VERIFICATION REPORT
PSC "DNIPROENERGO"

VERIFICATION OF THE
RECONSTRUCTION OF THE POWER UNITS AT THE "KRYVORIZKA TPP" OF THE "DNIPROENERGO" JSC

INITIAL AND FIRST PERIODIC FOR PERIOD FOR PERIOD 01/01/2009-30/09/2012

REPORT NO. UKRAINE-VER/0506/2012

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-ver/0506/2012

VERIFICATION REPORT: "RECONSTRUCTION OF THE POWER UNITS AT THE "KRYVORIZKA TPP" OF THE "DNIPROENERGO" JSC"

Date of first issue: 01/08/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: PSC "Dniproenergo"	Client ref.: Yurii Magera

Summary:
Bureau Veritas Certification has made the initial, 1st periodic, verification of the "Reconstruction of the power units at the "Kryvorizka TPP" of the "Dniproenergo" JSC", project of PSC "Dniproenergo" located in Zelenodolsk town, Apostolivskiy District Dnipropetrovsk Region, Ukraine, and applying JI specific approach, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Accredited Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the monitoring report against project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

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

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 251625 tonnes of CO2 equivalent for the monitoring period from 01/01/2009 to 30/09/2012 (10256 tonnes of CO2 equivalent for 01/01/2009-31/12/2009, 59450 tonnes of CO2 equivalent for 01/01/2010-31/12/2010, 130104 tonnes of CO2 equivalent for 01/01/2011-31/12/2011, 51815 tonnes of CO2 equivalent for 01/01/2012-30/09/2012).

Report No.: UKRAINE-ver/0506/2012	Subject Group: JI	
Project title: Reconstruction of the power units at the "Kryvorizka TPP" of the "Dniproenergo" JSC		
Work carried out by: Vyacheslav Yeriomin – Team Leader, Lead verifier. Sergii Verteletskyi – Team Member, Verfier		
Work reviewed by: Ivan Sokolov - Technical Reviewer Daniil Ukhanov – Technical Specialist		☒ No distribution without permission from the Client or responsible organizational unit
Work approved by: Ivan Sokolov - Operational Manager		☐ Limited distribution
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Bureau Veritas Certification Holding SAS

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1 INTRODUCTION

PSC "Dniproenergo" has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project "Reconstruction of the power units at the "Kryvorizka TPP" of the "Dniproenergo" JSC" (hereafter called "the project") at Zelenodolsk town, Apostolivskiy District Dnipropetrovsk Region, Ukraine.

This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period.

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

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

1.2 Scope

The verification scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan 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:

Vyacheslav Yeriomin Bureau Veritas Certification	Team Leader, Climate Change Verifier
Sergii Verteletskyi Bureau Veritas Certification	Climate Change Verifier

This verification report was reviewed by:

Ivan Sokolov

Bureau Veritas Certification, Internal Technical Reviewer

Daniil Ukhanov
Bureau Veritas Certification, Technical Specialist

2 METHODOLOGY

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

In order to ensure transparency, a verification protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

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

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

2.1 Review of Documents

The Monitoring Report (MR) submitted by "Elta-Eko" LLC and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), and Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the Monitoring Report version(s) 1.1 dated 18/10/2012 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 03/07/2012 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 PSC "Dniproenergo" and "Elta-Eko" LLC were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PSC "Dniproenergo"	Organizational structure Responsibilities and authorities Roles and responsibilities for data collection and processing Installation of equipment Data logging, archiving and reporting Metering equipment control Metering record keeping system, database IT management Training of personnel Quality management procedures and technology Internal audits and check-ups
CONSULTANT "Elta-Eko" LLC	Baseline methodology Monitoring plan Monitoring report Excel spreadsheets

2.3 Resolution of Clarification, Corrective and Forward Action Requests

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

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

(a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;

(b) Clarification request (CL), requesting the project participants to provide additional information for the Verification Team to assess compliance with the monitoring plan;

(c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

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

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

3 VERIFICATION CONCLUSIONS

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

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

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 9 Corrective Action Requests, 3 Clarification Requests, and 0 Forward Action Requests.

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

3.1 Remaining issues and FARs from previous verifications

There are no FARs pending from the determination process provided by Bureau Veritas Certification Holding SAS.

3.2 Project approval by Parties involved (90-91)

Letter of Approval #2752/23/7 dated 26/09/2012 has been issued from State Environment Investment Agency of Ukraine. Letter of Approval #2012JI51 dated 18/10/2012 has been issued by Ministry of Economical affairs, agriculture and innovations of Kingdom Netherlands

The abovementioned written approvals are unconditional.

Identified problem areas applicable to written project approvals, project participants' responses, Bureau Veritas Certification conclusions are listed in the Annex A of the Verification Report (See CAR01)

3.3 Project implementation (92-93)

The Kryvorizka TPP is a structure unit of the "Dniproenergo" JSC. This TPP is one of the largest in Ukraine.
The overall project installed capacity of the TPP was 3000 MW (10 generating units 300 MW each).
In 1991 the installed capacity of the energy units of the TPP were reduced from 300 MW to 282 MW due to physical deterioration of the equipment. The generating units were constructed for the Ash-type coal combustion with the addition of the natural gas and heavy fuel oil.
Project foresees modernization of the main and the auxiliary equipment of the all power generating units of the TPP. It includes replacement of the

control, automatic, and electro-technical systems, modernization of the boiler equipment, the outdated turbine equipment, the electric separation system, the cooling system, etc.
The thermal energy delivery in project scenario will remain the same as in the baseline scenario.

The implemented duiring the monitoring period project activities are listed here:

In 2009

Generating Unit #1

1. The replacement of the feeding water and cooling water pipeline turns;
2. The overhaul, repairs and the replacement of the steam pipelines parts;
3. The opening and metal control of the first stream low pressure cylinder;
4. The replacement of the working wheel MV-A;
5. The repairs of the gas and air ducts;
6. The repairs of the oil and vacuum system;

Generating Unit #2

1. The replacement of the pipelines and pipeline turns;
2. The repairs of the burners with the replacement of the nozzles;
3. The overhaul and repairs of the coal mill;
4. The replacement of the gas, dust and air ducts;
5. The repairs of the electric filters;
6. The overhaul and repairs of the low pressure rotor with the replacement of the blades and bearings;
7. The repairs of the oil and vacuum system.

