# VERIFICATION REPORT
# SE "PA YUZHNY MACHINE-BUILDING PLANT NAMED AFTER A.MAKAROV"

## VERIFICATION OF THE
# "IMPLEMENTATION OF ENERGY SAVING EQUIPMENT AND TECHNOLOGIES AT THE STATE ENTERPRISE "PRODUCTION ASSOCIATION YUZHNY MACHINE-BUILDING PLANT NAMED AFTER A. MAKAROV"

PERIODIC VERIFICATION
(01/07/2011 – 31/12/2011)

## REPORT NO. UKRAINE-VER/0439/2012
REVISION NO. 02

## BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-ver/0439/2012

# VERIFICATION REPORT

| Date of first issue: | Organizational unit: |
|---|---|
| 05/04/2012 | Bureau Veritas Certification Holding SAS |
| **Client:** | **Client ref.:** |
| SE "PA Yuzhny Machine-Building Plant named after A. Makarov" | Iuriy Pashchenko |


**Summary:**

Bureau Veritas Certification has made the periodic verification of the project "Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov", project of SE "PA Yuzhny Machine-Building Plant named after A.Makarov" located in Dnipropetrovsk city, Ukraine, and applying the JI specific approach, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the monitoring report against the project design 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 Request and Corrective Actions Requests (CR and CAR), 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 297 140 tonnes of $CO_2$ equivalent for the monitoring period 01/07/2011 – 31/12/2011.

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


| Report No.: | Subject Group: |
|---|---|
| UKRAINE-ver/0439/2012 | JI |
| **Project title:** | |
| Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov" | |
| **Work carried out by:** | |
| Oleg Skoblyk – Team Leader, Lead Verifier<br>Olena Manziuk – Team member, Verifier | |
| **Work reviewed by:** | |
| Ivan Sokolov – Internal Technical Reviewer<br>Vyacheslav Yeriomin – Technical Expert | |
| **Work approved by:** | |
| Ivan Sokolov – Operational Manager | |
| **Date of this revision:** | **Rev. No.:** / **Number of pages:** |
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## Abbreviations

| | |
|---|---|
| AIE | Accredited Independent Entity |
| BVC | Bureau Veritas Certification Holding SAS |
| CAR | Corrective Action Request |
| CDM | Clean Development Mechanism |
| CL | Clarification Request |
| $CO_2$ | Carbon Dioxide |
| DVM | Determination and Verification Manual |
| ERU | Emission Reduction Unit |
| FAR | Forward Action Request |
| GHG | Green House Gas(es) |
| IPCC | Intergovernmental Panel on Climate Change |
| JI | Joint Implementation |
| JISC | Joint Implementation Supervisory Committee |
| MP | Monitoring Plan |
| MR | Monitoring Report |
| DFP | Designated Focal Point |
| QA/QC | Quality Assurance/Quality Control |
| PDD | Project Design Document |
| UNFCCC | United Nations Framework Convention for Climate Change |

## *Table of Contents* *Page*

1 INTRODUCTION ..... 4
1.1 Objective 4
1.2 Scope 4
1.3 Verification Team 4

2 METHODOLOGY ..... 5
2.1 Review of Documents 5
2.2 Follow-up Interviews 6
2.3 Resolution of Clarification, Corrective and Forward Action Requests 6

3 VERIFICATION CONCLUSIONS ..... 7
3.1 Remaining issues and FARs from previous verifications 7
3.2 Project approval by Parties involved (90-91) 7
3.3 Project implementation (92-93) 8
3.4 Compliance of the monitoring plan with the monitoring methodology (94-98) 9
3.5 Revision of monitoring plan (99-100) 10
3.6 Data management (101) 12
3.7 Verification regarding programmes of activities (102-110) 13

4 VERIFICATION OPINION ..... 13

5 REFERENCES ..... 15

APPENDIX A: PROJECT VERIFICATION PROTOCOL ..... 19

# 1 INTRODUCTION

State Enterprise “Production Association Yuzhny Machine-Building Plant named after A. Makarov” has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Implementation of Energy Saving Equipment and Technologies at the State Enterprise “Production Association Yuzhny Machine-Building Plant named after A. Makarov” (hereafter called “the project”) at Dnipropetrovsk city, 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 submitted monitoring report and the determined project design document including 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 verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

## 1.3 Verification Team

The verification team consists of the following personnel:

Oleg Skoblyk
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Olena Manziuk
Bureau Veritas Certification Team Member, Climate Change 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 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 SE “PA Yuzhny Machine-Building Plant named after A. Makarov” and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), JI specific approach developed in accordance with 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 01 dated 27/02/2012, the Monitoring Report version 02 dated 27/03/2012, the Monitoring Report version 03 dated 02/04/2012, and project as described in the determined PDD.

## 2.2 Follow-up Interviews

On 22/03/2012 Bureau Veritas Certification during site visit performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of State Enterprise "Production Association Yuzhny Machine-Building Plant named after A.Makarov" and Institute of Engineering Ecology were interviewed (see section 5 References). The main topics of the interviews are summarized in Table 1 below.

