



**BUREAU  
VERITAS**

# VERIFICATION REPORT OJSC “KIROVOGRADOLIYA”

## VERIFICATION OF THE “UTILIZATION OF SUNFLOWER SEEDS HUSK FOR STEAM AND POWER PRODUCTION AT THE OIL EXTRACTION PLANT OJSC ‘KIROVOGRADOLIYA’ INITIAL AND 1<sup>ST</sup> PERIODIC

REPORT No. UKRAINE-VER/0066/2009

REVISION No. 02

BUREAU VERITAS CERTIFICATION



## VERIFICATION REPORT

Date of first issue: 10/12/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: OJSC "Kirovogradoliya"	Client ref.: Oleg Katrych

**Summary:**  
Bureau Veritas Certification has made the initial and 1<sup>st</sup> periodic verification of the "Utilization of sunflower seeds husk for steam and power production at the oil extraction plant OJSC 'Kirovogradoliya", project of OJSC "Kirovogradoliya", located in Kirovograd City, 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 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 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.

This report presents the results of the initial verification aiming to get evidences of project implementation and its readiness to generate emission reductions.

The first output of the verification process is a list of Clarification, Corrective Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 55446 tons of CO<sub>2</sub>eq for the monitoring period from 27/04/2009 till 31/12/2010.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and revised monitoring plan, and its associated documents.

Report No.: UKRAINE-ver/0066/2009	Subject Group: JI
Project title: «Utilization of sunflower seeds husk for steam and power production at the oil extraction plant OJSC 'Kirovogradoliya'»	
Work carried out by: Team Leader : Oleg Skoblyk	
Work reviewed by: Ivan Sokolov	
Work approved by: Flavio Gomes	
Date of this revision: 20/04/2011	Rev. No.: 02
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## 1 INTRODUCTION

OJSC “Kirovogradoliya” has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Utilization of sunflower seeds husk for steam and power production at the oil extraction plant OJSC ‘Kirovogradoliya’” (hereafter called “the project”) at Kirovograd, 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.

**Initial Verification:** The objective of an initial verification is to verify that the project is implemented as planned, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate verifiable emission reductions. A separate initial verification prior to the project entering into regular operations is not a mandatory requirement.

**Periodic Verification:** The objective of the periodic verification is to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan; furthermore the periodic verification evaluates the GHG emission reduction data and express a conclusion with a high, but not absolute, level of assurance about whether the reported GHG emission reduction data is free of material misstatements; and verifies that the reported GHG emission data is sufficiently supported by evidence, i.e. monitoring records. If no prior initial verification has been carried out, the objective of the first periodic verification also includes the objectives of the initial verification.

### 1.2 Scope

The verification scope is defined as an independent and objective review of the project design document, the project’s baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.



The objective of verification can be divided in Initial Verification and Periodic Verification.

**Initial Verification:** The objective of an initial verification is to verify that the project is implemented as planned, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate verifiable emission reductions. A separate initial verification prior to the project entering into regular operations is not a mandatory requirement.

**Periodic Verification:** The objective of the periodic verification is to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan; furthermore the periodic verification evaluates the GHG emission reduction data and express a conclusion with a high, but not absolute, level of assurance about whether the reported GHG emission reduction data is free of material misstatements; and verifies that the reported GHG emission data is sufficiently supported by evidence, i.e. monitoring records. If no prior initial verification has been carried out, the objective of the first periodic verification also includes the objectives of the initial verification.

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

### **1.3 Verification Team**

The verification team consists of the following personnel:

Oleg Skoblyk

Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

This verification report was reviewed by:

Ivan Sokolov

Bureau Veritas Certification, Internal Technical Reviewer

## **2 METHODOLOGY**

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a verification protocol was customized for the project, according to the version 01.1 of the Joint Implementation Determination and Verification Manual, issued by the Joint



Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

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

## 2.1 Review of Documents

The Monitoring Report (MR) Monitoring report “Utilization of sunflower seeds husk for steam and power production at the oil extraction plant OJSC ‘Kirovogradoliya” version 01 dated 12/02/2010 submitted by OJSC “Kirovogradoliya” and additional background documents related to the project design and baseline, i.e. country Law,) and/or Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, prior to and following the site-visit PPs revised the MR and resubmitted them as version 02 dated 18/03/2011.

