VERIFICATION REPORT

JSC"NATIONAL CARBON SEQUESTRATION FOUNDATION" (NCSF)

VERIFICATION OF THE

RECONSTRUCTION OF THE OXYGEN COMPRESSOR PLANT AT THE JSC "ZAPORIZHSTAL", UKRAINE

REPORT NO. UKRAINE-VER/0205/2010

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-ver/0205/2010

VERIFICATION REPORT

Date of first issue:	Organizational unit:
10/03/2011	Bureau Veritas Certification Holding SAS
Client: CJSC "National Carbon Sequestration Foundation" (NCSF)	Client ref.: Yuriy Fedorov

Summary:
Bureau Veritas Certification has made the 3rd periodic verification of the "Reconstruction of the oxygen compressor plant at the JSC "Zaporizhstal", Ukraine", ITL project ID UA1000189, the project of CJSC "National Carbon Sequestration Foundation" located in city of Zaporizhzhya, Zaporizhzhya region, Ukraine, and applying the JI specific approach, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Accredited Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the 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 per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 98135 tons of CO2eq for the monitoring period from 01/01/2010 to 31/12/2010.

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

Report No.:	Subject Group:
UKRAINE-ver/0205/2010	JI
Project title: Reconstruction of the oxygen compressor plant at the JSC "Zaporizhstal", Ukraine	
Work carried out by: Team Leader, Lead Verifier: Oleg Skoblyk Team Member, Lead Verifier: Igor Kachan Team Member, Verifier: Victoria Legka	
Work reviewed by: Ivan Sokolov – Internal Technical Reviewer	
Work approved by: Flavio Gomes – Operational Manager	
Date of this revision: 10/03/2011	Rev. No.: 1 / Number of pages: 51

Bureau Veritas Certification Holding SAS

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Abbreviations

AIE	Accredited Independent Entity
ASU	Air separation unit
CAR	Corrective Action Request
CL	Clarification Request
CO_2	Carbon Dioxide
DVM	Determination and Verification Manual
EIA	Environmental Impact Assessment
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
NCSF	CJSC “National Carbon Sequestration Foundation”
PDD	Project Design Document
OCP	Oxygen Compressor Plant
UNFCCC	United Nations Framework Convention for Climate Change

1 INTRODUCTION

CJSC "National Carbon Sequestration Foundation" has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project "Reconstruction of the oxygen compressor plant at the JSC "Zaporizhstal", Ukraine" (hereafter called "the project") at the city of Zaporizhzhya, Zaporizhzhya 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.

The verification covers the period from the 1st January 2010 to 31st December 2010.

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

Verification scope is defined as an independent and objective review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions. The verification is based on the 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 and corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

1.3 Verification Team

The verification team consists of the following personnel:

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

Igor Kachan
Bureau Veritas Certification Climate Change Lead Verifier

Victoria Legka
Bureau Veritas Certification 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 CJSC “National Carbon Sequestration Foundation” and additional background documents related to the project design, baseline, and monitoring plan, i.e. country Law,

Project Design Document (PDD), Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the Monitoring Report version 01 of 11/01/2011, version 02 dated 15/02/2011 and version 03 dated 02/03/2011 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 20/01/2011 Bureau Veritas Certification verification team conducted a visit to the project site (JSC "Zaporizhstal") and performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of JSC "Zaporizhstal" and CJSC "National Carbon Sequestration Foundation" were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
JSC "Zaporizhstal"	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: CJSC "National Carbon Sequestration Foundation"	Baseline methodology Monitoring plan Monitoring report Deviations from PDD.

2.3 Resolution of Clarification, Corrective and Forward Action Requests

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

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

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

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

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

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

3 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 8 Corrective Action Requests, 4 Clarification Requests, and 1 Forward Action Request.

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

3.1 Project approval by Parties involved (90-91)

The project was approved by the Host party, Ukraine (Letter of Approval No 1514/23/7 of 14/12/2009 issued by National Environmental Investment Agency of Ukraine). Written project approval by Switzerland (Letter of approval for a project under article 6 of the Kyoto Protocol (JI) Ref.J294-0485 dated 23/07/2010 issued by the Federal Office for the Environment (FOEN) of Switzerland), the other party involved, has been issued by the NFP of that Party when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest.

The abovementioned written approvals are unconditional.

3.2 Project implementation (92-93)

The project which is being implemented at the JSC “Zaporizhstal” is aimed at reconstruction of oxygen compressor plant (OCP) with a purpose of supply of the oxygen in required level for pig iron and steel production of the steel mill. Also the project serves to replace the worn-out air-separation units.

The oxygen compressor plant reconstruction at the JSC “Zaporizhstal” is implemented by the construction of the air-separation unit VRU-60, manufactured by Air Liquide (France). The main elements of the air-separation unit are turbo-compressor, gas-expansion machine intended for compressed air expansion and unit for liquefied air separation. The operation of air-separation unit VRU-60 makes it possible to provide production needs with the required amount of oxygen upon achievement of the following effects:

- reduction of electric power consumption;
- reduction in manufacturing water consumption;
- generation of oxygen without additional compression;
- decrease of oxygen losses during production;
- increase of oxygen concentration up to 99.5%.

The implementation of the project by the construction of VRU-60 makes it possible, versus the situation in the absence of this project (reconstruction of OCP by the construction of a new air-separation units KAAr-32), to significantly reduce the electric power consumption supplied for the OCP operation from the power grid of Ukraine. The reduction in the supply of electric power from the grid enables electric power generation at the electricity-generating plants of Ukraine to be decreased at the equivalent rate. This leads to a reduction in the emissions of GHG as a result of the reduction in the consumption of fuel and energy resources for electric power production.

The construction works under the project had lasted from February 2005 till October 2006. The installation work was performed in November 2005– May 2007; commissioning took place in June – December 2007. The air separation unit VRU-60 was put into operation in December 2007 (27/12/2007).

The starting date of the crediting period was changed from 19/02/2008 to 01/01/2008. This happened due to the fact that the original starting date of the crediting period stated in the PDD ver.03 (19/02/2008) was defined because of incorrect interpretation of commissioning documentation, and the date on which the air separation unit VRU-60 was put into operation is 27/12/2007. So the starting date of the crediting period was changed to the date after the VRU-60 commissioning which is 01/01/2008. This is sufficiently described in the revised monitoring plan ver.01 of 15/09/2010.

The status of project implementation during monitoring period at hand (January – December 2010) complies with the PDD ver.03 of 03/08/2010. The main stages of project implementation are presented in the table A.3 of the Monitoring Report.

The project was operational during the monitoring period for the year 2010.

During the 3rd monitoring period some deviations of actual emission reductions from emission reductions estimated in PDD were observed. They are explained by increase of actual emissions in project scenario on 12541 tCO_2eq because of planned repair works on air separation unit VRU-60 and operation of reserved units (for further information refer to cl.92-93 of the verification protocol in Appendix A). The effectiveness of oxygen production in reserved units is less than in VRU-60.

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

The monitoring occurred in accordance with the PDD regarding which the determination has been deemed final and revised monitoring plan ver.01 of 15/09/2010 which was positively determined in course of the 1st verification under the project. The determined PDD as well as determination of the revision to the monitoring plan within the framework of 1st verification report are listed on the UNFCCC JI website (http://ji.unfccc.int/JIITLProject/DB/DHPBSAFIRHMN55DS7FFABELK8NAVMP/details).

For calculating the emission reductions or enhancements of net removals, key factors, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating emission reductions or enhancements of net removals, such as appropriately calibrated measuring equipment, the study of standardized emission factors for the Ukrainian electricity grid, equipment passports are clearly identified, reliable and transparent.