Generating unit #4

1. The replacement of the brickwork and the boiler screens;
2. The replacement of the feeding water, cooling water and recirculation pipelines and pipeline turns;
3. The repairs of the burners with the replacement of the nozzles;
4. The repairs of the waste burners and air ducts;
5. The repairs of the ShBM mill;
6. The repairs of the electric filters;
7. The overhaul and repairs of the low and mid pressure cylinders with the replacement of the blades and bearings;
8. The replacement of the fittings.

Generating Unit # 5

1. The replacement of the brickwork and the boiler screens;
2. The replacement of the feeding water, cooling water and recirculation pipelines and pipeline turns;
3. The repairs of the burners with the replacement of the nozzles;
4. The repairs of the electric filters;
5. The repairs of the gas and air ducts and the dust system;
6. The replacement of the fittings;
7. The repairs of the turbine control system;

8. The repairs of the oil and vacuum systems;

Generating Unit # 6

1. The repairs of the dust system*
2. The replacement of the feeding water, cooling water and recirculation pipelines and pipeline turns;
3. Hot air ducts replacement at the ShBM mill;
4. The repairs of the air, dust and gas ducts;
5. The repairs of the backside end seal of the high pressure cylinder;
6. The repairs of the high and low-pressure regeneration;
7. The repairs of the gas coolers and sealing bearings of the TGV-300 generator.

Generating Unit #8

1. The heating surfaces cleaning;
2. The replacement of the feeding water, cooling water and recirculation pipeline turns;
3. The overhaul and repairs of the duct, gas and air ducts;
4. The replacement hot air supply ducts to the ShBM- A, B;
5. The repairs of the burners;
6. The overhaul and repairs of the low pressure fittings;

Generating Unit #10

1. The replacement of the pipelines at the left and right side screens;
2. The replacement of the pipelines and pipeline turns;
3. The repairs of the isolation and regulation valves;
4. The repairs of the dust system;
5. The replacement of the gas and air ducts.

In 2010:

Generating Unit № 3

Boiler Equipment:

1. The replacement of the fittings of the feeding system;
2. The replacement of the pipelines of the boiler aerodynamic ledge;
3. The replacement of the 3 Steam overheater loops;
4. The replacement of the boiler constant blowdown regulator fittings;
5. The replacement of the side screens pipelines of the boiler;
6. The replacement of the exhaust front armor;
7. The replacement of the oil cooler and the oil heater of the oil station ShBM-3A;
8. The repairs of the dust feeder ULPP-2;
9. The replacement of the separators return pipelines between the marks 21 and 35 m;
10. The repairs of the boiler brickwork;
11. The replacement of the lubricant electric motors;

Turbine Equipment:

1. The repairs of the low-pressure heater casing #4;
2. The replacement of the turbine oil cooler #4;
3. The evaporation system repairs;

4. The repairs of the vibration equipment and the vibrators of the turbine;

Generating Unit № 4

Boiler Equipment:

1. The replacement of the fittings of the feeding system;
2. The replacement of the pipelines of the boiler aerodynamic ledge;
3. The replacement of the boiler constant blowdown regulator fittings;
4. The replacement of the boiler cold overheating pipelines collectors;
5. The replacement of the radiation steam overheater drainage pipeline;
6. The replacement of the water economizer drainage pipeline;
7. The replacement of the oil cooler and the oil heater of the oil station ShBM-3A;
8. The replacement of the bearings;
9. The repairs of the dust dispenser;
10. The repairs of the boiler brickwork;

Turbine Equipment:

1. The repairs of the steam superheaters recirculation system;
2. The inspection and replacement or repairs of the steam pipelines holding system;
3. The replacement of the high-pressure heater drainage pipelines;
4. The bearings replacement;

Electric Equipment :

1. The repairs of the 4T transformer;
2. The repairs of the electric filters;
3. The replacement of the electric motors at the Power Generator;

In 2011

Generating Unit № 5

Boiler Equipment:

1. The replacement of the radiation steam overheater drenaige pipeline;
2. The replacement of the water economizer drainage pipeline;
3. The replacement of the pipelines of the boiler aerodynamic ledge;
4. The replacement of the dust pipelines from the distribution box to the burners;
5. The replacement of the oil cooler and the oil heater of the oil station ShBM-5A, B;
6. The replacement of the ShBM-5A, B bearings;
7. The replacement of the separator backups;
8. The replacement of the exhaust front armor;
9. The repairs of the boiler brickwork;

Turbine Equipment:

1. The replacement of the bronze gears;
2. The replacement of the recirculation valve at the High-Pressure Cylinder;
3. The overhaul and repairs of the chimney seals of the Low-Pressure Cylinder;
4. The replacement of the turbine oil cooler # 4;
5. The repairs of the electric pump 5A;
6. The bearings repairs;

Generating Unit № 6

Boiler Equipment:

1. The replacement of the fittings of the feeding system;
2. The replacement of the radiation steam overheater drainage pipeline;
3. The replacement of the water economizer drainage pipeline;
4. The replacement of the dust pipelines from the distribution box to the burners;
5. The repairs of the dust feeder ULPP-2;
6. The replacement of the oil cooler and the oil heater of the oil station ShBM-5A, B;
7. The bearings repairs;
8. The replacement of the exhaust front armor;

Turbine Equipment:

1. The replacement of the lubricant electric motors;
2. The stator winding repairs;

Generating Unit № 7

Boiler Equipment:

1. The replacement of the oil cooler and the oil heater of the oil station ShBM-7A, B;
2. The repairs of the dust feeder ULPP-2;

Turbine Equipment:

1. The replacement of the turbine oil cooler # 4;

Generating Unit № 8

Boiler Equipment:

1. The replacement of the steam pipelines;
2. The replacement of the oil cooler and the oil heater of the oil station ShBM-8A, B;
3. The replacement of the separator casings;

Generating Unit № 9

Boiler Equipment:

1. The replacement of the boiler constant blowdown regulator fittings;
2. The replacement of the radiation steam overheater drenaige pipeline;
3. The replacement of the water economizer drainaige pipeline;
4. The repairs of the dust feeder ULPP-2;
5. The replacement of the oil cooler and the oil heater of the oilstation ShBM-9A, B;
6. The bearings repairs;

Turbine Equipment:

1. The inspection and replacement or repairs of the steam pipelines holding system;
2. The replacement of the turbine oil cooler #4;
3. The bearings repairs;

Electric Equipment:

1. The repairs of the 9T and 29T electricity transformers.

In 2012 year

Generating Unit # 2

1. The repairs of the boiler burners with the replacement of the burner nozzles; 2. The replacement of the pipelines and pipeline turns at the boiler;
3. The repairs of the SHBM mill with the replacement of the cylindrical armor ShBM-2B

and the bearing #3 ShBM-2A;
4. The opening and the repairs of the low and mid pressure cylinders of the turbine;
5. The replacement of the 86 blades of the low pressure cylinder;
6. The repairs of the turbine supporting bearings.

Generating Unit # 4
1. The replacement of the pipelines and pipeline turns at the boiler;
2. The repairs of the K-4A, B burners with the replacement of the 100% of the burner nozzles;
3. The repairs of the ShBM mill with the repairs of the electric engines' bearings and the replacement of the bearings # 3 and 4;
4. The opening and repairs of the turbine low pressure cylinder;
5. The replacement of the 4 blades at the low pressure rotor.

Generating Unit # 5
1. The replacement of the pipelines and pipeline turns at the boiler;
2. The repairs of the ShBM mill including the repairs of the electric motors' bearings, the replacement of the driving gear and it's bearings, the replacement of the back end armor ShBM-5A and the cylindrical armor ShBM-5A, B;
3. The opening and repairs of the low pressure cylinder and the low pressure rotor fault detection;
4. The replacement of the 5th stage of the 1st, 2nd and 3rd streams tubular bandage;

Stops and technical disasters are not observed during the monitoring period
Mid repairs, running repairs and capital repairs are provided by time schedule approved by head staff of "Dniproenergo" LLC and DTEC.

Because modernization program on PJSC "Dniproenergo" TPPs was started no log ago comparing with "Skhidenergo" LLC, so blocks remarking doesn't provided

PDD lists measures which will be implemented during the monitoring period without indication of implementation timeline. Project measures are provided under the necessity or availability of finances and work power.

Difference between CO2 emissions in 2-tp form and ERUs calculation Excel file is explained in the next way. Kryvorizka TPP produces electric energy and heat energy as by-product, which is supplied to local consumers for household heating purposes. This heat energy is excluded from project boundaries for conservativeness. Project developer indicates in the calculations only the fuel used for electricity production in accordance with the 3-tech forms.

Waste steam from the turbines is exhausted in the cooling pounds, so in summer cooling system is not much effective that explains negative values of ERUs in the calculation.

Difference between ERUs indicated in the PDD and in the MR for 2011-2012 years is explained in the next way. Demand on electric energy in Ukrainian market is depended of next factors:

- Situation in steelmaking and chemical enterprises in Prydniprovskyi industrial region and mentioned branches in Ukraine
- Situation at the TPP, which includes next factors – quality of consumed fuel, conditions of generating equipment, meteorological conditions, etc.

ERUs estimations in the PDD from period 2011-2020 years is provided ex-ante based on data from 2005-2010 years and will be different from factual ERUs values anyway.

Identified problem areas applicable to project implementation status, project participants' responses, Bureau Veritas Certification conclusions are listed in the Annex A of the Verification Report (See CAR02-CAR04, CL01)

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

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

For calculating the emission reductions, key factors, such as fuel prices, natural gas, heavy fuel oil, electric energy, availability of capital and work forces, reliability of installed equipment, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating emission reductions, such as plant work forecasts (3-tech forms), fuel analysis samples laboratory logbooks, logbooks of fuel transporting and preparation, logbooks on electricity production are clearly identified, reliable and transparent.

Emission factors, including default emission factors, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice. Emission factors for coal, gas and heavy fuel oil burning, are in line within "National GHG Inventory Report for 1999-2010" approved by State Environment Investment Agency.

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

Identified problem areas applicable to compliance of the monitoring report with the monitoring methodology, project participants' responses, Bureau Veritas Certification conclusions are listed in the Annex A of the Verification Report (See CAR05, CL02, CL03)

3.5 Revision of monitoring plan (99-100)

"Not applicable"

3.6 Data management (101)

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

The implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures. These procedures are mentioned in the section "References" of this report.

The function of the monitoring equipment, including its calibration status, is in order. TPP uses power meters Actaris SL761A071 with class of accuracy 0.2 and SL761B071 with class of accuracy 0.5. Actual regulations in Ukraine energy sector require accounting of power transmitting on high-voltage lines power meters with class of accuracy equal or less than 0.5, so project monitoring equipment satisfy actual Ukraine regulations. Local output lines 6-10 kV has power meters with accuracy class 1.0. Power meters has intercalibration interval in 6 years and calibrated by representatives of State Enterprise "Dnipropetrovskderzhstandartmetrologiya".

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.

Identified problem areas applicable to project data management, project participants' responses, Bureau Veritas Certification conclusions are listed in the Annex A of the Verification Report (See CAR06-CAR09)

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 "Reconstruction of the power units at "Kryvorizka TPP" of the "Dniproenergo" JSC" Project in Zelenodolsk town, Apostolivskiy District Dnipropetrovsk Region, 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 PSC "Dniproenergo" 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 indicated in the final PDD version 1.3.1. 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 1.1 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period: From 01/01/2009 to 30/09/2012

Baseline emissions	: 24878398	tonnes of CO_2 equivalent.
Project emissions	: 24626773	tonnes of CO_2 equivalent.
Emission Reductions	: 251625	tonnes of CO_2 equivalent.

From 01/01/2009 to 31/12/2009

Baseline emissions	: 4 714 037	tonnes of CO2 equivalent.
Project emissions	: 4 703 781	tonnes of CO2 equivalent.
Emission Reductions	: 10 256	tonnes of CO2 equivalent.

