TÜV Rheinland®

TÜV Rheinland (China) Ltd. (TÜV Rheinland)

DETERMINATION REPORT

Determination of the Joint Implementation Large Scale Project

IMPLEMENTATION OF ENERGY SAVING MEASURES AT "CENTRAL IRON ORE ENRICHMENT WORKS" PUBLIC JOINT STOCK COMPANY"

Report No. 01 998 9105072320 - DR
Revision No. 02

Customer: PJSC "Central Iron Ore Enrichment Works"

DETERMINATION REPORT

Date of first issue: 26/10/2012	Project No.: 01 998 9105072320
Executor: TÜV Rheinland (China) Ltd. (TÜV Rheinland)	Organizational unit: TÜV Rheinland Ukraine Ltd., Technical Competence Center
Customer: PJSC "Central Iron Ore Enrichment Works"	Client ref.: Tymoshenko Pavlo Genadiyovych

Summary:

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed a determination of the JI large scale project "Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company" in Ukraine. The determination 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 determination serves as project design objective and complete assessment, and is a requirement for all JI projects. It consists of the following three phases: i) a desk review of the project design documents including analysis of the baseline justification and monitoring plan; ii) follow-up interviews with project stakeholders including on site visit; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract signing to Determination Report & Opinion, was conducted using TÜV Rheinland (China) Ltd. (TÜV Rheinland) internal procedures.

To address TÜV Rheinland (China) Ltd. (TÜV Rheinland) corrective action and clarification requests, PJSC "Central Iron Ore Enrichment Works" revised the PDD and resubmitted it on 23/11/2012 as version 2.0.

The determination findings presented in this report relate to the large scale project as described in the PDD version 2.0 dated 23/11/2012.

In summary, it is TÜV Rheinland (China) Ltd. (TÜV Rheinland) opinion that the project complies with the criteria for baseline setting and monitoring methodology according to developed JI specific approach, and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: 01 998 9105072320 – DR	Subject Group: Large scale JI project
Project title: Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company	
Work carried out by: Dr. Valery Yakubovsky – Team Leader, Technical Competence Center Director; Dr. Yuriy Kononov – Technical Expert; Ganna Zadnipriana – Auditor; Dmytro Rakovich – Trainee.	
Work verified by: Dr. Lixin Li – Technical Reviewer TÜV Rheinland (China) Ltd. (TÜV Rheinland)	
Determination Report approved by: Dr. Manfred Brinkmann – Accredited Independent Entity Operational Manager	

Date of this revision: 27/11/2012	Revision No.: 02	Number of pages: **90**

☒ No distribution without permission from the Client or responsible organizational unit

☐ Limited distribution

☐ Unrestricted distribution

Abbreviations

AIE	Accredited Independent Entity
CAR	Corrective Action Request
CL	Clarification Request
CO_2	Carbon Dioxide
ERU	Emission Reduction Unit
GHG	Greenhouse Gas
I	Interview
IETA	International Emissions Trading Association
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
NGO	Nongovernmental organization
PDD	Project Design Document
UNFCCC	United Nations Framework Convention on Climate Change

Table of Contents Page

1 DETERMINATION OPINION

The determination team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed a determination of the large scale JI project "Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company" under the national procedure (Track 1). The determination 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 determination consisted of the following three phases:

i) a desk review of the project design document (PDD) including analysis of the baseline justification and monitoring plan;

ii) follow-up interviews with project stakeholders including on site visit;

iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

The project participants of the large scale JI project "Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company" selected the JI specific approach for identifying the baseline, defined in paragraph 22 (a) of the "Determination and Verification Manual" (DVM).

A baseline for the project was set in accordance with criteria stated in Appendix B to decision 9/CMP.1 (JI guidelines). The JI specific approach is provided in paragraph 9 (a) of the "Guidance on criteria for baseline setting and monitoring", version 03.

The PDD version 2.0 dated 23/11/2012 provides a description of the chosen baseline in a clear and transparent manner according to "Guidelines for users of the joint implementation project design document form", version 04, and paragraphs 23-29 "Guidance on Criteria for Baseline Setting and Monitoring", version 03.

(a) An approach for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (JI-specific approach).

Project participants used JI specific approach to demonstrate the project additionality. PDD provides justification for this approach in a clear and transparent manner and also in accordance with paragraphs 23 and 29 of Guidelines on criteria for baseline setting and monitoring (version 03).

Project participants used the following approach defined in paragraph 28 (a) of the DVM: Application of the "Tool for the demonstration and assessment of additionality" version 06.0.0 for demonstration of the additionality. In line with this tool, the PDD version 2.0 dated 23/11/2012 provides investment analysis, barrier analysis and common practice analysis to determine that the project activity itself is not the baseline scenario.

The JI project is likely to result in reductions of GHG emissions in accordance with the project description. An analysis of the financial and technological barriers, prevailing practice demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (version 1.0, dated 20/09/2012) and the subsequent interviews have provided TÜV Rheinland (China) Ltd. (TÜV Rheinland) with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for JI projects and the relevant host country criteria.

The final version of the PDD (version 2.0 dated 23/11/2012) was revised based on raised corrective action requests and clarification requests by determination team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) that were satisfactory resolved.

The determination is based on the information made available to the determination team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) and the engagement conditions detailed in this report.

2 INTRODUCTION

PJSC "Central Iron Ore Enrichment Works" has commissioned TÜV Rheinland (China) Ltd. (TÜV Rheinland) to determinate its large scale JI project "Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company" (hereafter called "Project") that is located in Kryvyi Rih, Dnipropetrovsk region, Ukraine.

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

2.1 Objective

The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meet the stated requirements and identified criteria. Determination is a requirement for all JI projects and is considered necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, Appendix B of the JI guidelines and the subsequent decisions by the JISC, as well as the host country criteria.

2.2 Scope

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

The determination is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

2.3 JI Project Description

The brief information regarding large scale project is provided in Table 1.

Table 1 – JI large scale project brief information

Project Parties involved:	1. Ukraine (Host Party); 2. The Netherlands.

Title of the project:	Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company"
Type of JI activity:	Large scale
Baseline and monitoring methodology:	JI specific approach
Project entity participant:	PJSC "Central Iron Ore Enrichment Works"
Other project participants:	Metinvest International S.A.
Location of the project:	Kryvyi Rih, Dnipropetrovsk region, Ukraine
Starting date of the project:	01/01/2003
Length of the crediting period:	17 years or 204 months
Length of the part of crediting period befor the first commitment period of the Kyoto Protocol:	01/01/2004-31/12/2007 (48 month)
Length of the part of crediting period within the first commitment period of the Kyoto Protocol:	01/01/2008-31/12/2012 (60 months)
Length of the part of crediting period after the first commitment period of the Kyoto Protocol:	01/01/2013-31/12/2020 (96 months)

Reduction in greenhouse gas emissions may be achieved as a result of improvement in power efficiency of the plant by the implementation of several subprojects. The fulfillment of scheduled activities of decrease in energy efficiency of the production at PJSC "Central Iron Ore Enrichment Works" will result in reduction in volumes of natural gas consumption for pellets, decrease in electric energy consumption in production of iron ore concentrate and pellets which will decrease greenhouse gas emissions into the air.

The result of the implemented complex of energy saving measures was significant reduction of energy resources consumption for manufacturing of production at PJSC "Central Iron Ore Enrichment Works" and relevant greenhouse emissions reduction. The effects from the biggest realized measures are presented below:

- **Modernization of iron ore concentrate production** – aimed at establishing of high-efficient equipment and optimization of technological processes, which will allow reducing the

consumption of electric energy during the production of iron ore concentrate. Reduction in electric energy consumption will allow reducing energy consumption from UESU, which will result in decrease in fuel consumption for energy production and, correspondingly, reduction in greenhouse gas emissions at the power plants of Ukraine.
Modernization of OK-324 indurating machine (step-wise from 2005) allowed achieving specific natural gas consumption reduction during production of iron ore pellets in specific indicators from 15.0 m^3/t to 11.4 m^3/t;

- **Modernization of pellets production** – the aim of modernization is the establishment of high-efficient equipment and optimization of technological processes, which will allow reducing consumption in electric power and natural gas during the pellets production. Reduction in electricity consumption will allow reducing its consumption from UESU leading to reduction in fuel consumption for the electric power production and, correspondingly, to the decrease in greenhouse emissions by power plants of Ukraine. Reduction in volumes of natural gas consumption during the pellets production will lead to decrease in greenhouse gas emissions.
  Implementation of condenser compensating installations allowed realizing and automatizing the process of compensation of reactive energy overflow and reduce enterprise's expenses by 12-17%;
- Usage of effective system of electric drives management on the basis of scheme "thyristor converter – engine" allowed reducing exploitation as well as energy costs.

The proposed project will allow reducing the specific consumption of electric energy per ton of produced iron ore concentrate and pellets. Energy consumption reduction will allow decreasing the amount of energy consumption out of UESU, this will allow to reduce the fossil fuel combustion needed for energy production at Ukrainian energy enterprises. Also proposed project will allow reducing the specific consumption of natural gas consumption per ton of produced pellets. The decrease in quantity of natural gas combustion needed for pellets production will let to reduce the GHG emissions.

3 METHODOLOGY

The determination consists of the following three phases:

I) a desk review of the project design documents including analysis of the baseline justification and monitoring plan;

II) follow-up interviews with project stakeholders including on site visit;

III) the resolution of outstanding issues and the issuance of the final Determination report and opinion.

The following sections outline each step in more detail.