Emission factor is selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

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

3.4 Revision of monitoring plan (99-100)

In course of the 1st verification (01/01/2008 – 31/12/2008) under the project, the project participants introduced the revision to the approved monitoring plan from the PDD. The description of the revision and its appropriate justification was provided in the separate document “Revision of the monitoring plan” ver.01 of 15/09/2010 and Monitoring Report ver.05 of 27/11/2009 for the period of 01/01/2008-31/12/2008. The changes introduced are also described in the Monitoring Report ver.03 for the considered monitoring period of 2010, and they are as follows:

- The starting date of the crediting period was changed from 19/02/2008 to 01/01/2008. This happened due to the fact that the original starting date of the crediting period stated in the PDD ver.03 (19/02/2008) was defined because of incorrect interpretation of commissioning documentation, and the date on which the air separation unit VRU-60 was put into operation is 27/12/2007. So the starting date of the crediting period was changed to the date after the VRU-60 commissioning which is 01/01/2008.
- The description of monitoring plan chosen was revised. The main goal of this additional explanation is to provide a clarity that chosen approach for the monitoring plan is based on Guidance on criteria for baseline setting and monitoring. The included additional explanation does not change the monitoring procedure but provides a better understanding of the chosen approach of the monitoring plan.
- The formula for determination the total oxygen production in the baseline scenario was revised. If the oxygen production in the baseline scenario is less than the measured oxygen production in the project scenario, than the oxygen production in the baseline will be equal to the oxygen production in the project scenario. This is a conservative assumption as that provides to the zero emission reductions. This additional provision has been included in order to ensure the conservativeness of the approach for calculation the emission reductions.

- The project participant provided revised estimates of emission reduction in order to reflect the impact of the revised crediting period on the amount of the estimated emission reduction as this was presented in the registered PDD.
- Uncertainty level and verification frequency of meters are specified;
- Operational and management structure of monitoring is corrected which improves accuracy of the monitoring plan;
- Monitoring of electricity consumption for production in OCP since 01/01/2009 are provided daily (not monthly as determined in PDD). This is possible because of commissioning of electronic system for technical registration of electricity consumption at the JSC "Zaporizhstal". Daily electricity consumption monitoring ensures continuous and transparent data;
- The barometric pressure data for oxygen generation/distribution monitoring are taken from the JSC "Zaporizhgas". The procedures of barometric pressure data collection, using and archiving are determined by Manual of planimetrist. The data of barometric pressure taken from the independent organization ensures the quality of data used and results of emissions calculation.

The above mentioned revisions to the approved monitoring plan were positively determined during the 1st periodic verification by AIE TÜV NORD CERT GmbH and presented in its 1st Periodic Verification Report "Reconstruction of the Oxygen Compressor plant at the JSC "Zaporizhstal" Ukraine" No.8000377391 – 09/477 dated 07-10-2010.

The introduced revision improves transparency, completeness, 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. This revision does not affect conservativeness of the approach to the emission reductions calculations.

3.5 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 PDD and revised monitoring plan, including the quality control and quality assurance procedures. The procedures of GHGs emission reductions monitoring are determined by the company standard STP 8.2-13-10 "Integrated quality system. Monitoring of GHGs emission

reductions", approved by Order №98 of JSC "Zaporizhstal" dated on 05/03/2010.
In monitoring of GHGs emission reductions under the project the following departments of JSC "Zaporizhstal" are involved:

- Laboratory of environment protection;
- Power bureau of Chief Power Engineer Department;
- Recording bureau of Chief Power Engineer department;
- Technical bureau of Plant of networks and substations;
- Technical bureau of Oxygen compressor plant.

The Scheme of monitoring data collection and processing is presented on the figure B.2-1 of the Monitoring Report. The description of functions, roles and responsible personnel per structural units involved in the GHG emissions monitoring is provided in sufficient details in the table B.2-1 of the Monitoring Report.

The quality assurance and quality control procedures are determined by the Standard of STP 8.2-13-10 "Monitoring of GHG emission reductions" and other respective internal documents.

The function of the monitoring equipment, including its calibration status, is in order. The calibration and verification procedures are regulated by internal standards of JSC "Zaporizhstal", such as STP 7.6-01-03 "Measurement assurance. General provisions", STP 7.6-07-03 "Organization and order of meters calibration and verification", as well as Ukrainian laws.

The evidence and records used for the monitoring are maintained in a traceable manner. All necessary information for monitoring of GHGs emission reductions are stored in paper and electronic formats and will be saved till the end of the crediting period and for two years after the last operation with ERUs from the project. The procedures of monitoring data archiving and responsible persons are determined by STP 8.2-13-10 "Monitoring of GHG emission reductions" and other internal documents of JSC "Zaporizhstal". The description of data processing and storage is described in the section B.2 of the Monitoring Report.

The data collection and management system for the project is in accordance with the PDD and revised monitoring plan. The management and operational system supporting GHG emission monitoring is a part of the company's Integrated Quality, Health Safety and Environmental Management System certified against the requirements of ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 international standards.

The Monitoring Report ver.3 provides sufficient information on the assigning roles, responsibilities and authorities for implementation and maintenance of monitoring procedures including control of data. The verification team confirms effectiveness of the existing management and

operational systems and found them eligible for reliable project monitoring.

3.6 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 3rd periodic verification of the "Reconstruction of the oxygen compressor plant at the JSC "Zaporizhstal", Ukraine" Project in Ukraine, which applies JI specific approach. The verification was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The verification consisted of the following three phases: i) desk review of the 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 the CJSC "National Carbon Sequestration Foundation" (NCSF) is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version 03 and revised monitoring plan ver.01. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 03 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

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

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

Baseline emissions	: 498003	t CO_2 equivalents.
Project emissions	: 399868	t CO_2 equivalents.
Emission Reductions	: 98135	t CO_2 equivalents.

5 REFERENCES

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

/1/ Project Design Document of the project "Reconstruction of the oxygen compressor plant at the JSC "Zaporizhstal", Ukraine", version 03 dated 03/08/2009
/2/ Monitoring Report for the period from 01/01/2010 till 31/12/2010 version 01 dated 11/01/2011
/3/ Monitoring Report for the period from 01/01/2010 till 31/12/2010 version 02 dated 15/02/2011
/4/ Monitoring Report for the period from 01/01/2010 till 31/12/2010 version 03 dated 02/03/2011
/5/ Revision of the Monitoring Plan, version01 of 15/09/2010
/6/ Calculation of Emission Reductions – excel file "2010-01-11-MONITORING-Zaporizhstal_OCP-2010-ver_01-rus.xls", version 1 of 11/01/2011
/7/ Calculation of Emission Reductions – excel file "2011-02-15-MONITORING-Zaporizhstal_OCP-2010-ver_02-rus.xls", version 2 of 15/02/2011
/8/ 1st Periodic Verification Report "Reconstruction of the Oxygen Compressor plant at the JSC "Zaporizhstal" Ukraine" No.8000377391 –09/477 dated 07-10-2010 by TÜV NORD CERT GmbH
/9/ 2nd Periodic Verification Report "Reconstruction of the Oxygen Compressor plant at the JSC "Zaporizhstal" Ukraine" No. 8000377391 – 10/151 dated 19-04-2010 by TÜV NORD CERT GmbH
/10/ Letter of Approval from National Environmental Investment Agency of Ukraine ref. No 1514/23/7, issued on 14/12/2009
/11/ Letter of approval for a project under article 6 of the Kyoto Protocol (JI) of the Federal Office for the Environment (FOEN) of Switzerland ref. No J294-0485, issued on 23/07/2010