To address Bureau Veritas Certification further corrective action and clarification requests, OJSC “Kirovogradoliya” revised the MR and resubmitted it on 14/04/2011, the latter MR version 03 is considered final.

The verification findings presented in this report relate to the Monitoring Reports versions 01, 02, 03 and project as described in the determined PDD.

QA/QC documentation was reviewed onsite.

## 2.2 Follow-up Interviews

On 26/11/2010 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 OJSC “Kirovogradoliya” and SEC “Biomass” were interviewed (see References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

Interviewed organization	Interview topics
OJSC "Kirovogradoliya"	Organizational structure. Responsibilities and authorities. Training of personnel. Quality management procedures and technology. Implementation of equipment (records). Metering equipment control. Metering record keeping system, database.
Consultant: SEC "Biomass"	Baseline methodology. Monitoring report.

### 2.3 Resolution of Clarification, Corrective and Forward Action Requests

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

If the Verification Team, in assessing the monitoring report and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

- (a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;
- (b) Clarification request (CL), requesting the project participants to provide additional information for the AIE to assess compliance with the monitoring plan;
- (c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

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

### 3 INITIAL VERIFICATION FINDINGS

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 21 Corrective Action Requests, 5 Clarification requests and 0 Forward action requests.

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

### **3.1 Project approval by Parties involved (90-91)**

Written project approval by the Ukraine has been issued by the DFP of Ukraine (It is listed among Category 1 Documents in the Reference section of this report).

Project obtained the Letter of Approval from foreign country (Switzerland) acting as the project participant dated 25<sup>th</sup> of February 2011 (Ref. No. J 294-0485 (It is listed among Category 1 Documents in the Reference section of this report).

The abovementioned written approval is unconditional.

### **3.2 Project implementation (92-93)**

Before starting of the verification process the following measures were installed in the oil extraction plant:

- Two sunflower seeds husk fired steam boilers;
- One sunflower seeds husk fired steam boiler with reserve fuel (natural gas)
- Steam turbine

Beginning of the equipment installation according to the project has started in September 2006. According to PDD of the JI project installation period was carried out from September 2006 till December 2007. Project starting date according to the PDD of the JI project was December 2007. However, due to the logistical and financial problems at the company the official project start was delayed till the 27<sup>th</sup> of April, 2009. Expected project life time is 20 years and 0 month.

All deviations of project implementation concern measuring equipment (heat and electric meters) and data archiving process (not all data





archived in paper and electronic form). Comments to monitoring plan implementation provided in Appendix A.

## **4 VERIFICATION CONCLUSIONS**

### **4.1 Compliance of the monitoring plan with the monitoring methodology (94-98)**

The monitoring occurred not in accordance with the monitoring plan included in the PDD.

All necessary project information is collected and archived by plant personnel but not in line with monitoring plan provided in PDD. Comments to monitoring plan implementation are given in Appendix A.

### **4.2 Revision of monitoring plan (99-100)**

The project participants provided an appropriate justification for the proposed revision, which are documented internal operational procedures and technological regulations, specific energy consumption rates, reports generated and consumed electric energy, etc.(see **Category 2 Documents** below).

The proposed revision improves the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans.

### **4.3 Data management (101)**

Collection of information required for calculations of reductions of GHG emissions as a result of the project is performed in accordance with the procedure common for the enterprise. Initial data will be submitted by the environmental department, by the production manager, and by the head energy engineer.

A transparent system for collection and storage of measured data in the electronic form are established. Calculations of emission reduction will be prepared by specialists of OJSC “Kirovogradoliya” at the end of every reporting year. The project manager of OJSC “Kirovogradoliya” will prepare reports, as needed for audit and verification purposes. Specialists of “Scientific Engineering Centre “Biomass” will check the prepared reports.



#### **4.4 Verification regarding programmes of activities (102-110)**

Not applicable.