From 01/01/2010 to 31/12/2010

Baseline emissions	: 6 247 284	tonnes of CO2 equivalent.
Project emissions	: 6 187 834	tonnes of CO2 equivalent.
Emission Reductions	: 59 450	tonnes of CO2 equivalent.

From 01/01/2011 to 31/12/2011

Baseline emissions	: 7 714 270	tonnes of CO2 equivalent.
Project emissions	: 7 584 166	tonnes of CO2 equivalent.
Emission Reductions	: 130 104	tonnes of CO2 equivalent.

From 01/01/2012 to 30/09/2012

Baseline emissions	: 6 202 807	tonnes of CO2 equivalent.
Project emissions	: 6 150 992	tonnes of CO2 equivalent.
Emission Reductions	: 51 815	tonnes of CO2 equivalent.

5 REFERENCES

Category 1 Documents:
Documents provided by "Elta-Eko" LLC that relate directly to the GHG components of the project.

/1/ Project Design Document "Reconstruction of the power units at the "Kryvorizka TPP" of the "Dniproenergo" JSC" version 1.3.1 dated 31/01/2012
/2/ Monitoring Report "Reconstruction of the power units at the "Kryvorizka TPP" of the "Dniproenergo" JSC" version 1.0 dated 18/06/2012
/3/ Monitoring Report "Reconstruction of the power units at the "Kryvorizka TPP" of the "Dniproenergo" JSC" version 1.1 dated 18/10/2012
/4/ ERUs calculation Excel-file "monitoringKrTPP.xls"
/5/ Letter of Approval #2752/23/7 dated 26/09/2012 issued from State Environment Investment Agency of Ukraine
/6/ Letter of Approval #2012JI51 dated 18/10/2012 issued from from Ministry of Economical Affairs, agriculture and innovation of Kingdom Netherlands

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

/1/ Belt scales velocity meter
/2/ Tensometric sensor of coal belt #5
/3/ Weight processors SVEDA PV-110, belts #5-A, 5-B
/4/ Weight processors SVEDA PV-110 #151
/5/ Weight processors SVEDA PV-110 #152
/6/ Tensometric belt scales platform
/7/ Weight processors SVEDA PV-110 box
/8/ Weight processors SVEDA PV-110
/9/ Belt scales velocity meter
/10/ Main power meter Actaris SL7000 #36128071, connection Trifonova-1
/11/ Back-up power meter Actaris SL7000 #33001501, connection L-165
/12/ Main power meter Actaris SL7000 #36128052 connection L-165
/13/ Main power meter Actaris SL7000 #36128081 connection L-166
/14/ Back-up power meter Actaris SL7000 #33001523 connection L-166
/15/ Main power meter Actaris SL7000 #36128043 connection Trifonova-2
/16/ Back-up power meter Actaris SL7000 #33001521 connection Trifonova-2
/17/ Back-up power meter Actaris SL7000 #33001534 connection Trifonova-1
/18/ Main power meter Actaris SL7000 connection AT-1,2
/19/ Main power meter Actaris SL7000 #36128072 connection L-162
/20/ Back-up power meter Actaris SL7000 #33001540 connection L-162
/21/ power meter Actaris SL7000 #33001530
/22/ Back-up power meter Actaris SL7000 #33001500 connection AT-1,2
/23/ Back-up power meter Actaris SL7000 #33001512 connection L-163
/24/ Main power meter Actaris SL7000 #36128091 connation L-163
/25/ Power meter Actaris SL7000 #36128062 connection Sh-1
/26/ Back-up power meter Actaris SL7000 #33001522 connection L-164

/27/ Main power meter Actaris SL7000 #36128061 connection L-164
/28/ Main power meter Actaris SL7000 #33002625 connection L-225
/29/ Back-up power meter Actaris SL7000 #36130069 connection L-225
/30/ Back-up power meter Actaris SL7000 #33002627 connection L-210
/31/ Main power meter Actaris SL7000 #33002627 connection L-210 main
/32/ Back-up power meter Actaris SL7000 #36126173 connection L-223
/33/ Back-up power meter Actaris SL7000 #33002597 connection L-224
/34/ Main power meter Actaris SL7000 #36130087 connection L-224
/35/ Main power meter Actaris SL7000 #33002616 connection L-223
/36/ Main power meter Actaris SL7000 #36118887 connection L-221
/37/ Main power meter Actaris SL7000 #36130070 connection L-209
/38/ Main power meter Actaris SL7000 #33002606 connection L-212
/39/ Back-up power meter Actaris SL7000 #33002590 connection L-221
/40/ Back-up power meter Actaris SL7000 #33002588 connection L-209
/41/ Back-up power meter Actaris SL7000 #36120205 connection L-212
/42/ Back-up power meter Actaris SL7000 #33002607 connection C-332
/43/ Main power meter Actaris SL7000 #33002597 connection C-332
/44/ ASCAP-system box on open switch gear-150 KV
/45/ Main power meter Actaris SL7000 #36130066 connection C-331
/46/ Back-up power meter Actaris SL7000 #33002595 connection C-331
/47/ Back-up power meter Actaris SL7000 #33002609 connection L-226
/48/ Main power meter Actaris SL7000 #36118895 connection L-226
/49/ Main power meter Actaris SL7000 #36118604 connection 1GV
/50/ Main power meter Actaris SL7000 #36118502 connection 2GV
/51/ Power meter Actaris SL7000 #36118502 connection 4GV
/52/ Main power meter Actaris SL7000 #36118472 connection T-40a
/53/ Main power meter Actaris SL7000 #36118473 connection T-40b
/54/ Back-up power meter Actaris SL7000 #33003490 connection TG-10
/55/ Power meter Actaris SL7000 #36126030 connection T-31
/56/ Power meter Actaris SL7000 #36118475 connection TV-10
/57/ Main power meter Actaris SL7000 #33003492 connection TG-9
/58/ Back-up power meter Actaris SL7000 #33003473 connection TG-9
/59/ Power meter Actaris SL7000 #36126010 connection T-29
/60/ Power meter Actaris SL7000 #36116494 connection TV-9
/61/ Back-up power meter Actaris SL7000 #36132308 connection TG-8
/62/ Main power meter Actaris SL7000 #36132286 connection TG-8
/63/ Power meter Actaris SL7000 #36125970 connection T-28
/64/ Power meter Actaris SL7000 #36118471 connection TV-8
/65/ Back-up power meter Actaris SL7000 #33003472 connection TG-7
/66/ Main power meter Actaris SL7000 #33003491 connection TG-7
/67/ Back-up power meter Actaris SL7000 #36126000 connection T-27
/68/ Power meter Actaris SL7000 #33003473 connection TV-7
/69/ Main power meter Actaris SL7000 #36132319 connection TG-6
/70/ Back-up power meter Actaris SL7000 #36132298 connection TG-6
/71/ Back-up power meter Actaris SL7000 #36126029 connection T-26
/72/ Power meter Actaris SL7000 #36138465 connection TV-6
/73/ Main power meter Actaris SL7000 #36132290 connection TG-5