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

/1/ Aggregate log book for air separation unit KtK-35-3, ASU put into preservation on 05/01/2008
/2/ Log book for primary data of air separation unit VRU-60, started in January 2009, daily data for March 2010
/3/ Output form for accounting of production and consumption of fuel

and energy resources by new air separation unit VRU-60, dated 11/12/2010

/4/ Passport #98 of electricity meter type EA05RL-B-4, serial number 01103223, dated 13/09/10

/5/ Protocol #297 of active (reactive) power meter calibration dated 15/09/2010, meter serial number 01 103 223, type EA05RL-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/6/ Passport #109 of electricity meter, dated 25/10/10, meter serial number 01103218, type EA05RL-B-4

/7/ Protocol #4359 of energy meter calibration dated 05/10/2010, meter serial number 01103218, type EA05RL-B-4

/8/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103218, type EA05RL-B-4

/9/ Passport #60 of electricity meter, dated 30/04/ 2009, meter serial number 01103338, type EA05RL-B-4

/10/ Protocol #236 of active (reactive) energy meter calibration dated 21/08/2010, meter serial number 01103338, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/11/ Passport #108 of electricity meter, dated 25/10/ 2010, meter serial number 01103326, type EA05RL-B-4

/12/ Protocol #4358 of energy meter calibration dated 05/11/2010, meter serial number 01103218, type EA05RL-B-4

/13/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103218, type EA05RL-B-4

/14/ Passport #59 of electricity meter, dated 30/04/ 2009, meter serial number 01103311, type EA05RL-B-4

/15/ Protocol #237 of active (reactive) energy meter calibration dated 21/08/2010, meter serial number 01103338, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/16/ Passport #107of electricity meter, dated 25/10/ 2010, meter serial number 01103286, type EA05RL-B-4

/17/ Protocol #4260 of energy meter calibration dated 26/10/2010, meter serial number 01103286, type EA05RL-B-4

/18/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103286, type EA05RL-B-4

/19/ Passport #95 of electricity meter, dated 13/09/ 2010, meter serial number 01103220, type EA05RL-B-4

/20/ Protocol #300 of active (reactive) energy meter calibration dated 15/09/2010, meter serial number 01103220, type EA05RL-B-4, issued by Zaporizhzhia Scientific Industrial Center of

Standardization, Metrology and Certification State Enterprise

/21/ Passport #106 of electricity meter, dated 25/10/ 2010, meter serial number 01103159, type EA05RL-B-4

/22/ Protocol #4360 of energy meter calibration dated 05/11/2010, meter serial number 01103159, type EA05RL-B-4

/23/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103159, type EA05RL-B-4

/24/ Passport #100 of electricity meter, dated 13/09/ 2010, meter serial number 01103321, type EA05RL-B-4

/25/ Protocol #295 of active (reactive) energy meter calibration dated 13/09/2010, meter serial number 01103321, type EA05RL-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/26/ Passport #76 of electricity meter, dated 29/03/ 2010, meter serial number 01103154, type EA05RL-B-4

/27/ Protocol #3097 of energy meter calibration dated 19/03/2010, meter serial number 01103154, type EA05RL-B-4

/28/ Passport #86 of electricity meter, dated 03/06/ 2010, meter serial number 01103210, type EA05RL-B-4

/29/ Protocol #4178 of energy meter calibration dated 07/10/2010, meter serial number 01103210, type EA05RL-B-4

/30/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103210, type EA05RL-B-4

/31/ Passport #54 of electricity meter, dated 06/04/ 2009, meter serial number 01050771, type EA05RALX-B-4

/32/ Protocol #374 of active (reactive) energy meter calibration dated 09/11/2010, meter serial number 01050771, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/33/ Passport #47 of electricity meter, dated 16/03/ 2009, meter serial number 01050773, type EA05RALX-B-4

/34/ Protocol #724 of energy meter calibration dated 27/03/2009, meter serial number 01050773, type EA05RL-B-4

/35/ Passport #29 of electricity meter, dated 24/02/ 2009, meter serial number 01059576, type EA05RALX-B-4

/36/ Protocol #302 of active (reactive) energy meter calibration dated 23/09/2010, meter serial number 01059576, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/37/ Passport #38 of electricity meter, dated 24/02/ 2009, meter serial number 01059599, type EA05RALX-B-4

/38/ Protocol #709 of energy meter calibration dated 24/03/2009, meter serial number 01059599, type EA05RALX-B-4

/39/ Passport #52 of electricity meter, dated 31/03/ 2009, meter serial number 01103405, type EA05RALX-B-4

/40/ Protocol #786 of energy meter calibration dated 17/04/2009, meter serial number 01103405, type EA05RALX-B-4

/41/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103405, type EA05RALX-B-4

/42/ Passport #32 of electricity meter, dated 24/02/ 2009, meter serial number 01059584, type EA05RALX-B-4

/43/ Protocol #364 of active (reactive) energy meter calibration dated 02/11/2010, meter serial number 01059584, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/44/ Passport #121 of electricity meter, dated 16/11/ 2010, meter serial number 01103408, type EA05RALX-B-4

/45/ Protocol #4450 of energy meter calibration dated 18/11/2010, meter serial number 01103408, type EA05RALX-B-4

/46/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103408, type EA05RALX-B-4

/47/ Passport #35 of electricity meter, dated 24/02/ 2009, meter serial number 01059590, type EA05RALX-B-4

/48/ Protocol #305 of active (reactive) energy meter calibration dated 23/09/2010, meter serial number 01059590, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/49/ Passport #22 of electricity meter, dated 24/02/ 2009, meter serial number 01059545, type EA05RALX-B-4

/50/ Protocol #708 of energy meter calibration dated 24/03/2009, meter serial number 01059545, type EA05RALX-B-4

/51/ Passport #51 of electricity meter, dated 31/03/ 2009, meter serial number 01103399, type EA05RALX-B-4

/52/ Protocol #785 of energy meter calibration dated 17/04/2009, meter serial number 01103399, type EA05RALX-B-4

/53/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103399, type EA05RALX-B-4

/54/ Passport #46 of electricity meter, dated 16/03/ 2009, meter serial number 01050778, type EA05RALX-B-4

/55/ Protocol #363 of active (reactive) energy meter calibration dated 02/11/2010, meter serial number 01050778, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/56/ Passport #158 of electricity meter, dated 18/01/ 2011, meter serial number 01103390, type EA05RALX-B-4

/57/ Protocol #95 of energy meter calibration dated 19/01/2011, meter

serial number 01103390, type EA05RL-B-4

/58/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103390, type EA05RALX-B-4

/59/ Passport #99 of electricity meter, dated 13/09/ 2010, meter serial number 01103288, type EA05RL-B-4

/60/ Protocol #296 of active (reactive) energy meter calibration dated 15/09/2010, meter serial number 01103288, type EA05RL-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/61/ Passport #104 of electricity meter, dated 25/10/ 2010, meter serial number 01112334, type EA05RL-B-4

/62/ Protocol #4414 of energy meter calibration dated 05/11/2010, meter serial number 01112334, type EA05RL-B-4

/63/ Certificate of meter calibration dated 04/03/2005, meter serial number 01112334, type EA05RL-B-4

/64/ Passport #96 of electricity meter, dated 13/09/ 2010, meter serial number 01103231, type EA05RL-B-4

/65/ Protocol #298 of active (reactive) energy meter calibration dated 15/09/2010, meter serial number 01103231, type EA05RL-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/66/ Passport #103 of electricity meter, dated 25/10/ 2010, meter serial number 01112347, type EA05RL-B-4

/67/ Protocol #4315 of energy meter calibration dated 26/10/2010, meter serial number 01112347, type EA05RL-B-4

/68/ Certificate of meter calibration dated 04/03/2005, meter serial number 01112347, type EA05RL-B-4