3.1 Desk Review of the Project Design Documentation

The Project Design Document (PDD) submitted by PJSC "Central Iron Ore Enrichment Works", and additional background documents related to the project design to be checked by an Accredited Independent Entity were reviewed. The list of submitted documentation is provided below. To address TÜV Rheinland (China) Ltd. (TÜV Rheinland) corrective action and clarification requests, PJSC "Central Iron Ore Enrichment Works" revised the PDD and resubmitted it on 23/11/2012 as version 2.0.

The determination findings presented in this report relate to the project as described in the PDD version 2.0 dated 23/11/2012.

The following table outlines the documentation reviewed during the determination. The documents provided by PJSC "Central Iron Ore Enrichment Works", are indicated in Table 2 below. The documents of Category 1 relate directly to the components of the project. The documents of Category 2 relate to the design and/or methodologies employed in the design or other reference documents.

Table 2 – Documents reviewed during the determination

No.	Title of the document
Documents of Category 1	
/1/	PDD. Project Development Document "Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company", version 1.0 dated September 20, 2012
/2/	PDD. Project Development Document "Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company", version 1.1 dated September 27, 2012
/3/	PDD. Project Development Document "Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company", version 2.0 dated November 23, 2012
/4/	Calculations of emission reduction in Excel version 1.0 file dated 12/09/2012
/5/	Calculations of emission reduction in Excel file version 2.0 (Final version) dated 23/11/2012
/6/	"Tool for the demonstration and assessment of additionality",

No.	Title of the document
	version 06.0.0.
/7/	Guidelines for users, Form of documents of Joint Implementation Project Development Document, ver. 04, JISC
/8/	"Guidance on Criteria for Baseline Setting and Monitoring", version 03
/9/	JI guidelines. Appendix B to decision 9/CMP.1.
/10/	Tool "Combined tool to identify the baseline scenario and demonstrate additionality" (version 03.0.1)
/11/	"Joint implementation determination and verification manual", version 01.
/12/	Letter of Endorsement #3581/23/7 dated 22/11/2012
Documents of Category 2	
/13/	Permit No. 1211036600-399a dated 06/04/2011 for amendments to the Permit No. 1211036600-399 for air pollution emissions from stationary sources issued by State Environmental Protection Administration in the Dnipropetrovsk Region. Valid from 06/04/2011 to 24/09/2014
/14/	Permit No. 1211036600-399 dated 06/04/2011 for air pollution emissions from stationary sources issued by State Environmental Protection Administration in the Dnipropetrovsk Region. Valid from 06/04/2011 to 24/09/2014
/15/	Permit No. 1211036600-400 dated 06/04/2011 for air pollution emissions from stationary sources issued by State Environmental Protection Administration in the Dnipropetrovsk Region. Valid from 06/04/2011 to 24/09/2014
/16/	Permit No. 1211036600-400a dated 06/04/2011 for amendments to the Permit No. 1211036600-400 for air pollution emissions from stationary sources issued by State Environmental Protection Administration in the Dnipropetrovsk Region. Valid from 06/04/2011 to 24/09/2014
/17/	Permit No. 1211036600-402 dated 06/04/2011 for air pollution emissions from stationary sources issued by State Environmental Protection Administration in the Dnipropetrovsk Region. Valid from 06/04/2011 to 24/09/2014
/18/	Permit No. 1211036600-401 dated 06/04/2011 for air pollution emissions from stationary sources issued by State Environmental Protection Administration in the Dnipropetrovsk Region. Valid from 06/04/2011 to 24/09/2014
/19/	Permit No. 3524955100-37 dated 07/04/2011 p. for air pollution emissions from stationary sources issued by State Environmental Protection Administration in the Dnipropetrovsk Region. Valid from 07/04/2011 to 18/09/2014
/20/	Permit No. 3524955100-36 dated 07/04/2011 p. for air pollution emissions from stationary sources issued by State Environmental Protection Administration in the Dnipropetrovsk Region. Valid from 07/04/2011 to 18/09/2014
/21/	Permit for special water use No. 11277 dated September 23,

No.	Title of the document
	2011
/22/	Permit for special water use No. 02636
/23/	Permit No. 206 dated July 21, 2011 for waste disposal in 2012. Valid from 01/01/2012 to 01/01/2013
/24/	Permit No. 123 dated June 19, 2008 for waste disposal in 2009. Valid from 01/01/2009 to 01.01.2010
/25/	Certificate dated September 1, 2012 on active electric energy output for August 2012
/26/	Certificate on reactive electric energy transfer calculation dated September 1, 2012
/27/	Report on electric energy input into PJSC "Central Iron Ore Enrichment Works" grid from grids of energy supply companies, its transfer to the grids of energy supply companies and its consumption by structural units of the Plant and its sub-consumers for July, 2012
/28/	Passport on shield No. 143 with angle pressure difference measurement
/29/	Passport on transformer Sapfir, serial # 12656
/30/	Certificate No. 08/8 dated 31/08/2012 p. of natural gas acceptance
/31/	Certification No. E 107 dated 26/04/2011 on calibration of multi-rate meter of active and reactive energy Elvin ET 2A5E8ULRTS, serial # 9311. Valid till 26/04/2017
/32/	Certification No. E 420 dated 14/10/2010 on calibration of multi-rate meter of active and reactive energy Elvin ET 2A5E8ULRTS, serial # 9310. Valid till 14/10/2016
/33/	Inter-sectional reporting No. 11-sn on actual consumption of boiler and furnace fuels and electricity for production of certain types of products and works for 2002
/34/	Report on consumption of fuel, heat and electric energy in January-December 2003
/35/	Report on consumption of fuel, heat and electric energy in January-December 2004
/36/	Report on consumption of fuel, heat and electric energy in January-December 2005
/37/	Report on consumption of fuel, heat and electric energy in January-December 2006
/38/	Report on consumption of fuel, heat and electric energy in January-December 2007
/39/	Report on consumption of fuel, heat and electric energy in January-December 2008
/40/	Report on consumption of fuel, heat and electric energy in January-December 2009
/41/	Report on consumption of fuel, heat and electric energy in January-December 2010
/42/	Report on consumption of fuel, heat and electric energy in January-December 2011
/43/	Industrial energy conservation program at PJSC "Central Iron

No.	Title of the document
	Ore Enrichment Works" for 12 months of 2005
/44/	Report on the results of energy conservation program for 2006
/45/	Report on the results of energy conservation program for 2007
/46/	Report on the results of energy conservation program for 2008
/47/	Report on the results of energy conservation program for 2009
/48/	Report on the results of energy conservation program for 2010
/49/	Report on the results of energy conservation program for 2011
/50/	Report on the results of energy conservation program for 1st half-year of 2011

3.2 Interviews with project stakeholders

TÜV Rheinland (China) Ltd. (TÜV Rheinland) performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of the PJSC " Central Iron Ore Enrichment Works" and Metinvest International S.A. company were interviewed and their names are summarized in Table 3. The main topics of the interviews are summarized in Table 4.

Table 3 – Persons interviewed

No.	Name	Position	Organization
/1/	Antypov Vladislav Igorevich	Head of Investment Analysis Department	Metinvest International S.A.
/2/	Nelen Oleg Anatolievich	Director of HSE, OS and CBOs	Metinvest International S.A.
/3/	Alexandr Vyacheslavovich Velichko	Lead Expert on energy efficiency of planning production	Metinvest International S.A.
/4/	Shevchenko Alexander Vladimirovich	Acting Manager HSE, OS and CBOs	PJSC "Central Iron Ore Enrichment Works"
/5/	Bitsyuk Vitaliy Pavlovich	Head of the technical department	PJSC "Central Iron Ore Enrichment Works"
/6/	Sagittarius Maksim Aleksandrovich	Head of Energy Management	PJSC " Central Iron Ore Enrichment Works"
/7/	Klimenko Vladimir Stepanovich	Head of the Department of Labor	PJSC " Central Iron Ore Enrichment Works"
/8/	Gulevsky Rinat Vladimirovich	Lead Expert on water supply and sanitation in the General Energy (OGE)	PJSC " Central Iron Ore Enrichment Works"

No.	Name	Position	Organization
/9/	Shpilka Michael Fedorovich	Lead specialist of Environment	PJSC " Central Iron Ore Enrichment Works"
/10/	Edward Gennadievich Kuznetsov	Head of the Central Plant Laboratory	PJSC " Central Iron Ore Enrichment Works"
/11/	Klimovich O.	Chief Engineer of ore-dressing plant	PJSC " Central Iron Ore Enrichment Works"
/12/	Zhylkynskyy AJ	Chief Engineer pellet mill	PJSC " Central Iron Ore Enrichment Works"

Table 4 – Interview topics

No.	Date	Interviewed organization	Interview topics
/1/	25/10/2012	PJSC " Central Iron Ore Enrichment Works"	• Project decision • Baseline and project scenarios • Barrier analysis, analysis of common practice • Justification of additionality • Monitoring plan • Compliance with the requirements of the JI PDD • Organisational structure • Procedures and technology of quality management • Control of measuring equipment • Registration system and database of indicators of measuring equipment • Duties and responsibilities for monitoring project • Monitoring equipment • Environmental impact

3.3 Resolution of Clarification and Corrective Action Requests ï

The overall determination, from Contract signing to Determination Report and Opinion, was conducted using TÜV Rheinland (China) Ltd. (TÜV Rheinland) internal procedures. The objective of this phase of the determination is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for TÜV Rheinland (China) Ltd. (TÜV Rheinland) positive

conclusion on the project design.

In order to ensure transparency, a determination protocol (Annex A to the Determination report) was customized for the project, in accordance with the Annex to "Joint Implementation Determination and Verification Manual", version 01. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from determining the identified criteria. The determination protocol serves the following purposes:

- it organizes, details and clarifies the requirements a JI large scale project is expected to meet;
- it ensures a transparent determination process where the verifier will document how a particular requirement has been determined and the result of the determination.