**Table 1 Interview topics**

| Interviewed organization | Interview topics |
|---|---|
| State Enterprise "Production Association Yuzhny Machine-Building Plant named after A.Makarov" | ➢ Organizational structure<br>➢ Responsibilities and authorities<br>➢ Training of personnel<br>➢ Quality management procedures and technology<br>➢ Implementation of equipment (records)<br>➢ Metering equipment control<br>➢ Metering record keeping system, database<br>➢ Monitoring procedure |
| Institute of Engineering Ecology | ➢ Baseline methodology<br>➢ Monitoring plan<br>➢ Monitoring report<br>➢ Deviations from PDD<br>➢ Emission reduction calculation |

## 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 Request and Corrective 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 seven Corrective Action Requests and one Clarification Request.

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

## 3.1 Remaining issues and FARs from previous verifications

No FARs from previous verifications were raised by verification team. Thus, the following section is not applicable.

## 3.2 Project approval by Parties involved (90-91)

Written project approval (LoA # 2591/23/7 dated 16/09/2011) by the host Party (Ukraine) has been issued by the State Environmental Investment Agency of Ukraine.

Moreover, the Federal Office for the Environment (FOEN, Switzerland) has issued the Letter of Approval # J294-0485 dated 24/01/2011 for this

project acting as the Designated National Authority of that Party (refer to the section 5 References of this report).

The abovementioned written approvals are unconditional.

## 3.3 Project implementation (92-93)

The JI project “Implementation of Energy Saving Equipment and Technologies at the State Enterprise “Production Association Yuzhny Machine-Building Plant named after A. Makarov” main goal is reduction of fuel (i.e., natural gas) and electricity consumption due to implementation of energy-saving equipment and technologies at the SE “PA Yuzhny Machine-Building Plant named after A. Makarov”. Regarded JI project activity will result in decreasing of anthropogenic greenhouse gas emissions, mainly it is $CO_2$.

In addition, modernization of the existing and installation of the new modern boiler, turbine, technological and other equipment will enable to reduce not only GHG but also toxic gases emission in order to improve ecological situation in the center of the densely populated Dnipropetrovsk city, where the State Enterprise “Production Association Yuzhny Machine-Building Plant named after A. Makarov” is located.

According to the documents, the starting date of JI project operation is 11/10/2004. It is the date when the Agreement between State Enterprise «Production Association Yuzhny Machine-Building Plant named after A. Makarov» and the Institute of Engineering Ecology on energetic and ecological survey of the enterprise and development of materials for the project on greenhouse gases emission reduction was signed, and JI project activity has been started to be implemented by the Project Participants.

As a fact, the JI specific approach was used for JI project realization that developed in accordance with Guidance on Criteria for Baseline Setting and Monitoring.

Actually, for considered monitoring period a list of project activity that planned in the PDD was implemented, for instance:

- new technological equipment were installed;
- frequency controllers were installed;
- boiler units were reconstructed;
- steam turbines were rehabilitated, etc.

In detailed, heating systems based on "Proton P65” air-heaters (23 units) and "Proton-DTR-400" ceiling fans (i.e., 10 units) were installed, U-4000 ultraviolet ceiling heaters (i.e., 8 units) were installed, distribution networks were rehabilitated, the first stage of implementation of

automated system for complex electricity accounting (ASCEA) was performed by project participants, and other JI project activity.

On the whole, implementation of the energy saving measures is realized according to the schedule stated in the registered project design document.

As stated in the Monitoring Report, GHG emission reductions were achieved due to the JI project activity implementation, and the amount of the emission reductions (ER) for the monitoring period 01/07/2011 – 31/12/2011 is equal 297 140 tonnes $CO_2$ equivalent that is slightly lower than anticipated by PDD for the same monitoring period.

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

The monitoring occurred in accordance with the revised monitoring plan as well as the monitoring plan that is included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website. According to the PDD, selection of monitoring approach was made in compliance with “Guidance on criteria for baseline setting and monitoring”. The project developer used JI specific approach for establishing the monitoring. Collection of all key parameters required to calculate greenhouse gas emissions is undertaken in compliance with the established practice of the State Enterprise “Production Association Yuzhny Machine-Building Plant named after A. Makarov” to meter fuel, heat, energy, pollutant emissions into the air, and environmental impacts.

For calculating the emission reductions key factors, such as natural gas consumption by the enterprise equipment, natural gas consumption for heat energy production for external consumers, natural gas consumption for electricity generation for external and other consumers, natural gas consumption for production of the non-core products, Delivery of natural gas to the external consumers, electricity consumption for production of the aerospace products, average Net Calorific Value of natural gas, carbon emission factor for natural gas, carbon emission factor for JI projects reducing electricity consumption, delivery of heat energy for external consumers, gross production output of aerospace products at the enterprise, aerospace products price change index, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the JI project were taken into account, as appropriate.