/69/ Passport #27 of electricity meter, dated 24/02/ 2009, meter serial number 01059569, type EA05RALX-B-4

/70/ Protocol #304 of active (reactive) energy meter calibration dated 23/09/2010, meter serial number 01059569, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/71/ Passport #127 of electricity meter, dated 16/11/ 2010, meter serial number 01103397, type EA05RALX-B-4

/72/ Protocol #4514 of energy meter calibration dated 23/11/2010, meter serial number 01103397, type EA05RALX-B-4

/73/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103397, type EA05RALX-B-4

/74/ Passport #55 of electricity meter, dated 06/04/ 2009, meter serial number 01059589, type EA05RALX-B-4

/75/ Protocol #09348 of active (reactive) energy meter calibration dated 24/11/2009, meter serial number 01059589, type

EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/76/ Passport #42 of electricity meter, dated 24/02/ 2009, meter serial number 01133560, type EA05RALX-B-4

/77/ Protocol #725 of energy meter calibration dated 27/03/2009, meter serial number 01133560, type EA05RALX-B-4

/78/ Passport #57 of electricity meter, dated 06/04/ 2009, meter serial number 01103398, type EA05RALX-B-4

/79/ Protocol #362 of active (reactive) energy meter calibration dated 02/11/2010, meter serial number 01103398, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/80/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103398, type EA05RALX-B-4

/81/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126401, type EA05RALX-B-4

/82/ Passport #44 of electricity meter, dated 16/03/ 2009, meter serial number 01089278, type EA05RALX-B-4

/83/ Protocol #306 of active (reactive) energy meter calibration dated 23/09/2010, meter serial number 01089278, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/84/ Passport #126 of electricity meter, dated 16/11/ 2010, meter serial number 01103415, type EA05RALX-B-4

/85/ Protocol #4451 of energy meter calibration dated 18/11/2010, meter serial number 01103415, type EA05RALX-B-4

/86/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103415, type EA05RALX-B-4

/87/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126402, type EA05RALX-B-4

/88/ Passport #45 of electricity meter, dated 16/03/ 2009, meter serial number 01089275, type EA05RALX-B-4

/89/ Protocol #307 of energy meter calibration dated 23/09/2010, meter serial number 01089275, type EA05RALX-B-4

/90/ Passport #123 of electricity meter, dated 16/11/ 2010, meter serial number 01103410, type EA05RALX-B-4

/91/ Protocol #4513 of energy meter calibration dated 23/11/2010, meter serial number 01103410, type EA05RALX-B-4

/92/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103410, type EA05RALX-B-4

/93/ Protocol #4452 of energy meter calibration dated 18/11/2010, meter serial number 01103384, type EA05RALX-B-4

/94/ Certificate of meter calibration dated 03/09/2004, meter serial

number 01103384, type EA05RALX-B-4

/95/ Passport #89 of electricity meter, dated 24/06/ 2010, meter serial number 01144050, type EA05RALX-B-4

/96/ Certificate of meter calibration dated 06/09/2006, meter serial number 011044050, type EA05RALX-B-4

/97/ Passport #122 of electricity meter, dated 16/11/ 2010, meter serial number 01103396, type EA05RALX-B-4

/98/ Protocol #4628 of energy meter calibration dated 15/12/2010, meter serial number 01103396, type EA05RL-B-4

/99/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103396, type EA05RALX-B-4

/100/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126395, type EA05RALX-B-4

/101/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126399, type EA05RALX-B-4

/102/ Passport #39 of electricity meter, dated 24/02/ 2009, meter serial number 01050775, type EA05RALX-B-4

/103/ Protocol #868 of active (reactive) energy meter calibration dated 01/08/2010, meter serial number 01050775, type EA05RALX-B-4, issued by Dnipro Electric Power System Company

/104/ Passport #17 of electricity meter, dated 24/02/ 2009, meter serial number 01059532, type EA05RALX-B-4

/105/ Protocol #578 of energy meter calibration dated 05/03/2010, meter serial number 01059532, type EA05RALX-B-4

/106/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126397, type EA05RALX-B-4

/107/ Passport #25 of electricity meter, dated 24/02/ 2009, meter serial number 01059555, type EA05RALX-B-4

/108/ Protocol #313 of active (reactive) energy meter calibration dated 23/09/2010, meter serial number 01059555, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/109/ Passport #124 of electricity meter, dated 16/11/ 2010, meter serial number 01103393, type EA05RALX-B-4

/110/ Protocol #4449 of energy meter calibration dated 18/11/2010, meter serial number 01103393, type EA05RL-B-4

/111/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103393, type EA05RALX-B-4

/112/ Information note concerning high energy consumption by air separation units of oxygen compressor plant (OCP) in 2010

/113/ Annex to compliance certificate # 02781, series ADD, on air separation unit 2000t/d issued by TsDS TYSK Certification Organ, dated 07/11/2005

/114/ Statement on acceptance of completed construction object dated 14.12.2007, issued by State Admission Committee. Reconstruction of oxygen compressor plant with VRU-60 construction on the territory of JSC Zaporizhstal

/115/ List of overhaul repairs of main means of mechanical, electrical and energy equipment, buildings and constructions of JSC Zaporizhstal in 2011

/116/ Oxygen production and consumption during the period from 01.01.2010 till 31.01.2010

/117/ Oxygen production and consumption during the period from 01.02.2010 till 28.02.2010

/118/ Oxygen production and consumption during the period from 01.03.2010 till 31.03.2010

/119/ Oxygen production and consumption during the period from 01.04.2010 till 30.04.2010

/120/ Oxygen production and consumption during the period from 01.05.2010 till 31.05.2010

/121/ Oxygen production and consumption during the period from 01.06.2010 till 30.06.2010

/122/ Oxygen production and consumption during the period from 01.07.2010 till 31.07.2010

/123/ Oxygen production and consumption during the period from 01.08.2010 till 31.08.2010

/124/ Oxygen production and consumption during the period from 01.09.2010 till 30.09.2010

/125/ Oxygen production and consumption during the period from 01.10.2010 till 31.10.2010

/126/ Oxygen production and consumption during the period from 01.11.2010 till 30.11.2010

/127/ Oxygen production and consumption during the period from 01.12.2010 till 31.12.2010

/128/ Technological log book of air-separation unit VRU-60, dated 22.12.2010

/129/ Flow-rate meter for oxygen distribution, second meter СПГ-762

/130/ Flow-rate meter for oxygen production in air-separation unit VRU-60

/131/ Flow-rate meter for oxygen production in air-separation unit BR-2

/132/ Flow-rate meter for oxygen production in air-separation unit KAr-30

/133/ Flow-rate meter for oxygen production in air-separation unit KtK-35-3

/134/ Flow-rate meter for oxygen distribution, Primary sensor Сафір-М

/135/ Flow-rate meter for oxygen distribution, Primary sensor ДМ-3583

/136/ Flow-rate meter for oxygen distribution, Primary sensor АРГ 31.2

/137/ Air-separation unit VRU-60

/138/ Technological log book of air-separation unit KAR-30, dated 10-11.08.2010

/139/ Technological log book of air-separation unit Br-2

/140/ Accounting log-book of oxygen production of air-separation unit VRU-60. Started in January 2009.

/141/ Contract № 40243-56/TE/04/ VP.1323.37515.04.71I, 20/2004/2172 for sale and purchase of equipment dated 10.08.2004

/142/ Certificate # 2103 of Henadii Zub on education graduation and passed required tests.

/143/ Aggregate log-book of OCP, unit department, VRU-60. Started 22.10.2007

/144/ Aggregate book of air-separation unit KAR-30

/145/ Aggregate book of air-separation unit Br-2 №1

/146/ Form # 1 of oxygen production and distribution for January 2010. Daily report forms.