### **5 VERIFICATION OPINION**

Bureau Veritas Certification has performed the initial and 1<sup>st</sup> periodic verification of the “Utilization of sunflower seeds husk for steam and power production at the oil extraction plant OJSC ‘Kirovogradoliya’ Project in 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 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 OJSC “Kirovogradoliya” is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final Monitoring Report version 03 dated 14/04/2011. 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 dated 14/04/2011 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design. 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, we confirm the following statement:



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Reporting period: From 27/04/2009 till 31/12/2010

Baseline emissions	:63676	t CO2 equivalents.
Project emissions	:8230	t CO2 equivalents.
Emission Reductions	:55446	t CO2 equivalents.



## 6 REFERENCES

### Category 1 Documents:

Documents provided by OJSC “Kirovogradoliya” that relates directly to the GHG components of the project.

- /1/ Project Design Document, version 2 dated 12/02/2010
- /2/ Determination report, № 644483, dated 14/06/2005 (re-approved dated 23/02/2009).
- /3/ Monitoring Report dated 14/04/2011 version 03
- /4/ Correspondence between Service GmbH TUV SUD Group and SEC Biomass justified that Determination Report dated 14/06/2005 can be used for Track 1.
- /5/ Withdrawal letter from Track 2 in order to switch the project to Track 1
- /6/ ACM0006 “Consolidated methodology for electricity and heat generation from biomass residues”, version 11,1.
- /7/ Excel file – “ERU\_Calculation\_Workbook-ENG”
- /8/ Letter of Approval from Switzerland ated 25<sup>th</sup> of February 2011, Ref. No. J 294-0485  
A Letter of Approval for Joint Implementation Project “Utilization of sunflower seeds husk for steam and power production at the oil extraction plant” No.845/23/7 dated 30/07/2009 issued by National Environmental Investment Agency of Ukraine
- /9/

### Category 2 Documents:

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

1. Act №88/2009 of operation availability of object dated 27.04.2009
2. Act of audit of nature conservation laws' requirements realization dated 12.01.2010
3. Act of audit of nature conservation laws' requirements realization dated 12.02.2009
4. Act of equipment exchange (calibration) accounting dated 16.06.2010
5. Atmospheric air protection report in 2009
6. Atmospheric air protection report in 2nd quarter 2009
7. Atmospheric air protection report in 3rd quarter 2010
8. Boiler E-16-3,9-360 Д (Reg.№1558)
9. Boiler E-16-3,9-360 Д (Reg.№1603)
10. Boiler E-16-3,9-360 Д (Reg.№1604)
11. Calculation of rate of conditional fuel and electricity losses for the production of 1 Gcal of thermal energy for OJSC "Kirovogradoliya" dated 18.08.2005

12. Calculation of rate of thermal energy losses for the production of sunflower oil for OJSC "Kirovogradoliya" dated 09.2005
13. Calibration protocol №1 of gas meter Kurs-01 G400A (Reg.№03588) dated 20.04.2010
14. Certificate №11000088 about the compliance of object with the requirements of project documents, national standards, building norms and regulations
15. Certificate of attestation №2060 dated 17.05 2007, valid until 16.05.2011
16. Certificate of physical and chemical characteristics of natural gas in August 2008
17. Certificate of physical and chemical characteristics of natural gas in July 2008
18. Certificate of right of immovable property dated 06.07.2009
19. Certification of prime calibration (Reg.№00955.04503)
20. Clerical book. Register of CHP equipment repair
21. Control scheme. Condensation-evaporation facility
22. Control scheme. Vapour and water road
23. Control-measuring laboratory
24. Distribution of energy sources in June 2009
25. Distribution of energy sources in October 2010
26. Drying oven
27. Electricity meter №69349 made in 11.2008
28. Electricity meter №75870 made in 11.2008
29. Electricity three-phase meter Landis&Gyr Dialog (Reg.№76 703 742)
30. Extract from procedure regulations. Analysis of nuclear of sunflower seeds dated 19.08.2008
31. Extract from procedure regulations. Method of determination of nuclear carrying out into the hasks of sunflower seeds dated 19.08.2008
32. Extract from ГОСТ 10855-64. Oil seeds. Method of determination of hasks amount
33. Gas meter GMS-G 25-32-0,6-Y3.1-HЧ (Reg.№028730)
34. Handover/takeover act of (internal moving of) fixed assets №B5-0000242 dated 23.03.2007
35. Handover/takeover act of (internal moving of) fixed assets №KO000324 dated 31.12.2008
36. Handover/takeover register of millwright shift in industrial CHP dated 08.10.09
37. Industrial report in September 2010
38. Information about calibration of meter dated 20.04.10
39. Information about installation of the source of current and its exchange dated 14.04.08 and 20.04.08
40. Log-book. Gas ultrasonic meter "Kurs-01" АЧЦА 407251.001ФО. Dnipropetrovs'k
41. Message №09/47 about change of physical and chemical parameters of natural gas dated 25.11.2010
42. Message №09/48 about change of physical and chemical parameters of natural gas dated 25.11.2010