The determination protocol consists of three tables. The different columns in these tables are described in Figure 1 below.

To guarantee the transparency of the determination process, the concerns raised are documented in more detail in the determination protocol (Annex A to the Determination report).

The PDD, final version 2.0 of 23/11/2012 was submitted to the determination team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) for final determination. The final version of the PDD (version 2.0 of 23/11/2012) was revised based on the determination protocol (Annex A to the Determination report) with the issued corrective action requests and clarification requests. The major changes include: correcting references to data sources; duration of the crediting period; date of the project start; additionality of the project; monitoring plan; assessment of GHG emission reductions; information on the project participants.

Determination Protocol Table 1: Mandatory Requirement for Joint Implementation (JI) Project Activities			
Requirement	**Reference**	**Conclusion**	**Cross reference**
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR), a Clarification Request (CL) or a Forward Action Request (FAR) of risk or non-compliance with stated requirements. The CAR's, CL's and FAR's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2, to show how the specific requirement is determined. This is to ensure a transparent determination process.

Determination Protocol Table 2: Requirements checklist				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comments**	**Draft and/or Final Conclusion**
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided **(OK)**, or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question. (See below). **Clarification Request (CL)** is used when the determination team has identified a need for further clarification. **Forward action request (FAR)** informs the project participants of an issue that needs to be reviewed

				during the verification.

Determination Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	**Ref. to checklist question in tables 1, 2**	**Summary of project owner response**	**Determination team conclusion**
If the conclusions from the Determination are a Corrective Action Request, a Clarification Request or a Forward action request, these should be listed in this section.	Reference to the checklist question number in Tables 2 where the Corrective Action Request, Clarification Request or a Forward action request is explained.	The responses given by the Client or other project participants during the communications with the determination team should be summarized in this section.	This section should summarize the determination team's responses and final conclusions. The conclusions should also be included in Tables 2, under "Final Conclusion".

Figure 1 – Determination protocol tables

3.4 Internal Technical Review

Determination report including the determination findings underwent a technical review before requesting registration of the project activity. The technical review was performed by an internal technical reviewer qualified in accordance with TÜV Rheinland (China) Ltd. (TÜV Rheinland) qualification scheme for JI project determination and verification.

3.5 Determination team

The determination team consists of the following personnel indicated in Table 5 below.

Table 5 – Determination team

Name	Role
Dr. Manfred Brinkmann	Accredited Independent Entity Operational Manager
Dr. Lixin Li	Technical Reviewer
Dr. Valery Yakubovsky	Team Leader
Dr. Yuriy Kononov	Technical Expert
Ganna Zadnipriana	Auditor
Dmitry Rakovich	Trainee

4 DETERMINATION FINDINGS

In the following subsections the determination findings are stated as follows:

1) the findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Determination Protocol (Annex A to the Determination report);
2) in case TÜV Rheinland (China) Ltd. (TÜV Rheinland) had identified issues that needed clarification or that represented a risk to the fulfilment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following subsections and are further documented in the Determination Protocol (Annex A to the Determination report). The determination of the Project resulted in 35 Corrective Action Requests (CARs), 9 Clarification Requests (CLs) and 1 Forward Action Request (FAR) that will be considered during the first verification and closed after issuing written project approvals by Parties involved;
3) conclusions for determination subject are presented in each subsection.

The considerations, findings and means of verification for areas of determination are provided below in accordance with the Determination and Verification Manual (DVM). All information indicated in the following subsections relates to the PDD version 2.0 dated 23/11/2012 (hereinafter called "PDD").

4.1 Project approval by Parties Involved

In accordance with paragraphs 19-20 of the DVM the assessment of this area focuses on whether the designated focal points (DFPs) of all Parties listed as "Parties involved" in the PDD have provided written project approvals. It also should be assessed whether the written project approvals referred to above are unconditional.

The project has no written project approvals by Parties involved. "Glossary of joint implementation terms", version 03 defines the following:
a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines;
b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the

first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest.

To obtain a written project approval by the host Party (Ukraine) a final Determination Report should be submitted to the State Environmental Investment Agency of Ukraine. Written project approval by The Netherlands (Party involved in the project, other than the host Party), will be obtained before the submission of the first verification report for publication in accordance with paragraph 38 of the JI Guidelines.

The **FAR 01** was raised. It will be closed after issuing written project approvals by Parties involved.

Identified problem areas for project approval, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination Report (refer to FAR 01).

4.2 Authorization of project participants by Parties involved

In accordance with paragraph 21 of the DVM the assessment of this area focuses on whether each of the legal entities listed as project participants in the PDD is authorized by a Party involved, which is also listed in the PDD, through: a written project approval by a Party involved, explicitly stating the name of the legal entity; or any other form of project participant authorization in writing, explicitly stating the name of the legal entity.

The following legal entities were included in the PDD as project participants:

- PJSC "Central Iron Ore Enrichment Works";
- Metinvest International S.A.

Detailed information on the project participants is listed in Section A.3. of the PDD. Contact information on the project participants, which clearly specify the names of legal entities, is listed in Annex 1 of the PDD.

Identified problem areas for authorization of project participants by Parties involved, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination Report (refer to FAR 01).

4.3 Baseline Setting

In accordance with paragraphs 22-26 of the DVM the assessment of this area focuses on various aspects of the baseline setting by project participants.

The paragraph 22 of the DVM defines two following approaches selected for identifying the baseline:
(a) By using a methodology for baseline setting and monitoring developed in accordance with Appendix B of the JI guidelines (hereinafter referred to as JI specific approach);
(b) By using a baseline and monitoring methodology approved by the CDM Executive Board in its totality (hereinafter referred to as approved CDM methodology approach).

The project participants of the project "Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company" selected the JI specific approach for identifying the baseline.

According to "Guidance on criteria for baseline setting and monitoring" (version 03) for such projects, based on the certain approach, specific methodological parts can be included into the baseline setting, that are approved by the Joint Implementation Supervisory Committee. The methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality" (version 03.0.1) was chosen for the project baseline setting.

The PDD provides a description of the chosen baseline in a clear and transparent manner according to "Guidelines for users of the joint implementation project design document form", version 04, as well as a justification per the "Guidance on criteria for baseline setting and monitoring", version 03 (paragraphs 23-29).

The desk review of the PDD and follow-up interviews provided enough reasons for TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess that the baseline for this JI project is established:

a) **By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.**
Plausible future scenarios are listed below:

Scenario 1. Continuation of current situation at the plant without activities improving power efficiency

This scenario where enterprise will not implement any modernization of enterprise production capacity and technological vehicles requires the implementation of no measures, and don't have any barriers.

Scenario 2. Performance of project activities without joint implementation mechanisms.

Technological barrier: This scenario is requires significant plant modernization. The project presumes the installation of a new, technically complicated, equipment which demands high level of qualification from maintenance staff in order to reach the estimated energy efficiency figures
Complexity of the production process and the suggested measures, constant fluctuations of the cost of energy resources in Ukraine do not allow to predict energy and economic results of the implementation of measures within the framework of this project. The uncertainity of results leads to additional risks for the project owner.

Investment barrier: This scenario is not financially attractive without engaging the joint implementation mechanisms. Introduction of this alternative requires significant plant modernization and financial investments that are possible to obtain by joint implementation project implementation.

The making investment decision was made when the economic situation in Ukraine was extremely difficult. The continuous downward trend in GDP throughout the previous decade did the prospect of the project activity improbable.
Project foresees the significant amount of investments from 2003 to 2011. This amount is too high for PJSC "Central Iron Ore Enrichment Works". This level of income does not allow the company to finance a program of activities at their own expense.

All scenarios except **Scenario 1 - Continuation of current situation at the plant without activities improving power efficiency**, faced with the presence of obstacles. Thus, the continuation of the current situation is the most likely future scenario and was selected as the baseline for the project.

b) **Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector.**

In this context, the TÜV Rheinland (China) Ltd. (TÜV Rheinland) assessed whether the key factors that affect a baseline were taken into account. The project participants established the baseline taking into account the key factors.

All the alternatives mentioned above have conform the active legislation and relevant regulations.

According to the Ukrainian law in force the reduction of GHG emissions into the atmosphere is not obligatory. The national policy concerning this subject is determined by the Ukrainian law "On the air protection" #2707 XII dated 16/10/1992. This law does not implement exact requirements concerning industrial emissions of greenhouse gases. The requirements concerning permitted emissions into the atmosphere are regulated by the Order #309 dated 27/06/2006 "On adoption of

standards for permitted stationary sources air pollutants", issued by the Ministry of Environmental Protection of Ukraine.

Under such circumstances it is clear that the baseline scenario does not contradict existing laws and regulations, taking into account their performance in Ukraine.

c) **In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors.**
The project participants applied the selected approach with transparency. Necessary information on approaches, assumptions, parameters, data sources and key factors is available in the PDD version 2.0 dated 23/11/2012.

d) **Taking into account of uncertainties and using conservativeness assumptions.**
Project participants used default values to the extent possible in order to reduce uncertainty and provide conservative data for emission calculations.

e) **In such a way that emission reduction units (ERUs) cannot be earned for decreases in activity levels outside the project activity or due to force majeure.**
Emission sources in the project are clearly defined and under control of the project participants. According to the proposed approach emission reductions will be earned only within the project activity, so no emission reductions can be earned due to any changes outside the project activity or due to force majeure.

f) **By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate.**
The PDD draws on the list of standard variables contained in Appendix B to "Guidance on criteria for baseline setting and monitoring", version 03 if necessary: amount of consumed natural gas, amount of consumed electricity, CO_2 emission factor for electricity, Net Calorific Value of Natural gas, production output (baseline and project). These variables are monitoring parameters through the whole monitoring period.