/147/ Form # 2 of electrical energy consumption on production at oxygen compressor plant, December 2010.

/148/ Form # 3 of summarized data on oxygen compressor plant operation for January 2010.

/149/ Form # 3, summarized data on oxygen compressor plant operation for February 2010.

/150/ Form # 3, summarized data on oxygen compressor plant operation for April 2010.

/151/ Form # 3, summarized data on oxygen compressor plant operation for March 2010.

/152/ Form # 3, summarized data on oxygen compressor plant operation for June 2010.

/153/ Form # 3, summarized data on oxygen compressor plant operation for May 2010.

/154/ Form # 3, summarized data on oxygen compressor plant operation for September 2010.

/155/ Form # 3, summarized data on oxygen compressor plant operation for July 2010.

/156/ Form # 3, summarized data on oxygen compressor plant operation for September 2010.

/157/ Form # 3, summarized data on oxygen compressor plant operation for October 2010.

/158/ Form # 3, summarized data on oxygen compressor plant operation for November 2010.

/159/ Form # 3, summarized data on oxygen compressor plant operation for December 2010.

/160/ Calculation of consumer power consumption. Of 31.12.2010

/161/ Documentation of system operator CS3000

/162/ Manufacturer's report for 2005. Quality control, Book E10

/163/ Manufacturer's report for 2005. Quality control, Book E9

/164/ Documentation on system maintenance CS3000

/165/ Working educational syllabuses and programmes of technical-vocational education of workers at production

/166/ Instruction of planimetrist and power consumption accounting of chief energy engineer department of JSC Zaporizhstal

/167/ Certificate # 424 of Iryna Ponomarenko on education graduation and assessment of planimetrist profession of 4 category by qualification commission

/168/ Certificate # 426 of Maria Dymova on education graduation and assessment of planimetrist profession of 4 category by qualification commission

/169/ Certificate # 427 of Svitlana Kucher on education graduation and assessment of planimetrist profession of 4 category by qualification commission

/170/ Certificate # 425 of Olena Artamonova on education graduation and assessment of planimetrist profession of 4 category by qualification commission

/171/ Daily record of electrical energy consumption at substation M-3 of 10.10.2010

/172/ Energy consumption at oxygen consumption plant 18 dated 15.10.2010

/173/ Daily record of electrical energy consumption at substation M-1 for 15.10.2010

/174/ Report on energy consumption at JSC Zaporizhstal, data for October 2010

/175/ Energy consumption at oxygen consumption plant 18 for October

/176/ Energy consumption at oxygen consumption plant 18 dated 16.08.2010

/177/ Energy consumption at oxygen consumption plant 18 dated 15.08.2010

/178/ Energy consumption at oxygen consumption plant 18 dated 19.05.2010

/179/ Energy consumption at oxygen consumption plant 18 dated 28.05.2010

/180/ Guidance on installation and passport on multifunctional energy meter of EuroALFA type

/181/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103338 , type EA05RL-B-4

/182/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103220, type EA05RL-B-4

/183/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103221, type EA05RL-B-4

/184/ Certificate of meter calibration dated 18/09/2001, meter serial number 01050771, type EA05RALX-B-4

/185/ Protocol #10111 of active (reactive) energy meter calibration dated 23406/2010, meter serial number 01104333, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise

/186/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103223, type EA05RL-B-4

/187/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103231, type EA05RL-B-4

/188/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103339, type EA05RL-B-4

/189/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103288, type EA05RL-B-4

/190/ Certificate of meter calibration dated 10/12/2003, meter serial number 01089275, type EA05RALX -B-4

/191/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126401, type EA05RALX -B-4

/192/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126395, type EA05RALX -B-4

/193/ Certificate of meter calibration dated 30/04/2002, meter serial number 01059509, type EA05RALX -B-4

/194/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126402, type EA05RALX -B-4

/195/ Certificate of meter calibration dated 03/09/2004, meter serial number 01103398, type EA05RALX -B-4

/196/ Protocol #368 of active (reactive) energy meter calibration dated 02/11/2010, meter serial number 01103398, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise, Metrology and Certification State Enterprise

/197/ Certificate of meter calibration dated 06/09/2006, meter serial number 01144050, type EA05RALX -B-4

/198/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126399, type EA05RALX -B-4

/199/ Certificate of meter calibration dated 28/09/2005, meter serial number 01126397, type EA05RALX -B-4

/200/ Certificate of meter calibration dated 30/04/2002, meter serial number 01059589, type EA05RALX -B-4

/201/ Certificate of meter calibration dated 18/09/2001, meter serial number 01050766, type EA05RALX -B-4

/202/ Protocol #09346 of active (reactive) energy meter calibration dated 24/11/2009, meter serial number 01050766, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise, Metrology and Certification State Enterprise

/203/ Certificate of meter calibration dated 30/04/2002, meter serial number 01089278, type EA05RALX -B-4

/204/ Certificate of meter calibration dated 30/04/2002, meter serial number 01059531, type EA05RALX -B-4

/205/ Protocol #09345 of active (reactive) energy meter calibration dated 23/09/2010, meter serial number 01059531, type EA05RALX-B-4, issued by Zaporizhzhia Scientific Industrial Center of Standardization, Metrology and Certification State Enterprise, Metrology and Certification State Enterprise

/206/ Certificate of meter calibration dated 30/04/2002, meter serial number 01059555, type EA05RALX -B-4

/207/ Certificate of meter calibration dated 30/04/2002, meter serial number 01059569, type EA05RALX -B-4

/208/ Meter of electricity consumption, connection СД -36/48, serial number 01103393

/209/ Meter of electricity consumption, connection СД -35/46, serial number 01059531

/210/ Meter of electricity consumption, connection СД -22/42, serial number 01103415

/211/ Meter of electricity consumption, connection СД -31/47, serial number 01059589

/212/ Meter of electricity consumption, connection СД -32/45, serial number 01126397

/213/ Meter of electricity consumption, connection СД -34/51, serial number 01050766

/214/ Meter of electricity consumption, connection СД -33/49, serial number 01059594

/215/ Log-book of meters replacement

/216/ Meter of electricity consumption, connection 355-2/30, serial number 01112334

/217/ Meter of electricity consumption, connection СД-30/28, serial number 01126399

/218/ Meter of electricity consumption, connection СД-28/20, serial number 01103396

/219/ Meter of electricity consumption, connection СД-27/18, serial number 01103384

/220/ Meter of electricity consumption, connection СД-23/14, serial number 01126402

/221/ Meter of electricity consumption, connection СД-20-12, serial number 01103398

/222/ Meter of electricity consumption, connection СД-29/29, serial number 01126395

/223/ Meter of electricity consumption, connection СД-21/27, serial number 01126401

/224/ Meter of electricity consumption, connection СД-26/9, serial number 01103410

/225/ Meter of electricity consumption, connection 55-5/3, serial number 01112347

/226/ Meter of electricity consumption, connection 355-1/21, serial number 01112353

/227/ Protocol № 10-227 of 23/11/2010 of the integrated management system internal audit for the Oxygen Compressor Plant

/228/ Decree №349 of 01/09/2010 on strengthening the control over implementation of internal standard STP 8.2-13-10 “Monitoring of GHG emission reductions” and internal quality control procedures issued by Technical Director of JSC “Zaporizhstal” A.Putnoki

/229/ Minutes of the meeting on execution of the contract №VP.1323.37515.09.40I prescribing strengthening of the control over measuring equipment calibration, quality control, quality assurance and reporting procedures execution, dated 21/01/2011

Persons interviewed:

List persons interviewed during the verification or persons that contributed with other information that are not included in the documents listed above.

