor, including: -Gas volume corrector "OE-VPT" passport — s/n 28979, date of last calibration 14.12.10, calibration period — 2 years; -Gas meter "Kurs-01 G 650-B" passport — s/n 4892, date of last calibration 30.09.10, calibration period — 2 years; - Certificate of installation of gas meter "Kurs-01 G 650-B" s/n 4892 dated 07.05.2009.	The required documents have been submitted for verification. Issue is closed.
CL 05. Please provide the copies of passports for electricity meters that were not available at the verification site visit.	101 (b)	*PP's Response #1:* The copy of the passport of three-phase electricity meter (s/n 026354607) has been submitted to auditor. *PP's Response #2:* Please refer to the response of CAR19 and CL10.	*Conclusion on Response #1:* CL 05 is not closed. Please, refer to Conclusion CAR 19 and CL10. *Conclusion on response # 2:* Issue is closed.
CL 06. Please provide an order on keeping and archiving the project data	101 (c)	The orders on keeping and archiving the project data has been submitted to auditor, including: - Order on archiving the project data for monitoring #131 dated 15.06.2011; - Order on keeping	CL 06 is closed as the required documents were issued and presented for verification.

		records of energy supplies consumption and production #253 dated 04.12.2012; - Order on archiving the project data for monitoring#254 dated 04.12.2012.	
CL 07. Please provide a documented evidence on the class of the energy consumption for the plant.	101 (c)	*PP's Response #1:* The evidence will be submitted to auditor soon. *PP's Response #2:* The evidences of the class of energy consumption have been submitted to auditor.	*Conclusion on Response #1:* CL 07 is open as the requested documents have not be submitted. *Conclusion on response # 2* CL 07 is closed based on the evidences submitted.
CAR 15. Please make the required corrections mentioned above in the present protocol and make the data submitted in the MR consistent with the ones in the ERs calculation file.	101 (c)	The data in the revised MR and the revised ER calculation spreadsheet is same.	CAR 15 is closed.
CAR 16. The emission reductions calculation for the year 2010 presented in Section E.4. of the MR is incorrect, consequently the total ERs amount is incorrect as well. Please make respective corrections throughout the MR and excel file.	101 (c)	The mistake have been corrected in MR.	CAR 16 is closed based on the corrections made to the MR
CAR 17. According to the registered PDD, the monitoring frequency for the NCV husk is every 6 month. Considering CL02 the value of the parameter for the whole monitoring period can't	101 (c)	In the MR, the monitoring frequency of $NCV_{husk,y}$ is reset as annually. The deviation has been prescribed in Section	CAR 17 is closed based on the required changes made to the MR

be evidenced. Please provide the valid evidences, otherwise the monitoring frequency is to be revised that in its turn will lead to the revision of the monitoring plan.	B.2 and B.3 of the MR.

CAR 18. The deviation referring to the calculation of the baseline parameter Qhusk described in Section D.2. of the MR leads to the revision of the monitoring plan. Besides, there is no explanation for the recalculation method of the moisture content into dry residue. The quantity of operational hours and the value of the boiler load capacity taken by the PPs for the calculations as well as the data sources and documented evidences are not provided.	99 (a)	Table 2 in the MR has addressed the deviation referring to the revised calculation of Q_{husk}. The explanation for the recalculation method of the moisture content into dry residue has been given in MR. According to ACM0012 that was referred to by the project, the quantity of biomass residues (on dry-basis) shall be measured by "adjust for the moisture content in order to determine the quantity of dry biomass". The registered CDM project (ref. 0187) provides the calculation of the quantity of biomass residues (on dry-basis) as $C_{wet-basis}$ *(1-moisture). Please refer to page 23 of the PDD that is available at: http://cdm.unfccc.int/Projects/DB/DNV-CUK1134990070.21/view?cp=1 The quantity of biomass residues (husk) is measured and calculated by multiplying the weight of sunflower seed that are consumed by the oil production with the real husk percentage of the sunflower seed as well as with Moisture Content.. Therefore, the operational hours and the value of the boiler load capacity are not required for the calculation of ER in the	CAR 18 is closed

		MR. The MR has been revised. The weight of sunflower seed is measured by SPS Alfa Weight Hopper at the production unit. Despite that the hopper isn't calibrated because it is only for the internal and non-commercial use, it is inspected once a month by the commissioning company. The two Orders of the inspection and the Inspection Act have been submitted to the auditor.	
CL 08. Please specify the fuel type in the tables of project parameters $NCV_{i,y}$ and $FC_{i.j.y}$	101 (c)	$NCV_{i,y}$ refers to the NCV of natural gas and $FC_{i,j,y}$ refers to the quantity of natural gas in the MR. The tables in MR have been completed.	CL 08 is closed
CAR 19. Please amend the MR with a separate section providing the table of monitoring equipment specifying its type, installation date, serial/inventory number, the level of uncertainty/ accuracy class, calibration period, the last calibration date.	101 (b)	Annex 1 of the MR is inserted in order to archive the information.	CAR 19 is closed based on the amendment made to the MR
CL 09. Please provide more specific reference to the National Standard applied for the project parameter Q husk.	95 (b)	The referred standard National Standard of Ukraine Sunflower Husk Quality (7123:2009) has been submitted to auditor in the submission package of CAR06_CL03_CAR17_2. Table 2 of the Standard provide the max. moisture content is 12% and the min. NCV is 15 TJ/Gg. These two figures are applied to cross-check the relevant monitoring data.	Issue is closed

CAR 20. Please provide the list of Third Parties involved in the project, including the fuel and electricity suppliers, companies conducting maintenance and calibration of the project equipment, as well as laboratory tests.	95 (b)	Annex 1 of the MR is inserted in order to archive the information.	CAR 20 is closed based on the amendments made to the MR
CL 10. Please provide passports for Delta electricity meters.	101 (b)	The passport of Delta electricity meter has been submitted to auditor. However, only Meter 3 and Meter 4-IPSA are relative with the project activity. Its information is presented in Annex 1 of the MR.	CL 10 is closed
CAR 21. Please provide in the MR the description of the procedure for collecting, analysing, reporting and archiving the data subject to monitoring.	101 (a)	Section C of MR has been completed with the description of the procedures.	CAR 21 is closed based on the required information presented in the MR
CAR 22. Please describe in the MR the system of internal audits established within the plant to cross-check the monitoring data.	101 (a)	Section C of MR has been completed with the internal audit/quality control.	CAR 22 is closed based on the required information presented in the MR