/74/ Back-up power meter Actaris SL7000 #36132309 connection TG-5
/75/ Power meter Actaris SL7000 #361250980 connection T-25
/76/ Power meter Actaris SL7000 #36130047 connection TV-5
/77/ Main power meter Actaris SL7000 #36130067 connection TG-4
/78/ Back-up power meter Actaris SL7000 #36130047 connection TG-4
/79/ Power meter Actaris SL7000 #36126050 connection T-24
/80/ Power meter Actaris SL7000 #36118483 connection TV-4
/81/ Back-up power meter Actaris SL7000 #36132320 connection TG-3
/82/ Main power meter Actaris SL7000 #33003482 connection TG-3
/83/ Power meter Actaris SL7000 #36125979 connection T-23
/84/ Power meter Actaris SL7000 #36118505 connection T-30
/85/ Power meter Actaris SL7000 #36118492 connection TV-3
/86/ Back-up power meter Actaris SL7000 #36132301 connection TG-2
/87/ Back-up power meter Actaris SL7000 #36130052 connection TG-2
/88/ Power meter Actaris SL7000 #36125990 connection T-22
/89/ Power meter Actaris SL7000 #36118466 connection TV-2
/90/ main power meter Actaris SL7000 #36132288 connection TG-1
/91/ Back-up power meter Actaris SL7000 #36130060 connection TG-1
/92/ Power meter Actaris SL7000 #36125999 connection T-21
/93/ Power meter Actaris SL7000 #36118485 connection T-20
/94/ Power meter Actaris SL7000 #36118474 connection TV-1
/95/ Daily reports on combustible content in carry over gases sampling in march 2011
/96/ Passport #02319 on conveyor belt scales Er-Mak #1630
/97/ Passport #02319 on conveyor belt scales Er-Mak #1473
/98/ Permit #1210138400-1086A on pollutions of stationary sources, valid from 18/06/2012 till 27/10/2016
/99/ Permit #1210138400-1086 on pollutions of stationary sources, valid from 18/04/2012 till 27/10/2016
/100/ Report on atmosphere air protection for 2011 year (2-tp form)
/101/ Report on atmosphere air protection for 2010 year (2-tp form)
/102/ Report on atmosphere air protection for 2009 year (2-tp form)
/103/ Report on waste handling for 2011 year (form #1-wastes)
/104/ Report on waste handling for 2010 year (form #1-wastes)
/105/ Report on water usage for IV quarter 2011 year
/106/ Report on water usage for IV quarter 2010 year
/107/ Report on water usage for IV quarter 2009 year
/108/ Report on water usage for IV quarter 2008 year
/109/ Report on TPPs working for 2008 year (form 6-tp)
/110/ Report on TPPs working for 2009 year (form 6-tp)
/111/ Report on TPPs working for 2010 year (form 6-tp)
/112/ Report on TPPs working for 2011 year (form 6-tp)
/113/ Rules on ecological behavior on territory of JSC "Dniproenergo"
/114/ Statement on chemical laboratory of JSC "DTEC-Dniproenergo" chemical workshop attestation #PE 0036/2012. Dated 28/04/2012, valid till 08/10/2013
/115/ Annex to statement on attestation #PE 0036/2012, attestation area
/116/ Monthly acts on natural gas consumption for March-December 2009

/117/ Monthly acts on natural gas consumption for January - December 2008
/118/ Monthly acts on natural gas consumption for January-December 2010
/119/ Monthly acts on natural gas consumption for January-December 2011
/120/ Passport and calibration certificate on wagon tensometric scales VVT-100D prod.#03
/121/ Passport and calibration certificate on wagon tensometric scales VTV-1SDB prod.#020
/122/ Passport and calibration certificate on tensometric belt scales VK-230 prod.#116 5G
/123/ Passport and calibration certificate on tensometric belt scales VK-230 prod.#151 5A
/124/ Passport and calibration certificate on tensometric belt scales VK-230 prod.#152 5B
/125/ Permit #1220310300-11 on pollutions into atmosphere air from stationary sources, valid from 18/04/2012 till 28/10/2016
/126/ Gas consumption logbook, started 01/2005
/127/ Report on fuel, heat energy and electric energy consumption for 2011 year (form 11-mtp)
/128/ Report on fuel, heat energy and electric energy consumption for 2010 year (form 11-mtp)
/129/ Report on fuel, heat energy and electric energy consumption for 2009 year (form 11-mtp)
/130/ Report on fuel, heat energy and electric energy consumption for 2008 year (form 11-mtp)
/131/ Report on air protection for 2011 year (form 2-tp)
/132/ Report on air protection for 2010 year (form 2-tp)
/133/ Report on air protection for 2009 year (form 2-tp)
/134/ Report on air protection for 2008 year (form 2-tp)
/135/ Calibration certificate #09091 on power meter Actaris SL7000 prod. #33003472 dated 28.05.2009, connection TG-9 back-up
/136/ Calibration certificate #09092 on power meter Actaris SL7000 prod. #33003491 dated 28.05.2009, connection TG-9 main
/137/ Calibration certificate #09151 on power meter Actaris SL7000 prod. #33003473 dated 09.06.2009, connection TG-9 back-up
/138/ Calibration certificate #09159 on power meter Actaris SL7000 prod. #33003492 dated 09.06.2009, connection TG-9 main
/139/ Calibration certificate #09094 on power meter Actaris SL7000 prod. #33003490 dated 28.05.2009, connection TG-10 back-up
/140/ Calibration certificate #09098 on power meter Actaris SL7000 prod. #33001597 dated 28.05.2009, connection Electrohydromechanizatsya
/141/ Calibration certificate #09096 on power meter Actaris SL7000 prod. #33003482 dated 28.05.2009, connection TG-3 back-up
/142/ Calibration certificate #09258 on power meter Actaris SL7000 prod. #33002588 dated 22.07.2009, connection L-209 back-up
/143/ Calibration certificate #09262 on power meter Actaris SL7000 prod. #33002627 dated 22.07.2009, connection L-210 back-up
/144/ Calibration certificate #09263 on power meter Actaris SL7000 prod. #33002606