/1/ I. Kholina – Head of the environmental laboratory of JSC “Zaporizhstal”

/2/ V. Jarysh – Deputy head of chief power engineer department of JSC “Zaporizhstal”

/3/ A. Grabko – Head of automation and metrology department of JSC “Zaporizhstal”

/4/ R. Sheygus – Deputy chief power engineer for production technology of oxygen, compressed air, steam and energy saving of JSC “Zaporizhstal”

/5/ R. Lapitskiy – Head of OCP units department of JSC “Zaporizhstal”

/6/ O. Naumenko – Senior engineer of measurement equipment section of OCP of JSC “Zaporizhstal”

/7/ A. Leonov – Head of department’s sector for technological process management automated systems of JSC “Zaporizhstal”

/8/ V. Ilchenko – Deputy head of the Substations Network Shop of JSC “Zaporizhstal”

/9/ M. Kozachenko – Head of technological bureau of the Substations Network Shop of JSC “Zaporizhstal”

/10/ V. Demina – Electrician at the Substations Network Shop of JSC “Zaporizhstal”

/11/ R. Kazakov – Principal specialist of CJSC “National Carbon Sequestration Foundation”

APPENDIX A: PROJECT VERIFICATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

Table 1. Check list for verification, according to the JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	The project has been approved by both Host Party (Ukraine) and sponsor party (Switzerland). The written project approvals were issued by NFPs of Parties involved: - Ukraine: Letter of Approval of National Environmental Investment Agency of Ukraine ref. No 1514/23/7, issued on 14/12/2009, and - Switzerland: Letter of approval for a project under article 6 of the Kyoto Protocol (JI) of the Federal Office for the Environment (FOEN) of Switzerland ref. No J294-0485, issued on 23/07/2010. These letters were provided to AIE which does not question its authenticity. However, no information as to the project approval is available in the MR ver.01. **CAR 01.** Please include the information about project	CAR 01	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		approval in the MR with indicating the project registration number.		
91	Are all the written project approvals by Parties involved unconditional?	Yes, all the written project approvals by Parties involved are unconditional.	OK	OK
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The project has been implemented in accordance with the PDD which was positively determined by TÜV NORD CERT GmbH. The undertaken activities and equipment installed under the project comply with the registered PDD ver.03 of 03/08/2009. The construction works under the project had lasted from February 2005 till October 2006. The installation work was performed in November 2005– May 2007; commissioning took place in June – December 2007. The air separation unit VRU-60 was put into operation in December 2007 (27/12/2007). **CAR 02.** Because of the fact that during current monitoring period the achieved amount of emission reductions exceeded estimated emission reductions stated in the PDD, the explanation of the deviation should be included in the MR.	CAR 02	OK
93	What is the status of operation of the project during the monitoring period?	The status of project implementation during monitoring period at hand (01 January – 31 December 2010) complies with the PDD ver.03 of 03/08/2010. The main stages of project implementation are presented in the table A.3 of the Monitoring Report.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		The commissioning of the air separation unit VRU-60 took place in June – December 2007. The ASU VRU-60 started its operation on 27/12/2007. In course of the considered monitoring period (01/01/2010-31/12/2010) the planned repair works on air separation unit VRU-60 were undertaken during the period from 01/08/2010 to 12/08/2010. In this period the reserved units KAr-30 and BR-2 were in operation. The air separation unit VRU-60 was put into operation after repair works on 13/08/2010. The air separation units KAr-30 and BR-2 were put into preservation on 13/08/2010. The information about mentioned date and provided works is stated in the aggregates log-books according to the procedures described in the section C.3 of the MR. Taken into account the fact that planned repair works would be provided also in the absence of the project, the calculation of the emission reductions for the period 01.08.2010-12.08.2010 should be revised, therefore, CAR 04 has been raised (refer to paragraph 95 (a) of this protocol.		
Compliance with monitoring plan				
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The monitoring occurred in accordance with the PDD regarding which the determination has been deemed final and revised monitoring plan which was positively determined in course of the 1st verification under the project. The revision to the monitoring plan in the PDD are described and justified in the document “Revision	CAR 03	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		of the monitoring plan" ver.01 of 15/09/2010, Monitoring Report ver.05 of 27/11/2009 for the period of 01/01/2008-31/12/2008 as well as section A.8 of the MR for 2010. The monitoring system is in place and operational. **CAR 03.** In order to ensure better transparency of the project monitoring methodology, please, add to the MR the table D.1-1 describing the operating conditions j of oxygen compressor plant in baseline.		
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	Key factors, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account for calculating the emission reductions, as appropriate. Relevant national policies and sectoral circumstances were considered when setting the baseline. Increased demand for oxygen by production workshops of the steel mill, special exploitation regimes etc. were taken into account for calculating the emission reductions. **CAR 04.** It was revealed that during 12 days in August 2010 from 01/08/2010 till 12/08/2010 the air separation unit VRU-60 was out of operation due to the scheduled repair works. Based on this fact, the achieved emission reductions must be recalculated accordingly.	CAR 04	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of	The data sources used for calculating emission reductions are clearly identified, reliable and	CAR 05	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	net removals clearly identified, reliable and transparent?	transparent. They are listed and classified in the MR Sections B.1.1 – B.1.3. Data sources include calibrated measuring equipment, equipment technological passports, study on assessment of standardized emission factor for Ukrainian power grid etc. The scheme of monitoring points is presented of the figure B.1-1 in the MR. **CAR 05**. Because of the fact that in the "Revision of the monitoring plan" ver.01 it is stated, that the number of days when the OCP was operating in operating conditions j is determined based on actual date of Distributed oxygen, please add the parameter $N_{day,\ j}$ to the list of parameters which are monitored throughout the crediting period in the MR.		
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?	The emission factor used for calculating the emission reduction by the project is CO_2 emission factor during electric power generation supplied by the power system of Ukraine for the projects consuming electric power which was determined in the Study "Ukraine - Assessment of new calculation of CEF" prepared by Global Carbon B.V. in accordance with the CDM Methodological "Tool to calculate the emission factor for an electricity system".	OK	OK
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the	The performed calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner. The	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	most plausible scenarios in a transparent manner?	construction of the air-separation unit KAAr-32 was proven to be the most plausible baseline scenario.		
Applicable to JI SSC projects only				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis? If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?	N/a	N/a	N/a
Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	N/a	N/a	N/a
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	N/a	N/a	N/a
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	N/a	N/a	N/a