As the result of this analysis TÜV Rheinland (China) Ltd. (TÜV Rheinland) can confirm that the baseline for this project is established in accordance with criteria stated in the Appendix B of the JI guidelines and justified in accordance with paragraphs 23-29 of the "Guidance on criteria for baseline setting and monitoring", version 03.

Identified problem areas for baseline setting, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.4 Additionality

In accordance with paragraphs 27 - 31 of the DVM the assessment of this area focuses on whether a project provides "a reduction in emissions by sources, or an enhancement of net removals by sinks, that is additional to any that would otherwise occur" in accordance with Article 6 of the Kyoto Protocol.

The paragraph 28 of the DVM defines three approaches used to demonstrate additionality – items (a), (b), (c) for JI specific approach.

Project participants used specific approach to JI projects to demonstrate the project additionality. PDD provides justification for this approach in a clear and transparent manner and also in accordance with paragraphs 23 and 29 of Guidelines on criteria for baseline setting and monitoring (version 03).

Project participants used the "Tool for the demonstration and assessment of additionality" version 06.0.0 (hereinafter "Tool") for demonstration additionality (approach indicated in item (c) of paragraph 28 of the DVM).

The "Guidance on criteria for baseline setting and monitoring" (paragraph 44 (c) of the Annex 1), version 03 defines the application of the most recent version of the "Tool" approved by the CDM Executive Board for demonstrating that the project provides reductions in emissions by sources that are additional to any that would otherwise occur. At the time of the PDD development, the version 06.0.0 was the most recent version of the "Tool".

Analysis of additionality of the project is given in section B.2 of the PDD.

The following steps are taken as per "Tool for the demonstration and assessment of additionality" version 06.0.0:
Step 1. Identification of alternatives to the project activity consistent with current laws and regulations;
Step 2. Investment Analysis (does not apply);
Step 3. Barrier analysis;

Step 4. Common practice analysis.

The determination team's assessment on application of each step according to the Tool is presented below.

Step 1. Identification of alternatives to the project activity consistent with current laws and regulations.

As per "Tool for the demonstration and assessment of additionality" version 06.0.0 TÜV Rheinland (China) Ltd. (TÜV Rheinland) assessed that project participants defined the following alternative baseline scenarios that include:

(a) **The proposed project activity undertaken without being registered as a JI project activity**:

- *Implementation of project activities without joint implementation mechanisms.*

(b) **Other realistic and credible alternative scenarios to the proposed JI project activity scenario that deliver outputs services or services with comparable quality, properties and application areas:**

- *N/A.*

(c) **Continuation of the current situation:**

- *To continue current situation without implementation of energy-saving measures.*

The analysis of each alternative baseline scenario was assessed by TÜV Rheinland (China) Ltd. (TÜV Rheinland) through the desk review of the PDD with presented references on publicly available information and follow-up interviews. All abovementioned scenarios do not contradict with all applicable legislation in force of Ukraine.

The alternative baseline scenario that includes the continuation of the current situation is the most plausible one in case of the project absence, and is regarded as realistic and credible alternative scenario to the project activity.

Step 2. Investment Analysis.

As per "Tool for the demonstration and assessment of additionality" version 06.0.0 project participants used "Step 3. Barrier analysis" for demonstration of additionally.

Step 3. Barrier analysis.

Project participants applied the Barrier analysis (step 3) as per "Tool for the demonstration and assessment of additionality" version 06.0.0 in order to determine whether the proposed project activity is not economically or technical feasible, without the revenue from the sale of emission reduction units (ERUs).

Identification of barriers impeding the realization of joint implementation project.

1. Financial barriers

Project activity under the proposed project is long-termed complex action foreseen for the period 2003-2020. Project foresees the significant amount of investments from 2003 to 2020.
When investment decisions was made (2003) the economic situation in Ukraine was extremely difficult. Trend in GDP throughout the previous decade did the prospect of the project activity improbable.

Amount of investment is too high for PJSC "Central Iron Ore Enrichment Works”. This level of income does not allow the company to finance a program of activities at their own expense.
The project activities are not financially attractive without application of joint implementation mechanisms. The realization of this project requires considerable modernization of the plant and financial investments, which can be obtained only through the realization of the joint implementation project.

2. Technological barriers

The project activities require considerable modernization of the plant. The project presumes the installation of new, technically complex equipment having which, in order to achieve planned goals on power efficiency, requires the high qualification of maintenance personnel.

Complexity of the production process and the suggested measures, constant fluctuations of the cost of energy resources in Ukraine do not allow to predict energy and economic results of the implementation of measures within the framework of this project. The uncertainty of results leads to additional risks for the project owner.

Step 4. Common practice analysis.

The desk review of submitted documentation and follow-up interviews enabled TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess that all explanations, descriptions and analyses in the demonstration of additionality were made in accordance with Tool. The all key pieces of evidence for the investment barrier were checked. The evidences were transparently reviewed by the determination team and considered to be effective.

Barrier analysis and Common practice analysis clearly demonstrate that the proposed project activity is not unattractive. Common practice analysis was carried out showing that the proposed project activity is one of very few in Ukraine. On such enterprises as PJSC "Poltava Iron Ore Enrichment Works”, PJSC "Northern Iron Ore Enrichment Works”, PJSC "Eastern Iron Ore Enrichment Works” were implemented the complexes of similar measures. All the mentioned enterprises considered JI mechanism as the decisive factor in the implementation of the complex of measures. Similar projects without the JI mechanism were not implemented in Ukraine. Therefore, the proposed project activity is not business-as-usual, i.e. the proposed project activity provides the reductions in emissions by sources that are additional to any that would otherwise occur.

The desk review of submitted documentation and follow-up interviews enabled TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess that all explanations, descriptions and analyses in the demonstration of additionality were made in accordance with the selected version of the

"Tool". The proposed JI activity provides the reductions in emissions by sources that are additional to any that would otherwise occur.

Sufficient evidence was presented to AIE additionality in the PDD and as supporting documents. Additionality of the project has been demonstrated properly by performing the analysis using the "Tool".

Identified problem areas for baseline setting, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.5 Project boundary

In accordance with paragraphs 32-33 of the DVM the assessment of this area focuses on correct and complete delineation of the project boundary, inclusion and exclusion of any sources of greenhouse gases (GHGs) related to the baseline or the project.

It was assessed through the desk review of submitted documentation and follow-up interviews that project participants used the JI specific approach towards baseline setting in this project and establishing the project boundary.

The details on the project boundary were provided in section B.3. of the PDD. The desk review of submitted documentation enabled TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess that the project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are:

- under the control of the project participants;
- reasonably attributable to the project; and
- significant.

The baseline emission sources of GHGs that are included in the project boundaries are listed below.

The baseline for PJSC "Central Iron Ore Enrichment Works" would be maintenance of the existing in the beginning of 2002 technological equipment and heavy dump trucks in a due condition, at the same time the power resources consumption for mining rock transportation and for iron ore concentrate and pellets production and, as the result, greenhouse gases emissions to the atmosphere would stay equal to consumptions and emissions in 2002. Emission sources in the baseline that are included into the project boundary are:

- Emissions as a result of natural gas consumption in baseline scenario for period *y*;
- Emissions as a result of electricity consumption from the grid in baseline scenario for period *y*.

The project emission sources of GHGs that are included in the project

boundaries are listed below.

- Project emissions as a result of natural gas consumption by project activity in period *y*;
- Project emissions as a result of electricity consumption from the grid by project activity in period *y*.

All gases and sources included in the project boundary were explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD by using figures 9-10 and the details were provided by Table 7 in section B.3. of the PDD.

Identified problem areas for project boundary, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.6 Crediting period

In accordance with paragraph 34 of the DVM the assessment of this area focuses on correct and complete provision of information on the projects starting date, expected operational lifetime and the length of the crediting period.

It was assessed through the desk review of submitted documentation and follow-up interviews that the project participants had correctly stated in the PDD:

the starting date of the project is 01/01/2003 (date when it was concluded a comprehensive plan to modernize of the plant). The starting date of the project is after the beginning of 2000.

- **the expected operational lifetime** of the project in years and months is 20 years or 240 months.

- **the length of the crediting period** (from 01/01/2004 to 31/12/2020) in years and months is 17 years or 204 months.
  Project participants stated 3 parts of crediting period in years and months in the PDD for this project that are:
  - **Part of crediting period befor the first commitment period of the Kyoto Protocol –** from 01/01/2004 to 31/12/2007.
    Length of the part of crediting period within the first commitment period of the Kyoto Protocol is 4 years or 48 months.
  - **Part of crediting period within the first commitment period of the Kyoto Protocol –** from 01/01/2008 to 31/12/2012.

Length of the part of crediting period within the first commitment period of the Kyoto Protocol is 5 years or 60 months.

- **Part of the crediting period after the end of the first commitment period of the Kyoto Protocol** – from 01/01/2013 to 31/12/2020.
  Length of the part of crediting period after the first commitment period of the Kyoto Protocol is 8 years or 96 months.

The starting date of the crediting period is start of generating ERUs under the project.

The desk review of submitted documentation and follow-up interviews enabled TÜV Rheinland (China) Ltd. (TÜV Rheinland) to assess that all information on the projects starting date, expected operational lifetime and the length of the crediting period is correct and complete.

The evidence documents of projects' starting date, operational lifetime, starting date of the crediting period were provided by project participants to the determination team as supporting documents (please refer to evidence documents in Table 2, section 3.1. of the Determination Report).

Identified problem areas for crediting period, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.7 Monitoring plan

In accordance with paragraphs 35-39 of the DVM the assessment of this area focuses on assessing the completeness and correctness of the established monitoring plan and whether it meets the necessary requirements.