dated 22.07.2009, connection L-212 back-up

/145/ Calibration certificate #09268 on power meter Actaris SL7000 prod. #33002590 dated 22.07.2009, connection L-221 back-up

/146/ Calibration certificate #09264 on power meter Actaris SL7000 prod. #33002616 dated 22.07.2009, connection L-223 back-up

/147/ Calibration certificate #82 on power meter Actaris SL761B071 prod. #36 126b173 dated 08.04.2011, connection L-223

/148/ Calibration certificate #09264 on power meter Actaris SL7000 prod. #33002597 dated 22.07.2009, connection L-224 back-up

/149/ Calibration certificate #09260 on power meter Actaris SL7000 prod. #33002625 dated 22.07.2009, connection L-225 back-up

/150/ Calibration certificate #09259 on power meter Actaris SL7000 prod. #33002609 dated 22.07.2009, connection L-226 back-up

/151/ Calibration certificate #09264 on power meter Actaris SL7000 prod. #33002595 dated 22.07.2009, connection C-331 back-up

/152/ Calibration certificate #09266 on power meter Actaris SL7000 prod. #33002607 dated 22.07.2009, connection C-332 back-up

/153/ Calibration certificate #09239 on power meter Actaris SL7000 prod. #33001530, connection L-161 back-up

/154/ Calibration certificate #09236 on power meter Actaris SL7000 prod. #33002616, connection L-162 back-up

/155/ Calibration certificate #09243 on power meter Actaris SL7000 prod. #33001512, connection L-163 back-up

/156/ Calibration certificate #09251 on power meter Actaris SL7000 prod. #33001522, connection L-164 back-up

/157/ Calibration certificate #09235 on power meter Actaris SL7000 prod. #33001501, connection L-165 back-up

/158/ Calibration certificate #09242 on power meter Actaris SL7000 prod. #33001523, connection L-166 back-up

/159/ Calibration certificate #09237 on power meter Actaris SL7000 prod. #33001534, connection Trufonova-2 back-up

/160/ Calibration certificate #09238 on power meter Actaris SL7000 prod. #33001521 dated 22.07.2009, connection Tryfonova-2 back-up

/161/ Calibration certificate #09241 on power meter Actaris SL7000 prod. #33001500, connection L-223 back-up

/162/ Calibration certificate #09240 on power meter Actaris SL7000 prod. #33001503, connection Sh-1 back-up

/163/ Statement on replacement of power meter ZMB #72097487 to Actaris SL7000 #33002607 dated 06/08/2009 connection C-332 back-up

/164/ Statement on replacement of power meter CE6805E #2705759 to Actaris SL7000 #33002606 connection L-226 back-up

/165/ Statement on replacement of power meter CE6805E #BI59710 to Actaris SL7000 #33002625 connection L-225 back-up

/166/ Statement on replacement of power meter CE6805E #2705761 to Actaris SL7000 #33002597 dated 06/08/2009 connection L-224 back-up

/167/ Statement on replacement of power meter CE6805E #B103489 to Actaris SL7000 #33002616 dated 06/08/2009 connection L-223 back-up

/168/ Statement on replacement of power meter Actaris SL7000 #36130068 to Actaris SL7000 #36126173 dated 10/05/2011 connection L-223 back-up

/169/ Statement on replacement of power meter Actaris SL7000 #33002590 to Actaris SL7000 #2705753 dated 06/08/2009 connection L-221 back-up

/170/ Statement on replacement of power meter CE6805E #BI60592 to Actaris SL7000 #33002606 dated 06/08/2009 connection L-212 back-up

/171/ Statement on replacement of power meter CE6805E #B104242 to Actaris SL7000 #33002606 dated 06/08/2009 connection L-212 back-up

/172/ Statement on replacement of power meter ZMB #72097489 to Actaris SL7000 #33002588 dated 06/08/2009 connection L-209 back-up

/173/ Statement on replacement of power meter CE6805B #B104242 to Actaris SL7000 #33002627 connection L-210 duplicate

/174/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001512

/175/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001512

/176/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36128091 connection L-163 main

/177/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001540 connection L-162 main

/178/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36128072 connection L-163

/179/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001530 connection L-161 main

/180/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36128082

/181/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33002607 connection L-163

/182/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36130076 connection C-332 main

/183/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36118485 connection T-20 main

/184/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33002625 connection L-225 main

/185/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130087 connection L-224 main

/186/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33002597 connection L-224 main

/187/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33002616 connection L-223 main

/188/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36126173 connection L-223 back-up

/189/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36118887 connection L-221 main

/190/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33002590 connection L-221 back-up

/191/ Calibration certificate and passport on power meter Actaris SL761A071 prod.