Data sources used for calculating emission reductions, such as calibrated measurement equipment, the order that establishes standardized emission factors for the Ukrainian electricity grid, national inventory are clearly identified, reliable and transparent. On site responsible persons

register data from the measurement equipments and fixed monitoring data to logbooks. Moreover, there is electronic database of data monitoring. In detail, registration of monitoring data of natural gas consumption and electricity consumption at the enterprise is conducted in accordance with identified procedure of data collection. For example, chief of CHP, Chief of network and substation workshop, Chief of heat power workshop, and Chief of Metrology Department deliver the monitoring records to the Manager of energy production complex. Further the information from Manager of energy production complex as well as from Chief accountant is transferred to the main specialist of JI project where it is collected before the processing. Next step is Monitoring Report preparation by the specialists of the Institute of Engineer Ecology. In general, all roles and responsibilities connected with JI project at the SE "PE Yuzhny Machine-Building Plant named after A. Makarov" are established in accordance with procedure described in section D "Monitoring plan" of the registered PDD version 07 dated 16/08/2011 and revised monitoring plan.

Emission factors, including default emission factors, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice. According to the JI project documents, several emission factors are used for calculation of emission reductions, such as carbon emission factor for natural gas and carbon emission factor for JI projects electricity consumption.

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

The identified areas of concern as to compliance of the monitoring plan with the monitoring methodology, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR01 and CL01).

## 3.5 Revision of monitoring plan (99-100)

In the course of the monitoring period (01/07/2011 – 31/12/2011) the original monitoring plan described in the registered project design document version 07 dated 16/08/2011 was modified by the project participants. The project participants provided an appropriate justification for the proposed revisions caused by a set of reasons that described below. The changes are as follows:

1. Changes in application of the parameter Carbon Emission Factor for natural gas in the base year

In the calculation of dynamic baseline GHG emissions from the fuel (i.e., natural gas) consumption by equipment of the SE "PA Yuzhny Machine-Building Plant named after A.Makarov" for production of the aerospace products in the reported period, for computation of amounts of

GHG emissions with taking into account the actual values for the reported period, the Carbon Emission Factor for natural gas in the reported period ($Cef_{ngr}$, formula 12) determined according to the new valid documents ("National inventory report of Ukraine for 1990 – 2009") was used, instead of the Carbon Emission Factor for natural gas in the base year ($Cef_{ngb}$, formula D.12 in the PDD). As a result, it leads to improvement of data applicability because of usage of the latest estimated Carbon Emission Factor and accuracy calculations for the reporting period.

2. Changes in application of the parameter Carbon Emission Factor for JI projects reducing electricity consumption in the base year

In the calculation of dynamic baseline GHG emissions from production to the state electric grid of the electricity that is consumed by the SE "PA Yuzhny Machine-Building Plant named after A.Makarov" for production of the aerospace products in the reported period, for computation of amounts of GHG emissions with taking into account the actual values for the reported period, the Carbon Emission Factor for electricity consumption in the reported period ($CEF_{cr}$, formula 14) instead of the Carbon Emission Factor for JI projects reducing electricity consumption in the base year ($CEF_{cb}$, formula D.14 in the PDD) was used. Due to the regarded revision, data applicability and accuracy of calculations for the reporting period are to be improved because of the usage of the latest estimated Carbon Emission Factor that reflects the actual situation in the electricity sphere.

3. Changes in the data collection scheme

The revision concerns of changes of the data collection scheme. According to the description, data collection scheme improvements connected with the persons that are responsible for the monitoring scheme realisation. Data collection is provided with the participation of the Manager of energy production complex instead of the Main energy engineer due to internal reorganization of the enterprise and corresponding change of position duties. Thus, the current revision leads to higher transparency of the monitoring data collection process due to description of the actual information flow on the SE "PE Yuzhny Machine-Building Plant named after A. Makarov"

All revisions to the monitoring plan were made in accordance with the paragraph D of the „Guidance on criteria for baseline setting and monitoring" (version 03) to improve accuracy of the monitoring of emission reductions and applicability of information collected.

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

Based on above mentioned, BVC verification team can conclude that the proposed revision of the monitoring plan of the project is complete, effective and reliable. All relevant emission sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently. All parameters were monitored and determined as prescribed. The collected data are stored in electronic and paper formats. The monitoring methodologies and supporting records were sufficient to enable verification of emission reductions. As a result the verification process, no significant lacks of evidence were detected.

The identified areas of concern as to revision of the monitoring plan, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR02, CAR03 and CAR07).

## 3.6 Data management (101)

As a result of site visit, documents revision, and verification process at all there is concluded that 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. For instance, internal audits and control measures are conducted by the main specialist of the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov". These procedures are described in detailed in the registered project design document.

According to the documents on measurement equipments and its calibration certificates, the function of the monitoring equipment, including its calibration status, is in order.

During site visit logbooks were revised, and electronic database was checked and the last one was discovered as reliable and functional. Thus, the evidence and records used for the monitoring are maintained in a traceable manner.