The paragraph 35 of the DVM defines two following approaches selected for establishment of the monitoring plan:
(a) JI specific approach;
(b) Approved CDM methodology approach.

The project participants of the project "Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company" selected the JI specific approach for establishment of the monitoring plan.

The monitoring plan was established in accordance with criteria stated in Appendix B to decision 9/CMP.1 (JI guidelines). JI specific approach is defined in paragraph 9 (a) of the "Guidance on criteria for baseline setting and monitoring", version 03.

The information indicated below, that refers to the components of

monitoring plan, was assessed by TÜV Rheinland (China) Ltd. (TÜV Rheinland) through the desk review of the submitted documentation and follow-up interviews.

I. The chosen monitoring plan includes all procedures necessary for accurate and conservative calculation of emission reductions, describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance.

II. The established monitoring plan specifies the indicators, constants and variables that are reliable and provide consistent and accurate values; are valid and clearly connected with the effect to be measured, and that provide a transparent picture of the emission reductions to be monitored. The default values which were used in the monitoring plan were selected by carefully balancing accuracy and reasonableness. These values originate from recognized sources, are supported by statistical analyses providing reasonable confidence levels and are presented in a transparent manner in the PDD.

III. For those values that are to be provided by the project participants it is clearly indicated, how the values are to be selected and justified by explanation of what types of sources are to be used and the vintage of data to be used. For all values the precise references from which these values are taken are clearly indicated in section D of the PDD and the conservativeness of the values is justified. The sources from which the data are obtained do not foresee the situations where the expected data are not available.

IV. The International System Units (SI units) are used for values provided by the project participants.

V. Any parameters, coefficients, variables that are used to calculate baseline emissions but are obtained through monitoring are noted. The desk review of the documentation showed that the consistency between the baseline and monitoring plan is ensured.

VI. The project activity will include monitoring of GHG emissions in the baseline and project scenarios. Variables to be monitored in the baseline and project scenarios include the parameters listed in tables 6, 7 and 8 below.

Table 6. Data and parameters that are not monitored throughout the crediting period, but are determined only once and that are available already at the stage of determination regarding the PDD.

	Indication	*Parameter*
1.	$SFC_{pellets,NG,BC}$	Specific consumption of natural gas while pellets production in baseline scenario

2.	$SEC_{iron\ ore}$	Specific consumption of electricity while iron ore production in baseline scenario
3.	$SEC_{pellets,elec,BC}$	Specific consumption of electricity while pellets production in baseline scenario

Table 7. Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination regarding the PDD.

Data and parameters that are not determined during the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but are not available at the stage of determination of the PDD are absent in this project.

Table 8. Data and parameters that are monitored throughout the crediting period.

Parameter	Unit	Description
$P_{iron\ ore,\ y}$	t	Amount of iron ore concentrate produced for the period y
$P_{pellets,y}$	t	Amount of pellets produced for the period y
W_{NG}	tC/TJ	Amount of carbon in natural gas for the period y
$EC_{pellets,PC,y}$	MWh	Amount of electric energy consumption used for pellets production during the year
$FC_{NG,PC,y}$	m^3	Amount of natural gas combustion in the process of pellets production
$EC_{iron\ ore,PC,y}$	MWh	Amount of electric energy consumption in the process of iron ore concentrate production
$EF_{co2,elec,y}$	tCO_2e/MWh	Emission factor for UESU
$NCV_{NG,BC,y}$	$Gcal/m^3$	Net calorific value for natural gas in baseline scenario
$OXID_{NG,y}$	mass or volume unit	Carbon emission factor while natural gas consumption

VII. The monitoring plan draws on the list of standard variables contained in Appendix B to "Guidance on criteria for baseline setting and monitoring", version 03, as appropriate: amount of consumed natural gas, amount of consumed electricity, amount of produced iron ore concentrate and pellets. These variables are monitoring parameters through the whole monitoring period.

VIII. The established monitoring plan described the methods employed

for data monitoring (including its frequency) and recording. This information is provided in the tabular format in section D.2. of the PDD. The monitoring plan also elaborates all algorithms and formulae used for the calculation of baseline emissions and project emissions. The underlying rationale for the algorithms and formulae is sounded and explained as necessary. The project participants used consistent variables, equation formats, subscripts etc.; numbered all equations throughout the PDD; defined and indicated all variables and constants with units.

IX. The conservativeness of the algorithms and procedures is justified and methods to quantitatively account for uncertainty in key parameters are included, to the extent possible (Annex 2 to the PDD provides quantitative estimations of uncertainty in key baseline parameters). References for all parameters are provided as necessary. It is clearly stated in Annex 2 to the PDD which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed. The desk review of the documentation showed that the consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions of the baseline is ensured.

X. The national and international monitoring standards are not applied to monitor certain aspects of the project.

XI. A clear management structure will be identified to establish the division of responsibilities for gathering monitoring data. Respective services of the plant will collect relevant data in the form of technical reports and other statistical documents. All monitored data will be stored both electronically and in hard copy. The quality of collected data will be secured by conducting regular calibrations of applied meters and sensors. Calibration interval will be chosen as per passport or technical manual data.

XII. The document which indicates that data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project was provided to the AIE in supporting documentation (please refer to the evidence document in Table 2, Section 3.1. of the Determination Report).

XIII. The monitoring plan, on the whole, reflects good monitoring practices: the structure of data collection is clearly defined; all data concerning the greenhouse gas emissions within the project boundaries is monitored and used in calculations appropriately; all meters are properly calibrated and precisely indicate values of the measured parameters.

The evidence documents that relates to the completeness and correctness of the established monitoring plan were provided by project participants to the determination team as supporting documents (please

refer to evidence documents in Table 2, section 3.1. of the Determination Report).

Identified problem areas for monitoring plan, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.8 Leakage

In accordance with paragraphs 40-41 DVM, analysis of this question consists in checking estimation of potential leakage in the project.

Leakage is not applied to this project. No leakage is expected since energy sources consumption is decreasing under the project activities, according to the baseline.

Problem issues concerning leakage of the project were not detected.

4.9 Estimation of emission reductions

In accordance with paragraphs 42-47 of the DVM the assessment of this area focuses on checking the completeness and correctness of the provided methods and results of emission reduction estimates in the JI project.

The paragraph 42 of the DVM defines two following approaches to estimate the emission reductions or enhancement of net removals generated by the project selected the JI specific approach:
(a) Assessment of emissions or net removals in the baseline scenario and in the project scenario; or
(b) Direct assessment of emission reductions.

As per JI specific approach project participants chose the following approach to estimate the emission reductions generated by the project: assessment of emissions in the baseline scenario and in the project scenario. According to this approach emission reductions were calculated as follows:

$$ER_y = BE_y - PE_y \qquad \text{(Equation 1)}$$

where:

ER_y – Emission reductions in JI project in year y [tCO_2e];
BE_y – Baseline emissions in year y [tCO_2e];
PE_y – Project emissions in year y [tCO_2e].

Ex ante estimates of emissions for the project scenario (within the project boundary), emissions for the baseline scenario (within the project boundary) and emission reductions are provided in Section E of the PDD. These estimates in the PDD are given on a periodic basis,

from the beginning until the end of the crediting period, in tonnes of CO_2 equivalent, using appropriate emission factors. The formula used for calculating these estimates are consistent throughout the PDD.

The **baseline emissions** of the project are calculated under the formula:

$$BE_y = BE_{iron\ ore,y} + BE_{pellets,y}, \quad \text{(Equation 2)}$$

where:

BE_y – total emission levels during a year according to the baseline scenario, t CO_2e;

$BE_{iron\ ore,y}$ – emissions, caused by the energy consumption in the process of iron ore concentrate production (subproject "Modernization of iron ore concentrate production"), t CO_2e;

$BE_{pellets,y}$ – emissions, caused by the natural gas consumption in the process of pellets production (subproject "Modernization of pellets production"), t CO_2e.

$$BE_{pellets,y} = BE_{pellets,NG} + BE_{pellets,elec}, \quad \text{(Equation 3)}$$

where:

$BE_{pellets,y}$ – CO_2 emissions from natural gas combustion and electricity consumption in process of pellets production, t CO_2e;

$BE_{pellets,NG}$ – CO_2 emissions from natural gas combustion in process of pellets production, t CO_2e;

$BE_{pellets,elec}$ – CO_2 emissions from electricity consumption in process of pellets production, t CO_2e.

Emissions will be calculated separately for each proposed subproject

$$BE_{pellets,NG} = FC_{NG,BC} \cdot 4.1868 \cdot NCV_{NG,BC} \cdot EF_{co2,NG}, \quad \text{(Equation 4)}$$

where:

$FC_{NG,BC}$ – quantity of natural gas consumed in process of pellets production during the year, mil.m^3;

$NCV_{NG,BC}$ – natural gas net calorific value in baseline, Tcal/mil.m^3;

$EF_{co2,NG}$ – emission factor from natural gas combustion, t CO_2e/TJ;

4,1868 – standardized coefficient for Tcal recalculation into TJ, TJ/Tcal.

$$FC_{NG,BC} = SFC_{pellets,NG,BC} \cdot P_{pellets,y}, \quad \text{(Equation 5)}$$

where:

$SFC_{pellets,NG,BC}$ – natural gas baseline specific consumption during pellets production, mil. m^3/t;

$P_{pellets,y}$ – amount of pellets produced for the year *y* in project scenario, t.