#36120205 connection L-212 back-up

/192/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118492 connection TV-5

/193/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118483 connection TV-4

/194/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118493 connection TV-3

/195/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118466 connection TV-2

/196/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118474 connection TV-1

/197/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118502 connection 2GV

/198/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118504 connection 1GV

/199/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36126040 connection 105T

/200/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36126009 connection MSV-5

/201/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36126020 connection MSV-6

/202/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36126019 connection MSV-7

/203/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #33001597 connection Electrohydromechanisatsia BM-6

/204/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36126010 connection T-29

/205/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36126970 connection T-28

/206/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36126000 connection T-27

/207/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36126029 connection T-26

/208/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36125980 connection T-25

/209/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36126050 connection T-24

/210/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36125979 connection T-23

/211/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36125990 connection T-22

/212/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36125999 connection T-21

/213/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33003490 connection TG-10 back-up

/214/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130056 connection TG-10 main

/215/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36132308 connection TG-8 back-up

/216/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36132286 connection TG-8 main

/217/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130069 connection L-225 back-up

/218/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118515 connection 2TVR main

/219/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #33002588 connection L-209 back-up

/220/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130070 connection L-209 main

/221/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130070 connection L-210 back-up

/222/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33002627 connection L-210 main

/223/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33002606 connection L-212 main

/224/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118505 connection T-30

/225/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118472 connection T-40a

/226/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118473 connection T-40b

/227/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118484 connection 3GVR

/228/ Statement on replacement of power meter ZMB405CT #72385616S2 to Actaris SL761B071 #33001501 dated 28/07/2009

/229/ Statement on replacement of power meter ZMB405CT #72385610S2 to Actaris SL761B071 #33001522 dated 28/07/2009

/230/ Statement on replacement of power meter ZMB405CT #72385614S2 to Actaris SL761B071 #33001523 dated 27/07/2009

/231/ Statement on replacement of power meter ZMB405CT #72385611S2 to Actaris SL761B071 #33001534 dated 28/07/2009

/232/ Statement on replacement of power meter ZMB405CT #72385606S2 to Actaris SL761B071 #36128043 dated 28/07/2009

/233/ Statement on replacement of power meter ZMB405CT #72385608S2 to Actaris SL761B071 #36128062 dated 27/07/2009

/234/ Statement on replacement of power meter ZMB405CT #72385609S2 to Actaris SL761B071 #36128071 dated 09/01/2008

/235/ Statement on replacement of power meter ZMB405CT #71780141 to Actaris SL761B071 #33002595 dated 06/08/2008

/236/ Statement on replacement of power meter ZMB405CT #72385616S2 to Actaris SL761B071 #36128052 dated 09/01/2008

/237/ Statement on replacement of power meter CE6805B # BN63382 to Actaris SL761B071 #33001530 dated 27/07/2009

/238/ Statement on replacement of power meter CE6805B # BN72093 to Actaris

SL761B071 #33001540 dated 27/07/2009

/239/ Statement on replacement of power meter ZMB405CT #72385609S2 to Actaris SL761B071 #36128091 dated 28/07/2009

/240/ Statement on replacement of power meter ZMB405CT #72385608S2 to Actaris SL761B071 #33001521 dated 03/01/2008

/241/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130066 connection C-331 main

/242/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33002609 connection L-226 back-up

/243/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36128062 connection Sh-1 main

/244/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001500

/245/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36128092

/246/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36128043 connection Tryfonova-2 main

/247/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36128071 connection Tryfonova-1 main

/248/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001525 connection L-166 back-up

/249/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36128081 connection L-166 main

/250/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001501 connection L-165 back-up

/251/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36128052 connection L-165 main

/252/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001522 connection L-164 back-up

/253/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001534 connection Tryfonova-1 back-up

/254/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001521 connection Tryfonova-2 back-up

/255/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #33001503 connection Sh-1 back-up

/256/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36132320 connection TG-5 main

/257/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36132288 connection TG-1 main

/258/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36132301 connection TG-2 main

/259/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36130052 connection TG-2 main

/260/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130060

/261/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #33003473 connection TG-9 main

/262/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36118895 connection L-220 main
/263/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33003472 connection TG-4 main
/264/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33003491 connection TG-1 main
/265/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36132298 connection TG-6 back-up
/266/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36132319 connection TG-6 main
/267/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36132309 connection TG-5 back-up
/268/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36132290 connection TG-5 main
/269/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130047 connection TG-4 back-up
/270/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130057 connection TG-4 main
/271/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33003482 connection TG-4 back-up
/272/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #33003492 connection TG-9 main
/273/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33002595 connection C-331 back-up
/274/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118475 connection TV-10
/275/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118465 connection TV-6
/276/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36118535 connection 4GV
/277/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118495 connection TV-7
/278/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118471 connection TV-8
/279/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118494 connection TV-9
/280/ Calibration certificate and passport on power meter Actaris SL761B071 prod. #36128061 connection L-164
/281/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118505 connection T-30
/282/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118472 connection T-40a
/283/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #36118473 connection T-40b
/284/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130070 connection L-209 main
/285/ Calibration certificate and passport on power meter Actaris SL761C071 prod.

#33002588 connection L-209 back-up

/286/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #33002627 connection L-210 main

/287/ Calibration certificate and passport on power meter Actaris SL761A071 prod. #36130078 connection L-210 back-up

/288/ Calibration certificate and passport on power meter Actaris SL761C071 prod. #33002606 connection L-212 main

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/ Volodymyr Evhrafov – Head Engineer, Deputy Director