The data collection and management system for the JI project "Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov" is in accordance with revised monitoring plan as well as the monitoring plan registered in the PDD.

The identified areas of concern as to the data management, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR04, CAR05, and CAR06).

## 3.7 Verification regarding programmes of activities (102-110)

Not applicable.

# 4 VERIFICATION OPINION

Bureau Veritas Certification has performed the periodic verification of the project “Implementation of Energy Saving Equipment and Technologies at the State Enterprise “Production Association Yuzhny Machine-Building Plant named after A. Makarov” in Dnipropetrovsk city, Ukraine, which applies the JI specific approach developed in accordance with the Guidance on Criteria for Baseline Setting and Monitoring. The verification was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The verification consisted of the following three phases: i) desk review of the monitoring report against project design and 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 the SE “PA Yuzhny Machine-Building Plant named after A. Makarov” is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring Plan as per determined changes. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 03 dated 02/04/2012 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 01/07/2011 to 31/12/2011

| | | |
|---|---|---|
| Baseline emissions | : 385 905 | tonnes $CO_2$ equivalent |
| Project emissions | : 88 765 | tonnes $CO_2$ equivalent |
| Emission Reductions (3-4 quarters 2011) | : 297 140 | tonnes $CO_2$ equivalent |

# 5 REFERENCES

**Category 1 Documents:**
Documents provided by State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov" that relate directly to the GHG components of the project.

/1/ Project design Document of JI project "Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov" version 07 dated 16/08/2011

/2/ Monitoring report of JI project "Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov" for the period 01/07/2011 – 31/12/2011 version 01 dated 27/02/2012

/3/ Monitoring report of JI project "Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov" for the period 01/07/2011 – 31/12/2011 version 02 dated 27/03/2012

/4/ Monitoring report of JI project "Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov" for the period 01/07/2011 – 31/12/2011 version 03 dated 02/04/2012

/5/ Letter of Approval # 2591/23/7 dated 16/09/2011 of the JI project "Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov" issued by the State Environmental Investment Agency of Ukraine

/6/ Letter of Approval # J294-0485 dated 24/01/2011 of the JI project "Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov" issued by the Federal Office for the Environment (FOEN) of Switzerland

/7/ Guidance on criteria for baseline setting and monitoring, version 03

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

/1/ Statement # 1 on executed construction works (mounting works on implementation of automated system for complex electricity accounting (ASCEA) for December 2011 dated 15/12/2011

/2/ Statement # 2 on executed construction works (cjmmissioning works on implementation of automated system for complex electricity accounting (ASCEA) for December 2011 dated 15/12/2011
/3/ Statement dated 16/11/2011 on commissioning of first stage of automated system for complex electricity accounting at State Enterprise “Production Association Yuzhny Machine-Building Plant named after A. Makarov”
/4/ Statement on commissioning of heating device at building # 10 dated 12/10/2011
/5/ Statement # 8 dated 31/10/2011 on monthly heat distribution by SE “Production Association Yuzhny Machine-Building Plant named after A. Makarov” CHP to Teplotrans ME for October 2011 according to the Agreement # 135 dated 01/07/2010
/6/ Statement # 9 dated 30/11/2011 on monthly heat distribution by SE “Production Association Yuzhny Machine-Building Plant named after A. Makarov” CHP to Teplotrans ME for November 2011 according to the Agreement # 135 dated 01/07/2010
/7/ Statement # 10 dated 31/12/2011 on monthly heat distribution by SE “Production Association Yuzhny Machine-Building Plant named after A. Makarov” CHP to Teplotrans ME for December 2011 according to the Agreement # 135 dated 01/07/2010
/8/ Statement # 13852/21/359883 dated 31/07/2011 on natural gas supply provided services for July 2011
/9/ Statements # 13852/21/362277 and # 13852/21/362280 on natural gas supply provided services for August 2011
/10/ Statement # 13852/21/364793 on natural gas supply provided services for September 2011
/11/ Statements # 13852/21/369931 and # 13852/21/362280 on natural gas supply provided services for October 2011
/12/ Statement # 13852/21/374886 dated 30/11/2011 on natural gas supply provided services for November 2011
/13/ Acceptance-transmitting statement dated 31/12/2011 on providing energy services according to the Agreement # 289 dated 01/12/2011
/14/ Acceptance-transmitting statement dated 31/12/2011 on providing energy services according to the Agreement # 566 dated 01/02/2006
/15/ Acceptance-transmitting statement dated 30/11/2011 on providing energy services according to the Agreement # 566 dated 01/02/2006
/16/ Acceptance-transmitting statement dated 31/10/2011 on providing energy services according to the Agreement # 566 dated 01/02/2006
/17/ Acceptance-transmitting statement dated 31/10/2011 on natural gas according to the Agreement # 135 dated 01/07/2010
/18/ Acceptance-transmitting statement # 11 dated 30/01/2011 on natural gas according to the Agreement # 135 dated 01/07/2010
/19/ Acceptance-transmitting statement # 12 dated 31/12/2011 on natural gas according to the Agreement # 135 dated 01/07/2010
/20/ Acceptance-transmitting statement # 24/10/11 dated 30/10/2011 on heat energy
/21/ Acceptance-transmitting statement # 24/11/11 dated 30/11/2011 on

heat energy

/22/ Acceptance-transmitting statement # 24/12/11 dated 30/12/2011 on heat energy