43. Passport. Electronic multifunctional electricity meter Landis&Gyr ZxD dated 10.2002 (Reg.№76703742)
44. Passport. The meter of volume losses and volume of gas ОЕ-22ЛА ИИМ Д 421412.002-02 ПС. Ivano Frankivsk 2006
45. Photo, airpipeline transportation sunflower husk
46. Photo, boilers installed in the project
47. Photo, burning camera of husk
48. Photo, car scales platform #2
49. Photo, CHP installed during project implementation
50. Photo, CHP treatment plant (filter) installed during project activity
51. Photo, control cabinet CHP
52. Photo, Control Room CHP
53. Photo, dosimeter sunflower seeds
54. Photo, electricity meter #93927715
55. Photo, equipment of sunflower seeds analysis
56. Photo, manometer
57. Photo, manometers of steam turbine
58. Photo, office auto-scales #1
59. Photo, pressure sensor MIDA number 08212058
60. Photo, pressure sensor of burning husk boiler
61. Photo, samples of sunflower seeds
62. Photo, Steam pipelines
63. Photo, steam turbine
64. Photo, sunflower husk storage bins
65. Photo, sunflower seeds drying installation
66. Photo, temperature sensor TSP-1187 022-28
67. Photo, the old boiler-house, which is derived from the operation
68. Photo, verification team



69. Principle scheme of turbogenerator ТГУ-1,7
70. Register of shift measures dated 28.10.2010
71. Schedule of selection of raw materials, semi finished products, final products and auxiliary materials samples for technical and chemical control of compliance with the requirements of actual normative documents
72. Scheme air condensate pipelines CHP
73. Self-regulating generator Synchronous VDE 0530 DIG 130 i/4 (Reg.№84 28315 A101)
74. Shift register of steam boiler E-16-3.9-360 Д
75. Shift register of steam-turbine ТГУ 1,7-3,6/1,0
  
76. Shift register of vaporizer И-120-06-III. Industrial CHP
  
77. State calibration letter of scales A-12024(№1)
78. State calibration letter of scales A-12025(№2)
79. Steam-turbine MV 550 G, manufacturer PBS ENERGO a.s., Velka Bites, CZ, 2007.
  
80. Sunflower seeds meal ДСТУ 4638:2006
  
81. Sunflower seeds oil ДСТУ 4492:2005
  
82. Technical analysis №45 of solid fuel and residue trial in 1st quarter 2009
83. Technical analysis №46 of solid fuel and residue trial in 2nd quarter 2009
84. Technical analysis №48 of solid fuel and residue trial in 3rd quarter 2009
  
85. Technical analysis №51 of solid fuel and residue trial in 4th quarter 2009
  
86. Technological regulations (constant) TP У 18.15.00373869.04 2006 dated 22.11.2006
  
87. Technological schemes of CHP
88. The order of raw materials and final products accounting in organizations of oil and fat industry. 2009
  