/2/ Andrii Kyrylenko – Deputy Head Engineer on Exploitation and Environmental

/3/ Oleksandr Tatarchuk – Head of Environmental Department

/4/ Leonid Aharkov – Head of Electric Department

/5/ Halyna Reznichenko - Head of Chemical Department

/6/ Serhiy Vasylenko – Head of Planning Producing Department

/7/ Oleksandr Beldiy – Head of Fuel Supply Department

/8/ Mykolai Semeniuk – Head of Technical Automatization and Measuring Department

/9/ Andriy Kolobaev – Head of Fuel Support Department

/10/ Iryna Vorontsova – head master of electric department

/11/ Maksym Rogovoi – representative of "Elta-Eco" LLC

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?	*CAR01* Please add in the section A.2 information on written project approvals issued by Parties involved for this project	CAR01	Pending
91	Are all the written project approvals by Parties involved unconditional?	See section 90 of this protocol	-	-
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?	*CAR02* Please explain difference between lists of project implemented measures in the determined PDD and in the Monitoring Report *CAR03* Monitoring Report indicates but doesn't list measures implemented in 2009 year. Please correct this misamendment *CAR04* Please explain difference between ERUs indicated in the PDD and achieved in 2011 year	CAR02 CAR03 CAR04	OK OK OK
93	What is the status of operation of the project during the monitoring period?	The Project is in operation during the monitoring period *CL01* Please clarify in the monitoring report next follows, if	CL01	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		they have took place during the monitoring period - Stops of power units influencing emissions and level of project activities, associated with repairs, technical disasters, etc. - Please clarify if any additional equipment relate to the project activity was installed during the monitoring period - Please indicate if remarking of blocks power capacity took place during the monitoring period		
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 was provided in accordance with the monitoring plan included in the PDD which determination has been deemed final	OK	OK
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	Project developer taking into account key factors listed in the section 23(b) (i)-(vii) of Determination protocol, such as economic circumstances in Ukraine energy branch, availability of work power and technologies, influencing the baseline emissions and activity level of the project, as risks associated with the projects in appropriate way.	OK	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	The data sources uses for calculating emission reductions, such as TPP work forecasts, state statistical forms, etc, are clearly identified, reliable and transparent	OK	OK
95 (c)	Are emission factors, including default emission factors, if used for calculating the	*CL02* National GHG inventory report for 1990-2010 was used	CL02	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	for emission reduction calculations. This version of national GHG inventory report was not finally approved by JISC. Please correct or explain.		
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?	*CAR05* Please check calculation's rounding in the Excel file. *CL03* Please explain monthly negative values of emission reductions	CAR05 CL03	OK OK
Applicable to JI SSC projects only_Not applicable				
Applicable to bundled JI SSC projects only_Not applicable				
Revision of monitoring plan				
Applicable only if monitoring plan is revised by project participant				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	Revision of monitoring plan couldn't be required during the verification process	OK	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?	Not applicable	Not applicable	Not applicable
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	The implementation of data collection procedures is in accordance with the monitoring plan, included in the PDD which determination has been deemed final	OK	OK
101 (b)	Is the function of the monitoring equipment,	*CAR06*	CAR06	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	including its calibration status, in order?	Monitoring report indicates only generator and own needs transformers power meters. Please add data on outgoing power lines power meters *CAR07* Please provide correct information on natural gas supply enterprise and data on enterprises provided calibration of project measuring equipment	CAR07	OK
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	The evidences and records used for the monitoring is obtained in a traceable manner	OK	OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	*CAR08* Please add reference number and date of PJSC "Dniproenergo" order describing procedures on JI project data collection and keeping *CAR09* Please add person responsible for monitoring data preparation from the PJSC "Dniproenergo"	CAR08 CAR09	OK OK
Verification regarding programmes of activities (additional elements for assessment) _Not applicable				
Applicable to sample-based approach only_Not applicable				

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
CAR01 Please add in the section A.2 information on written project approvals issued by Parties involved for this project	90	Pending	Pending
CAR02 Please explain difference between lists of project implemented measures in the determined PDD and in the Monitoring Report	92	The list of measures implemented in frames of the Project activity in the Monitoring Report is slightly different from the one in the PDD. The reason for that is that in the PDD the there was a list of measures that could be implemented on some of the TPP units in the frames of the Project and in the Monitoring Report the list of the main measures implemented on the particular units during the specific time period.	Closed by clarifications of project participants
CAR03 Monitoring Report indicates but doesn't list measures implemented in 2009 year. Please correct this misamendment	92	Project measures implemented in 2009 are added in the Monitoring Report	The issue is closed based on information provided in the MR

CAR04 Please explain difference between ERUs indicated in the PDD and achieved in 2011 year	92	The list of measures implemented in frames of the Project activity in the Monitoring Report is slightly different from the one in the PDD. The reason for that is that in the PDD the there was a list of measures that could be implemented on some of the TPP units in the frames of the Project and in the Monitoring Report the list of the main measures implemented on the particular units during the specific time period.	The explanation was found satisfactory. The issue is closed
CAR05 Please check calculation's rounding in the Excel file	95(d)	Excel spreadsheets are checked	The issue is closed based on corrections provided by project consultant
CAR06 Monitoring report indicates only generator and own needs transformers power meters. Please add data on outgoing power lines power meters	101(b)	List of outgoing power lines power meters with calibration and installation data is provided in the section B.2.1	The issue is closed based on the information provided by project participants
CAR07 Please provide correct information on natural gas supply enterprise and data on enterprises provided calibration of project measuring equipment	101(b)	The "Dnipropetrovskgas" is indicated as gas-supply company.	The issue is closed
CAR08 Please add reference number and date of PJSC "Dniproenergo" order describing procedures on JI project data collection and keeping	101(d)	Done (the "DTEK Dniproenergo" PJSC. Order #169 dated 21.06.2012)	The relevant Order is mentioned in the MR. the issue is closed
CAR09 Please add person responsible for monitoring data preparation from the PJSC "Dniproenergo"	101(d)	The monitoring responsible persons from DTEC and "Elta-Eco" are indicated in the MR	The issue is closed

CL01 Please clarify in the monitoring report next follows, if they have took place during the monitoring period - Stops of power units influencing the baseline emissions and level of project activities, associated with repairs, technical disasters, etc. - Please clarify if any additional equipment relate to the project activity was installed during the monitoring period Please indicate if remarking of blocks power capacity took place during the monitoring period	93	The time of the power units stops and other factors in the monitoring period remained the same as in the Baseline. There was no additional equipment installed during the monitoring period. There was no remarking of the power units during the monitoring period.	The issue is closed based information provided by the project consultant and work staff of Krivorizka TPP
CL02 National GHG inventory report for 1999-2010 was used for emission reduction calculations. This version of national GHG inventory report was not finally approved by JISC. Please correct or explain.	95(c)	The National GHG inventory report for 1999-2010 was used for the calculation as it was the requirement of the SEIA and this version is already published at the UNFCCC website.	The issue is closed
CL03 Please explain negative values of emission reductions in July-August 2011 and July-September of 2010 year	95(d)	CL03: the negative values appear in the summer period, because in summer the cooling system of the power units works less efficient. It can be seen every year, but the average value for the whole year is getting better.	The clarification was found satisfactory. The issue is closed