/23/ Invoice # PH-0001466 dated 01/08/2011 (DS speed regulator, PROTON P65 air-heating unit)

/24/ Invoice # PH-0001470 dated 08/08/2011 (PROTON DTR400 destratifier fan)

/25/ Letter # 124/490 dated 27/03/2012 from SE "Production Association Yuzhny Machine-Building Plant named after A. Makarov" to O. Sigal Institute of Engineering Ecology dirctor

/26/ Annex # 1 to the Letter # 124/490 dated 27/03/2012. Information for GHG emission reductions calculation for the period from 01/07/2011 to 31/12/2011

/27/ Balance sheet on electricity production, purchase and distribution by SE "Production Association Yuzhny Machine-Building Plant named after A. Makarov" for the second half of 2011

/28/ Report on air protection for the 3$^{d}$ quarter of 2011. Form 2-ТП (air) per quarter

/29/ Report on air protection for 2011. Form 2-ТП (air) annual

/30/ Control card on power meter, fabrication # 154004. Last calibration date–29/02/2012

/31/ Card on periodical calibration of power meter, fabrication # 909133. Last calibration date–22/02/2012

/32/ Control card on power meter, fabrication # 098499. Last calibration date–18/02/2012

/33/ Passport on threephase power meter, fabrication # 197033. Last calibration date–18/03/2009

/34/ Control card on power meter, fabrication # 586826. Last calibration date – 02/02/2012

/35/ Passports on physical and chemical parameters of natural gas for July, August, September, October, November, December 2011

/36/ Protocol # 37 on electrical safety knowledge testing commission session # 10 dated 30/08/2011

/37/ Protocol # 56 on electrical safety knowledge testing commission session # 10 dated 16/12/2011

/38/ Protocol # 46 on electrical safety knowledge testing commission session # 10 dated 03/11/2011

/39/ Acceptance certificate on volume gas corrector "Tandem", fabrication # 1968. Last calibration date–22/07/2011

/40/ Acceptance certificate on ultrasonic gas meter "Kurs-01" G650Б, fabrication # 5343. Last calibration date–22/07/2011

/41/ Certificate # 19-20/3125-11 dated 21/11/2011 on measuring equipment calibration (Flowtech measuring unit, fabrication # 1-525). Valid till 21/11/2013

/42/ Natural gas consumption and distribution at SE "Production Association Yuzhny Machine-Building Plant named after A. Makarov" for the second half of the 2011

/43/ Acceptance certificate on gas meter "Kurs-01" G250Б2, fabrication # 5756. Last calibration date–14/01/2010

/44/ Acceptance and calibration certificate on volume gas meter type "Universal-02", fabrication # 8693. Last calibration date–18/12/2009

/45/ Acceptance certificate on gas meter “Kurs-01” G250Б2, fabrication # 5757. Last calibration date–14/01/2010
/46/ Acceptance and calibration certificate on volume gas meter type “Universal-02”, fabrication # 8665. Last calibration date–22/12/2009
/47/ Acceptance certificate on heat energy meter type “Ergomera-125”, fabrication # 1625. Last calibration date–03/09/2009
/48/ Acceptance certificate on heat energy meter type “Ergomera-125”, fabrication # 2078. Last calibration date–14/10/2010
/49/ Passport on heat energy meter type Sich, fabrication # 506. Last calibration date–10/08/2010

**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/ Muhailo Korobov – chief power engineer of SE “PA Yuzhny Machine-Building Plant named after A. Makarov”
/2/ Larysa Kovika – chief of environmental bureau at SE “PA Yuzhny Machine-Building Plant named after A. Makarov”
/3/ Oleksandr Nikolaenko – executive director EPC “Yuzhmashenergo”
/4/ Yakiv Takhterin – chief specialist of SE “PA Yuzhny Machine-Building Plant named after A. Makarov”
/5/ Anatolii Lobashov – chief metrologist of SE “PA Yuzhny Machine-Building Plant named after A. Makarov”
/6/ Vladyslav Dohonov – head of TPP at SE “PA Yuzhny Machine-Building Plant named after A. Makarov”
/7/ Yurii Pashchenko – deputy of director general of SE “PA Yuzhny Machine-Building Plant named after A. Makarov”
/8/ Valerii Logvyn – engineer of the Institute of Engineering Ecology