89. Thermal scheme of CHP



90. Ultrasonic gas meter Kurs-01G400 A2 (Reg.№03588)
91. Water and vapour accounting register. Industrial CHP
92. GOST 10855-64. Method of determination of husk amount
93. Log of laboratory measurements registration.
94. Report of natural gas acceptance-delivery and rendering of services of its transportation, dated 11/07/2009
95. Report on rendering of natural gas transportation services, dated 31/08/2010
96. Report of natural gas acceptance-delivery and rendering of services of its transportation, dated 30/09/2010
97. Report on rendering of natural gas transportation services, dated 30/09/2010
98. Report of natural gas acceptance-delivery and rendering of services of its transportation, dated 30/10/2010
99. Report of natural gas acceptance-delivery and rendering of services of its transportation, dated 31/12/2010
100. Order #128 dated 12/03/2011.
101. Passport of natural gas physic-chemical parameters.
102. Production Report, 08/2010
103. Production Report, 09/2010
104. Production Report, 10/2010
105. Production Report, 11/2010
106. Production Report, 12/2010
107. Report of resource allocation, 07/2010
108. Report of resource allocation, 09/2010
109. Report of resource allocation, 10/2010
110. Report of resource allocation, 11/2010
111. Report of resource allocation, 12/2010
112. Report, husk sale for 08/2010
113. Report, husk sale for 09/2010
114. Report, husk sale for 10/2010
115. Report, husk sale for 11/2010
116. Report, husk sale for 12/2010
117. Methodology of determination of husk amount consumed by boilers
118. Methodology for determination of heat amount consumed for production needs
119. Methodology of determination power consumption for CHP own needs





120. Methodology for determination of amount of sunflower seeds husks which comes to husk storage area (for burning in boilers and sale)
121. Methodology of determination of sunflower seed husks humidity
122. Methodology of determination of CHP turbo-generator power generation

**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 Katrych - Director General
- /2/ Raisa Polishchuk - Deputy General Director for production
- /3/ Nikolai Demidenko - Chief Energy Engineer
- /4/ Larissa Dianova - Energy Engineer
- /5/ Tasenko Valentina - Head of Laboratory
- /6/ Valery Kosolapov - Chief TPP
- /7/ Ivan Kosyakov - Engineer Metrologist
- /8/ Andrew Motsnyi - Head SEEE

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## VERIFICATION REPORT

## APPENDIX A: VERIFICATION PROTOCOL

## BUREAU VERITAS CERTIFICATION HOLDING SAS

## VERIFICATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
<b>Project approvals by Parties involved</b>					
90	Has the NFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	<p>A Letter of Approval for Joint Implementation Project "Utilization of sunflower seeds husk for steam and power production at the oil extraction plant" No.845/23/7 dated 30/07/2009 issued by National Environmental Investment Agency of Ukraine.</p> <p><u>CAR9</u>: Letter of Approvar from DFP of sponsor party not provided.</p>	All necessary requested documentation has been sent to verification team.	MR and LoA's were checked and founded appropriate. Issue was closed.	OK



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DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		CAR19: The information concerning project approval is missing in the MR. Please, add the appropriate information to the document.	The information on project approval has been added in the separate Section 1.3 of monitoring report version 03.	MR and LoA's were checked and founded appropriate. Issue was closed.	OK
91	Are all the written project approvals by Parties involved unconditional?	Yes, all the written project approvals by Parties involved are unconditional.	OK	OK	OK
<b>Project implementation</b>					
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?	CAR21: Please provide in Monitoring Report list of equipment or units that were implemented within the Project.  CAR17: Please, replace the name of the column (Table 5.1) "Date of installation" with "Year of installation" that reflects actual situation.	All equipment installed during the project activity on the enterprise (3 husk fired steam boilers with one boiler working on both husk and natural gas as well as steam turbine) has been put into operation according to PDD version 2 (21 February 2008). No additional equipment has been commissioned either before or during monitoring period.  All necessary amendments have been introduced into the monitoring report (see Table 5.1, Section 5 of MR version 03).	MR was checked, justified during site visit and founded appropriate. Issue was closed.  MR was checked and founded appropriate. Issue was closed.	OK  OK