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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?	In course of the 1st verification (01/01/2008 – 31/12/2008) under the project, the project participants introduced the revision to the approved monitoring plan from the PDD. The description of the revision and its appropriate justification was provided in the separate document "Revision of the monitoring plan" ver.01 of 15/09/2010 and Monitoring Report ver.05 of 27/11/2009 for the period of 01/01/2008-31/12/2008. The changes introduced are also described in the Monitoring Report ver.03 for the considered monitoring period of 2010, and they are as follows: - The starting date of the crediting period was changed from 19/02/2008 to 01/01/2008 based on actual date of air separation unit operation commencement. - The description of monitoring plan chosen was revised in order to provide a clarity that chosen approach for the monitoring plan is based on Guidance on criteria for baseline setting and monitoring. - The formula for determination the total oxygen production in the baseline scenario was revised including the provision that if the oxygen production in the baseline is less than the measured oxygen production in the project, than the oxygen production in the baseline will be equal to the project oxygen production. This additional provision has been included in order to ensure the conservativeness of the	CAR 06	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		approach for calculation the emission reductions. - The project participant provided revised estimates of emission reduction in order to reflect the impact of the revised crediting period on the amount of the estimated emission reduction as this was presented in the registered PDD. - Uncertainty level and verification frequency of meters are specified; - Operational and management structure of monitoring is corrected which improves accuracy of the monitoring plan; - Monitoring of electricity consumption for production in OCP since 01/01/2009 are provided daily (vs. monthly in PDD) due to commissioning of electronic system for technical registration of electricity consumption, which ensures continuous and transparent data; - The barometric pressure data for oxygen generation/distribution monitoring are taken from the independent organization JSC "Zaporizhgas", which organization ensures the quality of data used and results of emissions calculation. The procedures of barometric pressure data collection, using and archiving are determined by Manual of planimetrist. The above mentioned revisions were positively determined during the 1st periodic verification by AIE TÜV NORD CERT GmbH and presented in its 1st Periodic Verification Report "Reconstruction of the Oxygen Compressor plant at the JSC "Zaporizhstal"		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Ukraine" No.8000377391 – 09/477 dated 07-10-2010. **CAR 06.** The reference to the revised monitoring plan must be included in the MR (section A.8).		
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?	The introduced revision improves transparency, completeness, accuracy and applicability of information collected (see paragraph 99 (a) for further details) compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans. This revision does not affect conservativeness of the approach to the emission reductions calculations. The above mentioned revisions were positively determined during the 1st periodic verification by AIE TÜV NORD CERT GmbH.	OK	OK
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	The implementation of data collection procedures is in accordance with the PDD and revised monitoring plan, which was positively determined during 1st period verification of the project. Most of those are integral part of the operational routine of the JSC "Zaporizhstal" including quality control and quality assurance procedures. A special corporate standard on GHG emission reduction monitoring STP 8.2-13-10 "Monitoring of GHG emission reductions" was elaborated incorporating existing data collection procedures for GHG emission monitoring and	CAR 07	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		introducing some new requirements on reporting documentation (special reporting forms) and quality control. In accordance with the established monitoring plan the following parameters are monitored throughout the crediting period: - electricity consumption by the OCP; - oxygen production in ASU VRU-60; - oxygen production in the reserved units (KAr-30, KtK-35-3, BR-2); - the amount of distributed oxygen. **CAR 07.** Please, describe in the MR in more detailed the double checking procedures for ERU, second person review of the project monitoring results and internal audit (if applicable) of the project monitoring process applied for the current project.		
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	The monitoring equipment used for project monitoring is in order; its calibration status complies with the requirements. The information about meters used is presented in the tables B.3-1 (electricity consumption meters), B.3-2 (oxygen flow meters), B.3-3 (meters uncertainty level), and B.3-4 (frequency of metes calibration) of the MR. However, some requests for clarifications and corrections regarding the information on used measuring equipment were raised.	CAR 08 CL 01 CL 02 CL 03 FAR 01	OK OK OK OK FAR 01 to be checked during the next verification

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 08. During site visit some inconsistencies were observed as to the actually installed power meters and those indicated in the MR: a) electricity meter, connection M1:СД-6/16: №01050778 observed on site vs. №0104333 indicated in the MR; b) electricity meter, connection M3:СД-28/20: №01103405 in the MR vs. №01144050 installed in 2006; c) electricity meter, connection M3:СД-31/47: №01059589 in the MR vs. 01050775 which, according to the records in the replacement registration log, in 2010 replaced the previously installed there meter №01059532 (not mentioned in the MR). Please, make respective corrections in the MR and provide transparent information concerning indicated cases of inconsistencies. **CL 01.** Please, provide passports and calibration certificates for those meters which were replaced in course of the current monitoring period (e.g., power meter № 01103390 with connection M1:СД-6/16; power meter № 01103398 with connection M3:СД-20/12 etc.) as well as the respective statements of replacement or other records confirming the replacements performed.		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CL 02. Please, provide the information on what testing, calibration or other quality assurance routines are undertaken for second meter VRU ACS controller used in oxygen compressor plant for oxygen production measuring in VRU-60. **CL 03.** Please, clarify the information about the date when air separation unit KtK-35-3 was put into preservation and, if appropriate, specify the respective information in the MR (e.g., in the table B.3.2 presenting the data on measuring equipment used). **FAR 01**. In order to ensure better transparency of the information on measuring equipment used as well as its calibration status, please include in the monitoring report for the next monitoring period the information on when the meters used for project monitoring during respective monitoring period were installed or replaced.		
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	The evidences and records as to the project monitoring are maintained in a traceable manner. All necessary information for monitoring of GHGs emission reductions are stored in paper and electronic formats and will be saved till the end of the crediting period and for two years after the last operation with ERUs from the project. The procedures for monitoring data keeping, archiving and responsible personnel are defined by STP 8.2-13-10 “Monitoring of GHG emission	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		reductions" and other internal documents of JSC "Zaporizhstal".		
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	The operational and management structure that the project participants apply in implementing the monitoring plan is in accordance with the determined PDD and revised monitoring plan. Responsibilities and roles of the personnel are explicitly indicated in the MR. The verification team confirms effectiveness of the existing management and operational systems and found them eligible for reliable project monitoring. **CL 04.** Please clarify how the data on oxygen production are measured, collected and transferred to the Chief Power Engineer department including records (reports, primary data logs etc.) maintained.	CL 04	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?	N/a	N/a	N/a
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/a	N/a	N/a
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	N/a	N/a	N/a
104	Does the monitoring period not overlap with previous monitoring periods?	N/a	N/a	N/a
105	If the AIE learns of an erroneously	N/a	N/a	N/a

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	included JPA, has the AIE informed the JISC of its findings in writing?			
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE: (a) Describe its sample selection, taking into account that: (i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as: − The types of JPAs; − The complexity of the applicable technologies and/or measures used; − The geographical location of each JPA; − The amounts of expected emission reductions of the JPAs being verified; − The number of JPAs for which emission reductions are being verified; − The length of monitoring periods of the JPAs being verified; and − The samples selected for prior	N/a	N/a	N/a

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

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Determination team conclusion
CAR 01. Please include the information about project approval in the MR with indicating the project registration number.	90	The information about project approval has been added to the MR. The project "Reconstruction of the oxygen compressor plant at the JSC "Zaporizhstal", Ukraine" has received the Letters of Approval from the Host party (Ukraine) and from the Third party (Switzerland).1 The ITL project ID is UA1000189.	The MR ver.03 together with Letters of Approval from Ukraine and Switzerland were reviewed by the verification team. The information was found appropriate. The issue is closed.
CAR 02. Because of the fact that during current monitoring period the achieved amount of emission reductions exceeded estimated emission reductions stated in the PDD, the explanation of the deviation should be included in the MR.	92	*Response 1:* The explanation of actual emission reductions deviation from estimated value is provided in the section D.5. of the monitoring report. *Response 2:* The consistent with PDD values of estimated emissions and emission reductions are provided in the section D.5. of the monitoring report.	*Conclusion on response 1*: Please state values of estimated emission reductions as they are in PDD: 387,327 tCO2eq. for baseline, 495,897 tCO2eq. for project, and 108,571 tCO2eq. emission reductions. *Final conclusion:* The issue is closed based on appropriate corrections made.

CAR 03. In order to ensure better transparency of the project monitoring methodology, please, add to the MR the table D.1-1 describing the operating conditions j of oxygen compressor plant in baseline.	94	*Response 1:* The table D.1-1 of the PDD "The operation of the oxygen compressor plant in the baseline scenario" is provided in the section B.1.4 of the monitoring report. *Response 2:* The interpretation of ASU is provided in the section A.2. and in the reference to the table B.1-1.	*Conclusion on response 1*: Please provide an interpretation for ASU abbreviation. *Final conclusion*: The issue is closed based on appropriate supplements made to the MR.
CAR 04. It was revealed that during 12 days in August 2010 from 01/08/2010 till 12/08/2010 the air separation unit VRU-60 was out of operation due to the scheduled repair works. Based on this fact, the achieved emission reductions must be recalculated accordingly.	95 (a)	The recalculation of the emission reductions for period of air separation unit VRU-60 reparation in period 01/08/2010 till 12/08/2010 is provided. The actual data of emission reductions are provided in the monitoring report. The relevant information about air separation unit VRU-60 reparation during the monitoring period is provided in the section B.5 and C.3 of the monitoring report.	The revised Excel spreadsheet with updated emission reductions calculation was reviewed and found appropriate. The information regarding undertaken repair works during considered monitoring period was added to the MR. The issue is close based on due corrections made.