# APPENDIX A: PROJECT VERIFICATION PROTOCOL

**Table 1 Check list for verification, according to the JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 02)**

| 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? | All Parties involved in the JI project issued written project approvals. Namely, the State Environmental Investment Agency of Ukraine has issued the Letter of Approval # 2591/23/7 dated 16/09/2011 of the JI project "Implementation of Energy Saving Equipment and Technologies at the State Enterprise "Production Association Yuzhny Machine-Building Plant named after A. Makarov"; and the Federal Office for the Environment (FOEN), Switzerland (Party B), has issued the Letter of Approval for this project No. J294-0485 dated 24/01/2011. | OK | OK |
| 91 | Are all the written project approvals by Parties involved unconditional? | All LoAs of regarded JI project are unconditional. | OK | OK |
| **Project implementation** | | | | |
| 92 | Has the project been implemented in accordance with | As a result of the verification process, the JI project is implemented in accordance | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website? | with the PDD version 07 which has been deemed final.<br>As a matter of fact, implementation of the energy saving measures is realized mainly according to project schedule.<br>Based on the provided documents and results of the site visit, the JI project is generating emission reductions since 01/01/2005.<br>In the Monitoring Rerort version 03 stated that the achieved amount of emission reduction for the monitoring period 01/07/2011 – 31/12/2011 is 297 140 tonnes $CO_2$ equivalent.<br>On the whole, the JI project activities are conducted according to the Project Design Documents. | | |
| 93 | What is the status of operation of the project during the monitoring period? | Monitoring report indicated the current status of the project activity implementation. Based on provided materials, there is known that all project equipments were operational in the reporting period and generating emission reductions. Also, refer to section 92 above. | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| **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 procedure at SE "PA Yuzhny Machine-Building Plant named after A. Makarov" is strictly following the monitoring plan included in the PDD version 07 dated 16/08/2011 regarding which the determination has been deemed final.<br>Data used for calculation of emissions reduction based on information that confirmed by SE "PA Yuzhny Machine-Building Plant named after A. Makarov" documents. | 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? | According to reviewed information, there are taken into account key factors (such as emission factor of the natural gas consumption and carbon emission factor for the JI project reducing electricity consumption, etc.), natural gas consumption by the enterprise equipment, natural gas consumption for heat energy production for external consumers, natural gas consumption for electricity generation for external and other consumers, delivery of natural gas to the external consumers, electricity consumption by the enterprise | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | | equipment for production of the aerospace products, delivery of heat energy for external consumers, gross production output of aerospace products at the enterprise, average Net Calorific Value of natural gas, and other risks associated with the implementation of the project activity that can influence to the baseline and project emission, and emission reduction due to the JI project. | | |
| 95 (b) | Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent? | Data sources used for calculating emission reductions are clearly identified, reliable and transparent. On site responsible persons register data from the measurement equipments and fixed monitoring data to logbooks, monthly data collected to the reporting documents of the SE "PA Yuzhny Machine-Building Plant named after A. Makarov". Moreover, there is electronic database of monitoring data. All roles and responsibilities are described in details in the Monitoring report.<br>Corrective Action Request 01 (CAR01). Please pay your special attention that reference on different data source of the parameter $Cef_{ng}$ is provided in section | CAR01 | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | | B.2.1 and Annex 1 of the monitoring report. Please, bring the information in line.<br>Clarification Request 01 (CL01). Please clarify the source of index of currency rate transformation in the frame of the parameter on Gross production output of aerospace products at the enterprise. | CL01 | OK |
| 95 (c) | Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? | $CO_2$ emission factor from natural gas consumption is used for calculation of emissions and emission reductions. This factor is to be monitored from the normative documents.<br>Also, $CO_2$ emission factor for electricity consumed from Ukrainian grid by the project activity is used in calculation. It is to be regularly monitored from the national study documents (i.e., Order of the National Environmental Investment Agency of Ukraine). | OK | OK |
| 95 (d) | Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner? | The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner. As was approved in the PDD. Namely, JI specific approach are | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | | used regarding monitoring and emission reduction assessment that has been developed in accordance with the Guidance on criteria for baseline setting and monitoring. This project JI specific approach is in the main similar to the project JI specific approach developed by the Institute of Engineering Ecology for the JI projects on rehabilitation of District Heating systems in Ukrainian conditions and already approved by AIEs for several such JI projects in regions and cities of Ukraine (e.g., AR Crimea, Chernihiv, Donetsk and Dnipropetrovsk regions, Kharkiv, Sevastopol, Rivne, Luhansk cities), the main idea of which is to build the dynamic baseline for each reported year, with taking into account the actual changes of internal and external factors.<br>As a result of documents revision, all data connected with estimation of emission reduction are consistent through the Monitoring report and excel spreadsheets with calculation. | | |
| **Applicable to JI SSC projects only** | | | | |
| 96 | Is the relevant threshold to be | Not applicable | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | classified as JI SSC project not exceeded during the monitoring period on an annual average basis?<br>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? | | | |
| **Applicable to bundled JI SSC projects only** | | | | |
| 97 (a) | Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE? | Not applicable | OK | OK |