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DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		Please, indicate year of installation for the positions 8, 11, 17, 21, 22 (Table 5.1).			
93	What is the status of operation of the project during the monitoring period?	Beginning of the equipment installation according to the project has started in September 2006. According to PDD of the JI project installation period was carried out from September 2006 till December 2007. Project starting date according to the PDD of the JI project* was December 2007. However, due to the logistical and financial problems at the company the official project start was delayed till the 27 <sup>th</sup> of April, 2009.	OK	OK	OK
<b>Compliance with monitoring plan</b>					
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	<u>CAR1</u> : All necessary data collected but not in line with PDD. Please revised monitoring plan in accordance with real situation.	Monitoring plan was corrected in line with current situation. See Annex 2 of MR version 03.	Revised monitoring plan was checked and founded appropriate. Issue was closed.	OK

\* Version 2 PDD (21 February 2008)



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DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	the UNFCCC JI website?	<p><b>CAR12:</b> It is stated in the MR: Monitoring parameters according to the monitoring plan given in project technical documentation are written and presented in electronic and written form. However, an actual monitoring plan was modified in comparison with the monitoring plan in the PDD. Please, correct/clarify.</p> <p><b>CL5:</b> Please, clarify why the values of total project emissions for some months are negative Table 1.7</p> <p><b>CAR20:</b> In provided excel spreadsheets some of</p>	<p>The clarifications have been provided and appropriate text has been changed according to applied monitoring approach (see Section 4.3 of MR version 03)</p> <p>Negative values were observed due to specific calculation approach. After revision the approach have been modified according to the applied monitoring plan without impact on resulting GHG emission reductions. All necessary actions have been performed in the calculation file (see Excel file "ERU_calculation_workbook-ENG.xls")</p> <p>The calculations of GHG emission reductions have been</p>	<p>MR was checked and founded appropriate. Issue was closed.</p> <p>MR and Excel file "ERU_calculation_workbook-ENG.xls" were checked and founded appropriate. Issue was closed.</p> <p>Excel file "ERU_calculation_</p>	<p>OK</p> <p>OK</p> <p>OK</p>



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		parameters (like as TOTAL EMISSIONS IN PROJECT SCENARIO, tCO <sub>2</sub> ) calculated not in accordance with monitoring plan. Please, correct spreadsheets in line with monitoring plan.	revised according to applied monitoring methodology without any impact on resulting GHG emission reductions (see Excel file "ERU_calculation_workbook-ENG.xls")	workbook-ENG.xls" was checked and founded appropriate. Issue was closed.	
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?	<u>CAR2:</u> In monitoring plan EC <sub>PJ,y</sub> and EC <sub>PJ,HP_needs,y</sub> were confused. In calculations used only On-site electricity consumption attributable to the project activity during the year y but it named as EC <sub>PJ,y</sub> . Please correct this and exclude unnecessary.	Monitoring plan was revised. EC <sub>PJ,y</sub> and EC <sub>PJ,HP_needs,y</sub> were excluded from table of data to be collected in order to monitor emissions from the project.	Revised monitoring plan was checked and founded appropriate. Issue was closed.	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	<u>CAR3:</u> Please provide records of consumed natural gas temperature, density and pressure in paper and electronic form. Or, please mentioned in revised monitoring plan If such information is not collected and amount of consumed natural gas recalculated to	Data of natural gas temperature, density and pressure collected and archiving in electronic form used corrector of natural gas volume. But this data don't used in calculations because natural gas volume reduced to standart conditions automatically by corrector of natural gas volume.	Revised monitoring plan was checked and founded appropriate. Issue was closed.	OK



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		<p>normal conditions automatically by corrector.</p> <p><u>CAR4:</u> Not all information archiving in electronic and paper forms. Please correct it and provide in revised monitoring plan.</p> <p><u>CAR5:</u> Procedures of <math>BF_{k,v}</math> estimation in PDD and on-site are different. Please correct it and provide in revised monitoring plan.</p> <p><u>CAR6:</u> Procedures of monitoring of Net quantity of heat generated used firing biomass by the project plant in monitoring plan and on-site are different. In emission reduction calculations can be</p>	<p>Monitoring plan was revised. Data archiving procedure corrected in line with current Plant archiving procedure.</p> <p>Monitoring plan was revised in accordance with current plan procedures. Quantity of husks combusted in the project plant estimated as difference between quantity of husks generated at the Plant and quantity of sold husks. This parameters measured by Plant laboratory used equipment and methods in line with procedures accepted at the Plant.</p> <p>Monitoring plan was revised. Only quantity of heat consumed on technological needs used in emission reduction calculations. This parameter monitored by Lead engineer Department based on norms and procedures</p>	<p>Revised monitoring plan was checked and founded appropriate. Issue was closed.</p> <p>Revised monitoring plan was checked and founded appropriate. Issue was closed.</p> <p>Revised monitoring plan and monitoring procedures of heat quantity consumed on Plant technological</p>	<p>OK</p> <p>OK</p> <p>OK</p>