$EF_{co2,NG} = OXID_{NG} \cdot W_{NG} \cdot 44/12$, (Equation 6)

where:

$OXID_{NG}$ – factor of carbon oxidation during natural gas combustion, mass or volume unit;

W_{NG} – average mass fraction of carbon in natural gas, t/TJ;

44/12 – stechiometric ratio between molecular weight of CO_2 and carbon.

$BE_{pellets,elec} = EC_{pellets,BC} \cdot EF_{co2,elec}$, (Equation 7)

where:

$EC_{pellets,BC}$ – quantity of electricity consumed in process of pellets production in baseline, MWh

$EF_{co2,elec}$ – emission factor for UESU, t CO_2e/MWh.

$EC_{pellets,BC} = SEC_{pellets,elec,BC} \cdot P_{pellets,y}$, (Equation 8)

where:

$SEC_{pellets,elec,BC}$ – electric energy specific consumption during baseline pellets production, MWh/t;

$P_{pellets,y}$ – amount of pellets produced for the year *y* in project scenario, t.

Emissions from the electric power consumption in process of iron ore concentrate production is calculated using the following formulas:

$BE_{iron\ ore,elec} = EC_{iron\ ore,y} \cdot EF_{co2,elec}$, (Equation 9)

where:

$BE_{iron\ ore,y}$ – emissions, caused by the energy consumption in the process of iron ore concentrate production t CO_2e;
$EC_{iron\ ore,y}$ – quantity of electricity consumed in process of pellets production in baseline, MWh/t;

$EF_{co2,elec}$ – emission factor for UESU, t CO_2e/MWh.

$$EC_{iron\ ore,BC} = SEC_{iron\ ore,elec,BC} \cdot P_{iron\ ore,y}, \quad \text{(Equation 10)}$$

where:

$SEC_{iron\ ore,elec,BC}$ – electric energy specific consumption during iron ore production in baseline, MWh/t;

$P_{iron\ ore,y}$ – amount of iron ore produced for the year *y* in project scenario, t.

All algorithms and formulae for estimating emissions in the baseline scenario of each subproject are described under section D.1. of the PDD. The details of the calculation are provided in the GHG emission reductions calculation spreadsheet in Excel format.

Project emissions due to consumption of natural gas and electricity by the project activity are calculated as follows:

$$PE_y = PE_{iron\ ore,y} + PE_{pellets,y}, \quad \text{(Equation 11)}$$

where:
PE_y – total emission levels during a year according to the project scenario, t CO_2e;
$PE_{iron\ ore,y}$ – emissions, caused by the energy consumption in the process of iron ore concentrate production (subproject "Modernization of iron ore concentrate production"), t CO_2e;
$PE_{pellets,y}$ – emissions, caused by the natural gas consumption in the process of pellets production (subproject "Modernization of pellets production"), t CO_2e.

Emissions will be calculated separately for each proposed subproject.

The formulas provided in the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption" (version 01) are used for calculation of the project emissions under the subproject "Modernization of iron ore concentrate production".

$$PE_{iron\ ore,y} = EC_{iron\ ore,PC,y} \cdot EF_{co2,elec}, \quad \text{(Equation 12)}$$

where:
$PE_{iron\ ore,y}$ – CO_2 emissions from energy consumption in process of iron ore concentrate production, t CO_2e ;
$EC_{iron\ ore,PC,y}$ – quantity of electricity consumed in process of iron ore concentrate production per year, MWh;
$EF_{co2,elec}$ – emission factor for UESU, t CO_2e/MWh.

Concerning natural gas combustion in process of pellets production the formulas provided in the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion" (version 02) are used for

calculation of the project emissions under the subproject "Modernization of pellets production". In some parts of the calculations concerning electricity consumption in process of pellets production the formulas provided in the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption" (version 01) are used.

$$PE_{pellets,y} = PE_{pellets,NG} + PE_{pellets,elec}, \quad \text{(Equation 13)}$$

де:
$PE_{pellets,y}$ – CO_2 emissions from natural gas combustion and electricity consumption in process of pellets production, t CO_2e;
$PE_{pellets,NG}$ – CO_2 emissions from natural gas combustion in process of pellets production, t CO_2e;
$PE_{pellets,elec}$ – CO_2 emissions from electricity consumption in process of pellets production, t CO_2e.

$$PE_{pellets,NG} = FC_{NG,PC,y} \cdot 4.1868 \cdot NCV_{NG,y} \cdot EF_{co2,NG}, \quad \text{(Equation 14)}$$

де:
$FC_{NG,PC,y}$ – quantity of natural gas consumed in process of pellets production during the year, mil.m^3;
$NCV_{NG,y}$ – natural gas net calorific value in the project scenario, Tcal/mil.m^3;
$EF_{co2,NG}$ – emission factor from natural gas combustion, t CO_2e/TJ;
4.1868 – standardized coefficient for Tcal recalculation into TJ, TJ/Tcal.

$$EF_{co2,NG} = OXID_{NG} \cdot W_{NG} \cdot 44/12, \quad \text{(Equation 15)}$$

де:
$OXID_{NG}$ – factor of carbon oxidation during natural gas combustion, mass or volume unit;
W_{NG} – average mass fraction of carbon in natural gas, t/TJ;
44/12 – stechiometric ratio between molecular weight of CO_2 and carbon.

$$PE_{pellets,elec} = EC_{pellets,PC,y} \cdot EF_{co2,elec}, \quad \text{(Equation 16)}$$

де:
$EC_{pellets,PC,y}$ – quantity of electricity consumed in process of pellets production per year, MWh;
$EF_{co2,elec}$ – emission factor for UESU, t CO_2e/MWh.

All algorithms and formulae for estimating emissions in the project scenario of each subproject are described under section D.1. of the PDD. The details of the calculation are provided in the GHG emission reductions calculation spreadsheet in Excel format.

It was assessed by the desk review of submitted documentation, especially GHG emission reductions calculation spreadsheet in Excel format that 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. Data sources used for calculating the estimates referred above are clearly identified, reliable and transparent. Emission factors used for calculating the estimates referred to above, were selected by carefully balancing accuracy and reasonableness, and the choice is appropriately justified. The estimation referred to above is based on conservative assumptions and the most plausible scenarios in a transparent manner. The estimates of emission reductions are consistent throughout the PDD. The annual average of estimated emission reductions over the crediting period is calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period, and multiplying by twelve.

According to the PDD and GHG emission reductions calculation spreadsheet in Excel format the emissions for the project scenario, emissions for the baseline scenario and emission reductions are provided in Tables 9, 10 and 11 below.

Table 9 – Estimated emission reductions generated by the project over the part of crediting period before the first commitment period of the Kyoto Protocol

Period:	01/01/2004 – 31/12/2007
Emissions for the project scenario, tCO_2e	1 900 909 t CO_2e
Leakage, tCO_2e	0 t CO_2e
Emissions for the baseline scenario, tCO_2e	2 047 410 t CO_2e
Emission reductions, tCO_2e	146 501 t CO_2e
Annual average of estimated emission reductions, tCO_2e	36 625 t CO_2e

Table 10 – Estimated emission reductions generated by the project over the part of crediting period within the first commitment period of the Kyoto Protocol

Period:	01/01/2008 – 31/12/2012
Emissions for the project scenario, tCO_2e	4 617 895 t CO_2e
Leakage, tCO_2e	0 t CO_2e
Emissions for the baseline scenario, tCO_2e	5 173 259 t CO_2e
Emission reductions, tCO_2e	555 344 t CO_2e
Annual average of estimated emission reductions, tCO_2e	111 069 t CO_2e

Table 11 – Estimated emission reductions generated by the project over the part of the crediting period after the end of the first

commitment period of the Kyoto Protocol

Period:	01/01/2013 – 31/12.2020
Emissions for the project scenario, tCO_2e	7 764 944 t CO_2e
Leakage, tCO_2e	0 t CO_2e
Emissions for the baseline scenario, tCO_2e	8 716 008 t CO_2e
Emission reductions, tCO_2e	951 064 t CO_2e
Annual average of estimated emission reductions, tCO_2e	118 883 t CO_2e

Identified problem areas for calculation of GHG emission reductions, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.10 Environmental impacts

In accordance with paragraph 48 of the DVM the assessment of this area focuses on checking the completeness and correctness of the provided information on the assessment of the environmental impacts of the JI project.

The host Party for the project is Ukraine.

The realization of this project has facilitated the reduction of pollutant emissions from stationary sources. According to the issued permit of the Administration of ecological resources in Dnipropetrovsk region the environmental impact is not sufficient, but generally positive.

According to the requirements of the Ukrainian legislation in force, namely the law of Ukraine "On environmental protection" #1264 XII dated 25/06/1991 and SCN (DBN in ukrainian transcription) A.2.2-1 , the implementation of this project does not demand ecological assessment.

In Annex F of this standard there is a list of "types of projects or activities that are of high environmental hazard" for which full-scale EIA is obligatory, Ministry of Environment and Natural Resources of Ukraine is competent authority for performing of it.

Identified problem areas for environmental impacts, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.11 Stakeholder consultation

In accordance with paragraph 49 of the DVM the assessment of this area focuses on checking if stakeholder consultation was undertaken in

accordance with procedures as required by the host Party.

The host Party for the project is Ukraine.

The host Party does not require consultations with stakeholders for joint implementation projects.

Stakeholders' comments will be collected during publishing of the project within the determination procedure.

Identified problem areas for comments by local stakeholders, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.12 Other areas

In accordance with paragraphs 50-73 of the DVM the assessment of the areas such as additional elements for assessment in determination regarding large scale projects, determination regarding land use, land-use change and forestry projects, determination regarding programmes of activities is not applicable to this JI project.