| 97 (b) | If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report? | Not applicable | OK | OK |
| 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? | Not applicable | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | Do the monitoring periods not overlap with those for which verifications were already deemed final in the past? | | | |
| **Revision of monitoring plan** | | | | |
| **Applicable only if monitoring plan is revised by project participant** | | | | |
| 99 (a) | Did the project participants provide an appropriate justification for the proposed revision? | Some deviations or revisions to the registered monitoring plan are regarded in the monitoring report version 02 dated 27/03/2012.<br>Corrective Action Request 02 (CAR02). Based on the registered PDD, Carbon emission factor for natural gas in the base year ($Cef_{ngb}$) and Carbon emission factor for JI projects reducing electricity consumption in the base year ($CEFc_b$) are provided in the formulae 12, 14 and in the formulae 5, 7. The parameters $Cef_{ngr}$ and $CEFc_r$ for the reported year are used in the same formulae in the monitoring report for calculation of baseline emission. Please, explain the reason of changes and provide appropriate justification.<br>Corrective Action Request 03 (CAR03). In comparison with the PDD the scheme of the data collection was modified. Please, | CAR02<br><br>CAR03 | OK<br><br>OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | | explain the fact and provide justification in the monitoring report.<br>Corrective Action Request 07 (CAR07). Please consider all revisions included in the current Monitoring Report according to the following algorithm: 1) essence of revision; 2) reason for this revision; and 3) what it can improve (e.g., applicability, accuracy, etc.). Also, explicitly state whether proposed revisions improve the accuracy and applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans. | CAR07 | 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? | Refer to section 99 (a) above. | OK | OK |
| **Data management** | | | | |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| 101 (a) | Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures? | Procedures of data collection are implemented in compliance with the approved monitoring plan. Measuring equipment, such as gas meters, heat meters, and electricity meters, etc. is used for monitoring. Monitoring data of the project is monitored in compliance with scheduled frequency approved in the developed monitoring plan and monitoring procedure.<br>The quality control and quality assurance procedures realised due to performing of internal audits and checking measures, participation of third parties, and carrying out of troubleshooting procedures. | OK | OK |
| 101 (b) | Is the function of the monitoring equipment, including its calibration status, is in order? | All project equipments were operating within the considered monitoring period. As a fact, the monitoring equipment has calibration. It is calibrated with periodic frequency (passport states the calibration frequency for every device) according to the national regulations.<br>During site visit verification team received and reviewed passports and/or certificates on calibration of all measurement equipment that confirm the fact stated | | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | | above. Detailed information about the equipment accuracy, calibration dates of the measurement devices, etc. is stated in the Annex 5 to the Monitoring Report for the monitoring period 01/07/2011-31/12/2011. | | |
| | | Corrective Action Request 04 (CAR04). As a result of document analysis, the last calibration date of the measurement device type "Flowtech-TM" ser. # 1-525 is 21/11/2011 (refer to the section 5 Category 2 document 41 of the Verification report). The other date is stated in Annex 5 to the monitoring report. Please, make amendments. | CAR04 | OK |
| | | Corrective Action Request 05 (CAR05). Please provide serial/identification numbers of correctors to the measurement equipment as well as their last calibration dates. | CAR05 | OK |
| | | Corrective Action Request 06 (CAR06). Please provide documented evidences of calibration status of the following measurement devices: heat energy meters type "Sich" and type "Ergomera - 125", and gas flow meters type "Kurs- | CAR06 | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | | 01" G250B2. | | |
| 101 (c) | Are the evidence and records used for the monitoring maintained in a traceable manner? | Monitoring records are used for the emissions calculation and emission reductions estimation maintained in a traceable and transparent manner. | OK | OK |
| 101 (d) | Is the data collection and management system for the project in accordance with the monitoring plan? | The data collection and management system for the project is in accordance with the approved monitoring plan. Implementation of monitoring system was checked during the site visit, and it was concluded that monitoring system is completely in accordance with the monitoring plan. This fact is also confirmed by the documented evidences. | OK | OK |
| **Verification regarding programs of activities (additional elements for assessment)** | | | | |
| 102 | Is any JPA that has not been added to the JI PoA not verified? | Not applicable | OK | OK |
| 103 | Is the verification based on the monitoring reports of all JPAs to be verified? | Not applicable | OK | OK |
| 103 | Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA? | Not applicable | OK | OK |
| 104 | Does the monitoring period not | Not applicable | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | overlap with previous monitoring periods? | | | |
| 105 | If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing? | Not applicable | OK | OK |
| **Applicable to sample-based approach only** | | | | |
| 106 | Does the sampling plan prepared by the AIE:<br>(a) Describe its sample selection, taking into account that:<br>(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:<br>− The types of JPAs;<br>− The complexity of the applicable technologies and/or | Not applicable | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | measures used;<br>− The geographical location of each JPA;<br>− The amounts of expected emission reductions of the JPAs being verified;<br>− The number of JPAs for which emission reductions are being verified;<br>− The length of monitoring periods of the JPAs being verified; and<br>− The samples selected for prior verifications, if any? | | | |
| 107 | Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation? | Not applicable | OK | OK |
| 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 | Not applicable | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification? | | | |
| 109 | Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional) | Not applicable | OK | OK |
| 110 | If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing? | Not applicable | OK | OK |