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		used useful heat used in production but not all heat generated by TPP. Please correct it and provide in revised monitoring plan.	accepted on the Plant or used heat meters.	needs were checked, founded appropriate and them reflected good practice.	
		<u>CAR7:</u> Net calorific value of biomass residue estimated quarterly only in 2009. And in 2010 it was estimated only once. Please correct this procedure and provide in revised monitoring plan.	The appropriate issue has been changed according to applied monitoring methodology and conservativeness principle. (See Table D.1.1.1, Annex 2: Amendments to the monitoring plan of MR version 03).	Revised monitoring plan and methodology used for monitoring electricity generation were checked and founded appropriate. Issue was closed.	OK
		<u>CAR8:</u> There are no electric meters implemented on TPP for measured Net quantity of electricity generated in the project plant before July 2010. But this value monitored used calculation method. Please correct it and provide in revised monitoring plan.	Monitoring plan was corrected in line with current situation.	Revised monitoring plan was checked and founded appropriate. Issue was closed.	OK
		<u>CL1:</u> Please specify	Data of Net calorific value of the	Revised monitoring	OK





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		<p>procedure of Net calorific value of the natural gas estimation in monitoring report.</p> <p><u>CL2:</u> Please provide in formulas and in descriptions same indexes for same values.</p> <p><u>CAR13:</u> Please, state serial number for the devices indicated in the positions 28-30 (Table 3.1) and 15, 19, 26, 28-30 (Table 5.1).</p> <p><u>CAR14:</u> Please, provide interpretation for all abbreviations, markings and elements indicated in the Figure 3.3.</p> <p><u>CL4:</u> Please, ensure correctness sequence number (1<sup>st</sup> column) in the Table 5.1 (# 18 is missing).</p>	<p>natural gas provided by natural gas supplier SC "Kirovogradoblgas"</p> <p>All necessary amendments have been introduced into the monitoring report (see Table 5.1, Section 5 of MR version 03).</p> <p>All requested corrections has been introduced into the monitoring plan (see Table 3.1, Table 5.1 of MR version 03)</p> <p>All requested corrections has been introduced into the scheme of monitoring (see Figure 3.3 and also Figure D.4.1 of MR version 03).</p> <p>The number sequences has been corrected (see Table 5.1). All numeration has been checked subject to number sequence according to</p>	<p>plan was checked and founded appropriate. Issue was closed.</p> <p>MR was checked and founded appropriate. Issue was closed.</p> <p>MR was checked and founded appropriate. Issue was closed.</p> <p>MR was checked and founded appropriate. Issue was closed.</p> <p>MR was checked and founded appropriate. Issue was closed.</p>	<p>OK</p> <p>OK</p> <p>OK</p> <p>OK</p>



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## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
			monitoring plan revision.		
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?	Yes, emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice	N/a	N/a	OK
<b>Applicable to JI SSC projects only</b>					
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?	There was no procedure for JI SSC project during project determination (2008 year). Thus project was classified JI Large Scale Project.	N/a	N/a	N/a
<b>Applicable to bundled JI SSC projects only</b>					
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	N/a	N/a	N/a	N/a
97 (b)	If the determination was	N/a	N/a	N/a	N/a



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	conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?				
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	N/a	N/a	N/a	N/a
<b>Revision of monitoring plan</b>					
<b>Applicable only if monitoring plan is revised by project participant</b>					
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	CAR10: As per GUIDANCE ON CRITERIA FOR BASELINE SETTING AND MONITORING revisions to the monitoring plan to improve the accuracy and/or applicability of information collected <b>shall be justified by project participants.</b> Please, provide detailed	The appropriate document has been developed by project developers and provided to verification team.	MR was checked and founded appropriate. Issue was closed.	OK



## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		information concerning all changes in the monitoring plan (compare new monitoring plan with the plan included in the determined PDD) and an appropriate justification in the MR.			
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?	<u>CAR11</u> : It is stated in the MR (Anex 2 section 3.1, 4.1): During monitoring plan development for the project baseline consolidated methodology ACM0006 version 11.1 approved by the executive body of CDM at the 17 <sup>th</sup> of September 2010 was used. In fact there are a number of deviations from the monitoring approach described in the ACM0006 methodology in monitoring plan. It should be reflected in the MR.	Appropriate corrections have been included in monitoring report. The JI specific approach has been used in project activity (see Section 3.1).	MR was checked and founded appropriate. Issue was closed.	OK
<b>Data management</b>					
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality	<u>CAR15</u> : Please, submit adopted methodologies of estimation of the amount of husk consumed by the	All requested methodologies approved in the appropriate order at the enterprise have been provided to verification	Methodologies (listed among Category 2 Documents in	OK



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	control and quality assurance procedures?	boilers, the flow rate of heat for production needs, estimation the power consumption for its own needs CHP, estimation of electricity generation turbo-generator CHP to ensure transparency of monitoring.	team. .	the Reference section of this report) were checked and founded appropriate. Issue was closed.	
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	<u>CAR16</u> : Please, indicate date of calibration (dd.mm.yyyy) for the positions 2, 3, 9, 11, 15, 19, 20, 34 Table 5.1.  <u>CAR18</u> : Please, indicate frequency calibration (dd.mm.yyyy) for the positions 17, 19, 26 (Table 5.1.)	All necessary corrections have been introduced in monitoring report (Table 5.1).  All necessary corrections have been introduced in monitoring report (Table 5.1).	MR was checked and founded appropriate. Issue was closed.  MR was checked and founded appropriate. Issue was closed.	OK  OK
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	<u>CL3</u> : Please, provide documented instruction which indicates that the data monitored and required for verification are to be kept for two years after the crediting period as per <i>Jl determination and verification manual, v.01</i> .	The approved documented instruction was provided to the verification team.	Oder #128 was checked and founded appropriate. Issue was closed.	OK
101 (d)	Is the data collection and	Yes, the data collection and	OK	OK	OK



## VERIFICATION REPORT

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	management system for the project in accordance with the monitoring plan?	management system for the project is in accordance with the monitoring plan.			
<b>Verification regarding programs of activities (additional elements for assessment)</b>					
102	Is any JPA that has not been added to the JI PoA not verified?	N/a	N/a	N/a	N/a
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/a	N/a	N/a	N/a
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	N/a	N/a	N/a	N/a
104	Does the monitoring period not overlap with previous monitoring periods?	N/a	N/a	N/a	N/a
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	N/a	N/a	N/a	N/a
<b>Applicable to sample-based approach only</b>					
106	Does the sampling plan prepared by the AIE: (a) Describe its sample selection, taking into account that:	N/a	N/a	N/a	N/a



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	<p>(i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as:</p> <ul style="list-style-type: none"> <li>- The types of JPAs;</li> <li>- The complexity of the applicable technologies and/or measures used;</li> <li>- The geographical location of each JPA;</li> <li>- The amounts of expected emission reductions of the JPAs being verified;</li> <li>- The number of JPAs for which emission reductions are being verified;</li> <li>- The length of monitoring periods of the JPAs being verified; and</li> <li>- The samples selected for prior verifications, if any?</li> </ul>				



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107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	N/a	N/a	N/a	N/a
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification?	N/a	N/a	N/a	N/a
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	N/a	N/a	N/a	N/a
110	If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC	N/a	N/a	N/a	N/a





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<b>DVM Paragraph</b>	<b>Check Item</b>	<b>Initial finding</b>	<b>Action requested to project participants</b>	<b>Review of project Participants' action</b>	<b>Conclusion</b>
	of the fraud in writing?				