5 SUMMARY OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

According to paragraph 32 of the JI Guidelines, the AIE shall make the project design document publicly available through the secretariat, subject to confidentiality provisions set out in paragraph 40 of the JI Guidelines, and receive comments from Parties, stakeholders and UNFCCC accredited observers on the project design document and any supporting information for 30 days from the date the project design document is made publicly available.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) published the project design document (version 1.0 dated 20/09/2012) on the website (http://www.tuv.com.ua/content/view/75/79/) 02/10/2012 and invited comments by Parties, stakeholders and UNFCCC accredited observers till 02/11/2012.

There were no comments from Parties, stakeholders and UNFCCC accredited observers received.

- o0o -

ANNEX A: JI PROJECT DETERMINATION PROTOCOL

Table 1 – Mandatory Requirement for Joint Implementation (JI) Project Activities

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
1. The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	**FAR 01**	Table 2, section A.5. **FAR 01.** The project has no written project approvals by Parties involved. Provide relevant documents to the first verification report. "Glossary of joint implementation terms", version 03 defines the following: a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines; b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			guidelines, at the latest. To obtain a written project approval (Letter of Approval) a final Determination Report should be submitted to the State Environmental Investment Agency of Ukraine. Written project approval by a Party involved in the JI project, other than the host Party will be obtained before the first verification.
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	**OK**	Please refer to Table 2, section B.
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (c)	**OK**	Article 5 requires: "Each Party included in Annex I shall have in place, no later than one year prior to the start of the first commitment period, a national system for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases". According to the Article 7: "Annex I Parties to submit annual greenhouse gas inventories, as well as national communications, at regular intervals, both including supplementary information to

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			demonstrate compliance with the Protocol". Ukraine has submitted its Initial Report on December 29, 2006: http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/ukraine_aa_report.pdf
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.	Kyoto Protocol Article 6.1 (d)	**OK**	Please refer to Table 2, section B.2.
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Marrakech Accords, JI Modalities, §20	**OK**	Ukraine has designated its Focal Point. National guidelines and procedures for approving JI projects have been published. Contact data in Ukraine: State Environmental Investment Agency of Ukraine 35 Urytskogo St, Kyiv, P.O. 03035 Phone: +380 44 594 91 11 Fax: +380 44 5949115 Ukrainian national guidelines and procedures for the approval of JI projects are available on the site www.neia.gov.ua. On February 22, 2006 the Cabinet of Ministers of Ukraine adopted the

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			Regulation № 206, which established assessment and implementation procedures of JI projects within the Kyoto Protocol.
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	**OK**	The Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at February 4th, 2004.
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts.	Marrakech Accords, JI Modalities, §21(b)/24	**OK**	The arranged extent for Ukraine is 100% of its emissions by 1990. In the Initial Report (Ukraine's Initial Report Under Article 7, Paragraph 4, Of The Kyoto Protocol) submitted by Ukraine to the UNFCCC Secretariat, on the 26 May 2006 the AAUs are quantified with: 925 362 174.39 (x 5) = 4 626 810 872 tCO_2e http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/ukraine_aa_report.pdf Currently Ukraine has submitted to the UNFCCC its fifth national communication on climate change under the Kyoto Protocol.
8. The host Party shall have in place a national	Marrakech	**OK**	The designed system of the

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
registry in accordance with Article 7, paragraph 4.	Accords, JI Modalities, §21(d)/24		national registry has been described in the Initial Report: http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/ukraine_aa_report.pdf
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	**OK**	Project participants provided PDD, which contains all the necessary information for the determination.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Marrakech Accords, JI Modalities, §32	**OK**	TÜV Rheinland (China) Ltd. (TÜV Rheinland) published the project design document on the http://www.tuv.com.ua website from 02/10/2012 to 02/11/2012. There were no comments from Parties, stakeholders and UNFCCC accredited observers received.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the host Party, an environmental impact assessment in accordance with procedures as required by the host Party shall be carried out.	Marrakech Accords, JI Modalities, §33(d)	**OK**	Please refer to Table 2, section F.
12. The baseline for a JI project shall be the	Marrakech	**OK**	Please refer to Table 2,

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Accords, JI Modalities, Appendix B		section B.
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Appendix B	**OK**	Please refer to Table 2, section B.
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities, Appendix B	**OK**	Please refer to Table 2, section B.
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	**OK**	Please refer to Table 2, section D.
16. A project participant is a legal entity authorized by a Party involved to participate in the JI project.	"Glossary of Joint Implementation Terms", Version 03.	Conclusion is pending a follow-up on **FAR 01**.	Please refer to Table 2, section A.

Table 2 – Requirements Checklist

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
A. General description of the project					
A.1. Title of the project					
1.1. Does the provided title of the JI project represent project activity?	PDD	DR	"Implementation of Energy Saving Measures at "Central Iron Ore Enrichment Works" Public Joint Stock Company"	**OK**	**OK**
1.2. Is (are) the sectoral scope(s) to which the project pertains presented?	PDD	DR	The sectoral scope: 3 – Energy Demand 8 – Mining/mineral production	**OK**	**OK**
1.3. Are the version number and date of the document presented?	PDD	DR	Initial version of the PDD: 20/09/2012 version 1.0 Final version of the PDD: 23/11/2012 version 2.0	**OK**	**OK**
A.2. Description of the project					
2.1. Is the purpose of the project indicated (with the concise, summarizing explanation of the situation existing prior to the starting date of the project, baseline scenario and project scenario)?	PDD	DR	Yes, this section includes brief summary of the project: *The purpose of the project:* The proposed project is aimed at upgrading production pellets and iron ore concentrate. This project aims to reduce greenhouse gas emissions through the implementation of a set of energy efficiency measures, who mainly reduce specific consumption of electric energy in the production of concentrate and reduce the specific	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			consumption of electricity and natural gas in the production of pellets. *Situation in the baseline scenario: t*he baseline scenario assumes that in the absence of the JI project, the baseline for PJSC "Central Iron Ore Enrichment Works " was to maintaining the existing year 2002 processing equipment and heavy dump trucks in good condition and the specific energy consumption from transporting the rock mass and the production of iron ore concentrate and pellets would have remained constant at the 2002 level *Project scenario:* The project "Implementation of complex energy efficiency measures at PJSC "Central Iron Ore Enrichment Works" involves implementation of measures that aimed to reduce specific consumption of electricity for pellets and iron ore concentrate production, which reduced electricity consumption of the United Energy Systems of Ukraine (hereinafter - UESU) at production. Also it prevent to reduce of natural gas specific consumption in the pellets production.		

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
2.2 Is the history of the Project including its JI component summarized?	PDD	DR	Yes, the history of the Project including its JI component is presented in section A.2. of the PDD.	**OK**	**OK**
2.2.1. Is it clarified how the proposed project activity reduces emissions GHG that would occur in the baseline scenario?	PDD	DR	Yes, the proposed project involves implementation of series of measures on saving energy resources.	**OK**	**OK**
A.3. Project participants					
3.1. Are project participants and Party(ies) involved in the project listed?	PDD	DR	Two project participants are indicated In Section A.3, Table 1 of the PDD: - Public Joint Stock Company (PJSC) "Central Iron Ore Enrichment Works" and - Metinvest International S.A.	**OK**	**OK**
3.2. Is contact information provided in Annex 1 of the PDD that is indicated in section A.3?	PDD	DR	Contact information of the project participants is given in Annex 1 of the PDD	**OK**	**OK**
3.3. Is it indicated, if the Party involved is a host Party?	PDD	DR	Host Party is Ukraine	**OK**	**OK**
3.4. Is it indicated, if it is the case, if the Party involved wishes to be considered as a project participant?	PDD	DR	Parties involved do not want to be participants of the project.	**OK**	**OK**
A.4. Technical description of the project					
A.4.1. Location of the project					
4.1.1. Host Party(ies)	PDD	DR	Ukraine	**OK**	**OK**
4.1.2. Region/State/Province etc.	PDD	DR	Dnipropetrovsk region	**OK**	**OK**
4.1.3. City/Town/Community etc.	PDD	DR	Kryvyi Rih City	**OK**	**OK**
4.1.4. Detail of the physical location, including information allowing the unique identification of the project (maximum one page)					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
4.1.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s) (this section should not exceed one page)?	PDD	DR	Detailed information is presented in Section A.4.1.4. However it was found out description of the project activity location isn`t exactly precise. This section does not exceed one page. **CAR 01:** Please provide a more accurate map of the location of the project activity. **CAR 02:** Provide clarifying information about the location of all components of the project (mines and production) **CAR 03:** How is the Mine Giant - Deep related to the proposed project?	**CAR 01** **CAR 02** **CAR 03**	**OK**
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
4.2.1. Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project described?	PDD	DR	Reduction of greenhouse gas emissions is achieved as a result of increasing energy efficiency through the implementation of a number of subprojects in the proposed project activity: • Modernization of OK-324 indurating machine (step-wise from 2005) allowed achieving specific natural gas consumption reduction during production of iron ore pellets in specific indicators from 15.0 m^3/t to 11.4 m^3/t;	**CAR 04** **CAR 05** **CL 01**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			• Implementation of condenser compensating installations allowed realizing and automatizing the process of compensation of reactive energy overflow and reduce enterprise's expenses by 12-17%; • Usage of effective system of electric drives management on the basis of scheme "thyristor converter – engine" allowed reducing exploitation as well as energy costs. See full and detailed description of energy and resource saving measures in the Section A.4.2 of the PDD. **CAR 04:** In PDD 3 subprojects are indicated, but described and discussed during on-site visit only two. Correct the error or provide necessary information. **CAR 05:** Provide a list of future activities planned under the project of enterprise modernization. **CL 01:** Explain whether the activities: • The implementation of commercial accounting;		