**Table 2 Resolution of Corrective Action and Clarification Requests**

| Draft report clarifications and corrective action requests by verification team | Ref. to checklist question in table 1 | Summary of project participant response | Verification team conclusion |
|---|---|---|---|
| Corrective Action Request 01 (CAR01). Please pay your special attention that reference on different data source of the parameter $Cef_{ng}$ is provided in section B.2.1 and Annex 1 of the monitoring report. Please, bring the information in line. | Table 1, 95 (b) | This information is corrected in MR version 03. | The information was amended by the developers of the monitoring report. Issue is closed. |
| Corrective Action Request 02 (CAR02). Based on the registered PDD, Carbon emission factor for natural gas in the base year ($Cef_{ngb}$) and Carbon emission factor for JI projects reducing electricity consumption in the base year ($CEFc_b$) are provided in the formulae 12, 14 and in the formulae 5, 7. The parameters $Cef_{ngr}$ and $CEFc_r$ for the reported year are used in the same formulae in the monitoring report for calculation of baseline emission. Please, explain the reason of changes and provide appropriate justification. | Table 1, 99 (a) | The parameters in question are used for calculation of namely the dynamic baseline emissions.<br>For correct comparing of amounts of GHG emissions with taking into consideration actual values in the reported period, Carbon Emission Factors for the reported period instead of Carbon Emission Factor for the base year should be used.<br>These changes favor improving accuracy of calculations in the | Based on the provided explanation, issue is closed. |

| Draft report clarifications and corrective action requests by verification team | Ref. to checklist question in table 1 | Summary of project participant response | Verification team conclusion |
|---|---|---|---|
| | | reported period. | |
| Corrective Action Request 03 (CAR03). In comparison with the PDD the scheme of the data collection was modified. Please, explain the fact and provide justification in the monitoring report. | Table 1, 99 (a) | The scheme of the data collection was modified due to internal reorganization of the enterprise: data collection is occurred with the participation of Manager of energy production complex instead of Main energy engineer.<br>This change is reflected in the MR v.03. | Issue is closed. |
| Corrective Action Request 04 (CAR04). As a result of document analysis, the last calibration date of the measurement device type "Flowtech-TM" ser. # 1-525 is 21/11/2011 (refer to the section 5 Category 2 document 41 of the Verification report). The other date is stated in Annex 5 to the monitoring report. Please, make amendments. | Table 1, 101 (b) | The last calibration date of the measurement device type "Flowtech-TM" ser. # 1-525 is specified from “IV q. 2011” to 21/11/2011 in Annex 5 to the MR version 03. | The information was corrected according to the documents of SE “PA Yuzhny Machine-Building Plant named after A. Makarov”. Thus, issue is closed. |
| Corrective Action Request 05 (CAR05). Please provide serial/identification numbers of correctors to the measurement equipment | Table 1, 101 (b) | This information is added in Annex 5 to the MR version 03. | The required information was described in correct way in the Annex 5 supporting the |

| Draft report clarifications and corrective action requests by verification team | Ref. to checklist question in table 1 | Summary of project participant response | Verification team conclusion |
|---|---|---|---|
| as well as their last calibration dates. | | | monitoring report. Issue is closed. |
| Corrective Action Request 06 (CAR06). Please provide documented evidences of calibration status of the following measurement devices: heat energy meters type "Sich" and type "Ergomera - 125", and gas flow meters type "Kurs-01" G250B2. | Table 1, 101 (b) | This information is provided to AIE. | Required documented evidences were provided to the verification team. As a result of documents analysis, it can be concluded that the calibration status of regarded measurement devices is in order. So issue is closed. |
| Corrective Action Request 07 (CAR07). Please consider all revisions included in the current Monitoring Report according to the following algorithm: 1) essence of revision; 2) reason for this revision; and 3) what it can improve (e.g., applicability, accuracy, etc.). Also, explicitly state whether proposed revisions improve the accuracy and applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans. | Table 1, 99 (a) | The information was justified according to the requirements in the MR version 03. | The corrected version of the MR was provided to the verification team for analysis. As a result of analysis, issue is closed. |
| Clarification Request 01 (CL01). Please | Table 1, 95 | The source of index of currency rate | According to the clarification, |

| Draft report clarifications and corrective action requests by verification team | Ref. to checklist question in table 1 | Summary of project participant response | Verification team conclusion |
|---|---|---|---|
| clarify the source of index of currency rate transformation in the frame of the parameter on Gross production output of aerospace products at the enterprise. | (b) | transformation in the frame of the parameter on Gross production output of aerospace products at the enterprise is the website of the National Bank of Ukraine: http://www.bank.gov.ua/control/uk/curmetal/currency/search/form/period?startPeriod=01,07,2011&endPeriod=31,12,2011&charCode=169&step=daily&outer=table | issue is closed. |