CAR 05. Because of the fact that in the "Revision of the monitoring plan" ver.01 it is stated, that the number of days when the OCP was operating in operating conditions j is determined based on actual date of Distributed oxygen, please add the parameter $N_{day,\ j}$ to the list of parameters which are monitored throughout the crediting period in the MR.	95 (b)	The parameter $N_{day,\ j}$ has been added to the list of parameters which are monitored throughout the crediting period in the Monitoring Report ver.03.	The issue is closed based on due amendments made to the Monitoring Report.
CAR 06. The reference to the revised monitoring plan must be included in the MR (section A.8).	99 (a)	The reference to the revised monitoring plan is provided in the section A.8 of the monitoring report.	The issue is closed based on reference to the revised monitoring plan stated in the section A.8 of the MR ver.02.

CAR 07. Please, describe in the MR in more detailed the double checking procedures for ERU, second person review of the project monitoring results and internal audit (if applicable) of the project monitoring process applied for the current project.	101 (a)	*Response 1:* The procedures of the double checking and second person review are clearly described in the Table B.2-1. "Departments of the company participating in GHGs emission monitoring, responsible specialists and their functions". The results of the double checking and second person review during the current monitoring period are stated in the monitoring forms prepared monthly according to the STP 8.2-13-10 "Integrated quality system. Monitoring of GHGs emission reductions". The procedures of internal audits are described in the section C.1. of the monitoring report. The results of the internal audits are provided in the protocols of internal audits. *Response 2:* The protocol of internal audit conducted in the current monitoring period is attached.	*Conclusion on response 1:* Please provide protocol of internal audits conducted in 2010. *Final conclusion*: The information provided in the MR ver.03 was found appropriate. The protocol of internal audit № 10-227 dated 23/11/2010 was checked. The issue is closed based on due corrections made and appropriate information provided.

CAR 08. During site visit some inconsistencies were observed as to the actually installed power meters and those indicated in the MR: d) electricity meter, connection M1:СД-6/16: №01050778 observed on site vs. №0104333 indicated in the MR; e) electricity meter, connection M3:СД-28/20: №01103405 in the MR vs. №01144050 installed in 2006; f) electricity meter, connection M3:СД-31/47: №01059589 in the MR vs. 01050775 which, according to the records in the replacement registration log, in 2010 replaced the previously installed there meter №01059532 (not mentioned in the MR). Please, make respective corrections in the MR and provide transparent information concerning indicated cases of inconsistencies.	101 (b)	*Response 1*: The data about electricity meters by connection M1: СД-6/16, M3: СД-28/20, M3: СД-31/47 stated in the table B.3-1 of the monitoring report is corrected. The inconsistency of the information provided in the monitoring report version 01 can be explained by the following: the compilation of the data of the electricity meters verification provided in the table B.3-1 was made based on meters certificates without double checking with meters passport that include information about meters connection. The double checking of meters information will be undertaken according to the meters certificates and passports in the following monitoring period. *Response 2*: The attached calibration certificates demonstrate that the with delay replaced electricity meters had the accuracy in the admissible range at the moment of calibration. Therefore the meters operation in previous period (before the calibration) ensures the accuracy of the recorded data. The low uncertainty level of electricity meters reading ensures the correctness of the monitored parameters. The necessary organizational decision was made at JSC “Zaporizhstal” for quality assurance of measured monitoring parameters (Protocol dated on 21.01.2011 approved by Technical director attached).	*Conclusion on response 1:* During review of electricity meters documentation (passports, calibration certificates etc.) it was revealed that calibration of some meters had expired before the meters were replaced. Please provide the information on how measurement data accuracy was ensured for such meters after its calibration expiry. *Final conclusion*: The respective calibration protocols were checked. The meters were concluded to be valid for accurate measurement with the level of accuracy of 1.0. The Minutes of the meeting dated 21/01/2011 regarding strengthening of control over calibration, QA & QC and reporting procedures execution was checked. The information provided was found adequate. The issue is closed.

CL 01. Please, provide passports and calibration certificates for those meters which were replaced in course of the current monitoring period (e.g., power meter № 01103390 with connection M1:СД-6/16; power meter № 01103398 with connection M3:СД-20/12 etc.) as well as the respective statements of replacement or other records confirming the replacements performed.	101 (b)	The passports and calibration certificates for all replaced electricity meters are attached to the monitoring report. The replacement confirmed information is stated in the provided electricity meters' passports. The necessary corrections are provided in the table B.3-1 of the monitoring report.	The provided documentations were reviewed. The issue is closed based on appropriate information provided and due corrections made.
CL 02. Please, provide the information on what testing, calibration or other quality assurance routines are undertaken for second meter VRU ACS controller used in oxygen compressor plant for oxygen production measuring in VRU-60.	101 (b)	The quality data of second meter Controller VRU ACS is assured by using of duplication second meter for oxygen production recording in VRU-60: СПГ-762 #1355 (the verification data is provided in the table B.3-2 of the monitoring report and the passport of meter is attached). The primary sensors used for oxygen production measuring - Rosemount 3051-CD (#8066805, 8066806) are the same for the Controller VRU ACS and СПГ-762 #1355. The information about primary sensors verification is provided in the table B.3-2 of the monitoring report, the passport of meter is attached.	The provided information was found sufficient. The issue is closed.

CL 03. Please, clarify the information about the date when air separation unit KtK-35-3 was put into preservation and, if appropriate, specify the respective information in the MR (e.g., in the table B.3.2 presenting the data on measuring equipment used).	101 (b)	The air separation unit KtK-35-3 was put into preservation 05.01.2008 (confirmed by attached Aggregate journal of KtK-35-3). The relevant information is provided in the table B.3.2 of the monitoring report.	The aggregate log-book of air separation unit KtK-35-3 was reviewed, the information about air separation unit KtK-35-3 preservation was found adequate. The clarification about KtK-35-3 preservation was provided in the MR ver.02. The issue is closed.
CL 04. Please clarify how the data on oxygen production are measured, collected and transferred to the Chief Power Engineer department including records (reports, primary data logs etc.) maintained.	101 (d)	The data of oxygen production are measured using the meters stated in the table B.3-2 “Flow-rate meters for oxygen production in air-separation units and oxygen distribution of the monitoring report” of the monitoring report. The procedures of data collection and transfer are clarified in the table B.2-1 “Departments of the company participating in GHGs emission monitoring, responsible specialists and their functions” of the monitoring report. The primary data logs and reports are attached.	The primary log-book with daily data on oxygen production “The log-book for accounting of oxygen production on VRU-60 in OCP”, started in January 2009, and Output form for accounting of production and consumption of fuel and energy resources by new air separation unit VRU-60 were reviewed. The MR was supplemented with appropriate information. The issue is closed based on information provided.

FAR 01. In order to ensure better transparency of the information on measuring equipment used as well as its calibration status, please include in the monitoring report for the next monitoring period the information on when the meters used for project monitoring during respective monitoring period were installed or replaced.	101 (b)	The monitoring plan will be revised in respect of the requested modifications, and appropriate information will be provided during the next periodic verification.	The implementation of the FAR to be checked in course of the next periodic verification.