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			• Organizational measures; • Implementation of AMR as those that will not take place without the income from the sale of carbon credits.		
4.2.1.1. Does the project design engineering reflect current good practices?	PDD	DR	Project design engineering reflects current good practices.	**OK**	**OK**
4.2.1.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	PDD	DR	As a result of the complex energy-saving measures, the significant reduction of energy consumption for production of products occurred. These activities require the use of newest equipment with the most up-to-date technology, or improving existing equipment to such levels. Description of the applicable project equipment is given in Section A.4.2.	**OK**	**OK**
4.2.1.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	PDD	DR	Technology used in this project for production of pellets and iron concentrate is modern, and there is no probability that it will be replaced by any other technology during the project lifetime. **CL 02:** Please provide an explanation that the applied technology will not undergo any changes in the case of increasing of production.	**CL 02**	**OK**
4.2.2. Are all relevant technical data and the implementation schedule indicated?	PDD	DR	Yes. The implementation schedule of all energy efficiency measures is	**CAR 06**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			indicated in Section A.4.2. of the PDD. **CAR 06:** Provide technical information of main power equipment involved in the project activities. **CAR 07:** Please provide an implementation schedule of major measures in sub-projects in tabular form with the indicated dates.	**CAR 07**	
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances:					
4.3.1. Is it indicated how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed project?	PDD	DR	Greenhouse gases are taking place due to: - natural gas combustion for the production of pellets; and - electricity consumption from UESU for the production of iron ore concentrate and pellets. Emission reductions due to this project will come from two main sources: ▪ Reduction of the specific electricity consumption per tonne of produced iron ore concentrate. Energy consumption reduction will allow decreasing the amount of	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			energy consumption out of UESU; ▪ Allow reductioning of the specific electricity consumption and specific consumption of natural gas per tonne of produced pellets.		

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
4.3.2. Is it stated why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances?	PDD	DR	Yes, this section contains the relevant information. Environmental legislation is not perfect in Ukraine yet; so far it is not fully adapted to the current requirements of international environmental bodies and European Union standards. There is no targeted state policy in Ukraine requiring to reduce greenhouse emissions by the mining industry enterprises. **CL 03:** Please provide an explanation whether any energy saving measures would be carried out in the absence of the Kyoto component.	**CL 03**	**OK**
4.3.3. Are the estimates of anticipated total reductions provided in tonnes of CO_2 equivalent as determined in section E of the PDD. (This section should not exceed one page).	PDD	DR	Yes. Section A.4.3.1 of the PDD contains tables with estimated annual emission reductions for the chosen crediting period in tCO_2e. Average annual emission reductions over the crediting period are 111 069 tonnes of CO_2 equivalent.	**OK**	**OK**
A.4.3.1. Estimated amount of emission reductions over the crediting period					
4.3.1.1. Is it provided the length of the crediting period and estimates of total as well as annual emission reductions using the appropriate tabular format?	PDD	DR	Yes, the relevant information is presented in tabular format. - Duration of the crediting period is 5 years; - Duration of the crediting period before 2008 is 4 years - Duration of the crediting period after 2012 is 8 years. **CL 04:** Explain why the beginning of	**CL 04**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			implementation period before the 2008 has taken as 2004 since the activity is started from 2003.		
4.3.1.2. Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?	PDD	DR	Yes, annual average of estimated emission reductions is calculated by appropriate method.	**OK**	**OK**
A.5. Project approval by the Parties involved					
5.1. Are written project approvals by the Parties involved attached? Are they unconditional?	PDD	DR	According to the national Ukrainian procedure Letter of Approval from Ukraine is being expected after determination of the project. **CL 05:** Please provide an explanation of the procedure for receiving Letter of Approval from The Netherlands.	**CL 05**	**OK**
B. Baseline					
B.1 Description and justification of the baseline chosen					
1.1. Is it indicated in the PDD: - a detailed theoretical description of the baseline in a complete and transparent manner, as well as a justification of chosen baseline using the step-wise approach;	PDD	DR	Yes, there is the description of the chosen baseline. Stepwise approach to JI projects is used to establish baseline. Justification of the chosen baseline and detailed theoretical description with references on	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
- a justification of baseline setting; - references on regulations according to baseline setting.			regulatory documents are in Section B.1. of the PDD.		
1.2. Does the PDD explicitly indicate the approach used for identifying the baseline with references on regulations?	PDD	DR	Approach for baseline setting and monitoring elaborated in accordance with Appendix B of JI Guidelines (JI specific approach).	**OK**	**OK**
1.3. Is it indicated in the PDD that baseline was established:					
1.3.1. by listing and describing plausible (alternative) future scenarios on the basis of conservative assumptions and selecting the most plausible one?	PDD	DR	There are a list in Section B.1 with description of possible (alternative) future scenarios: - Alternative 1.1 - Continuation of current situation at the plant without activities improving power efficiency; - Alternative 1.2 - Performance of project activities without joint implementation mechanisms However, it is not clear which conservative assumptions were used. Some barriers set too superficially. **CAR 08:** Please specify which conservative assumptions were used for indicating the baseline. **CAR 09:** Describe more widely the barriers of Alternative 1.2.	**CAR 08** **CAR 09**	**OK**
1.3.2. taking into account relevant national and/or sectoral policies and	PDD	DR	In view of valid political demands and circumstances, key factors influencing	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector?			the baseline scenario were taken into account		
1.3.3. in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?	PDD	DR	Specific approach to JI projects is used for baseline setting. Baseline was identified by the enumeration and analysis of plausible future scenarios and selecting the most possible of them.	**OK**	**OK**
1.3.4. taking into account of uncertainties and using conservative assumptions?	PDD	DR	See **CAR 08.**	**OK**	**OK**
1.3.5. in such a way that emission reduction units (ERUs) cannot be earned for decreases in activity levels outside the project activity or due to force majeure?	PDD	DR	ERUs cannot be earned for decreases in activity levels outside the project activity or due to force majeure	**OK**	**OK**
1.3.6. by drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring"?	PDD	DR	Yes, baseline was set by drawing on the list of variables contained in appendix B, but some symbols were changed. **CAR 10:** Correct designation of standard variables according to appendix B to "Guidance on criteria for baseline setting and monitoring".	**CAR 10**	**OK**
1.4. If a multi-project emission factor is used, does the PDD provide appropriate justification?	PDD	DR	Multi-project emission factor is not used	**OK**	**OK**
1.5. Are the title, reference number and	PDD	DR	Approved CDM methodology isn't used. To establish baseline used JI	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
version of the approved CDM methodology clearly indicated in the context of the project?			specific approach.		
1.6. Is the applied version of the CDM methodology the most recent one and/or is this version still applicable?	PDD	DR	N/A	**OK**	**OK**
1.7. Is it described how the chosen approach is applied in the context of the project?	PDD	DR	JI specific approach, applied in the context of this project, is completely and clearly described in Section B.1. of the PDD.	**OK**	**OK**
1.8. Are the key information and data used to establish the baseline (variables, parameters, data sources etc.) indicated in tabular form?	PDD	DR	Yes, necessary information is provided in tabular form in Section B. 1. of the PDD. However, not all parameters used to establish the baseline are listed in this section in tabular form. **CAR 11:** Describe parameters EF_{CO2NG} (emission factor for natural gas combustion) and W_{NG} (carbon content in NG). **CAR 12:** Provide values in the tables that will be fixed at the stage of determination. Provide a separate table with the parameters which are fixed and those that will be monitoring throughout the lifetime of the project. **CL 06:** Explain which factors are affected on specific energy consumption for the production of	**CAR 11** **CAR 12** **CL 06** **CAR 13** **CAR 14**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			concentrate and pellets (quality of raw materials, energy quality, weather events, etc.). Whether there is not linear energy consumption from technological factors? **CAR 13:** Value of Net Calorific Value (NCV_{NG}) of natural gas in the baseline scenario should not be fixed. **CAR 14:** Provide parameter $OXID_{NG}$ for period before 2008, the full name of the source and reference.		
1.9. Are all regulations and sources clearly referenced?	PDD	DR	Yes, references to regulations are clearly indicated and are available. **CAR 15:** Please provide the full name of reference source to regulatory document that is the data source for baseline parameters. **CAR 16:** Please provide the reference to regulatory document that is the data source for carbon content in natural gas. **CAR 17:** Establishing of specific energy consumption to the amount of output products is supplied with data for 2001. Please confirm that this year selected as most conservative, or use average data for 3 years.	**CAR 15 CAR 16 CAR 17**	**OK**
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
2.1. Is the demonstration of project additionality indicated and described in the PDD using the step-wise approach?	PDD	DR	Step-wise approach is used for this project in order to demonstrate that the project will reduce emissions from sources that are additional to any reductions that would have occurred without the project. The following steps are taken as per "Tool for the demonstration and assessment of additionality" version 06.0.0: Step 1. Identification of alternatives to the project activity consistent with current laws and regulations; Step 2. Investment Analysis; Step 3. Barrier analysis; Step 4. Common practice analysis. More detailed description of c Step-wise approach is given in Section B.2. of the PDD.	**OK**	**OK**
2.2. Does the PDD provide a justification of the applicability of the approach with a clear and transparent description with relevant reference on regulations?	PDD	DR	PDD doesn't provide justification of the applicability of this approach along with descriptions and links to relevant regulatory documents. **CAR 18:** Provide justification of the applicability of used approach with a clear and transparent description and a link to the relevant regulations. **CAR 19:** Provide a link to data on foreign investment.	**CAR 18** **CAR 19**	**OK**
2.3. Is it described how the chosen approach	PDD	DR	Yes, in Section B.2. of the PDD it is	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
is applied in the context of the project?			described how the chosen approach is applied in the context of this project.		
2.4. Are additionality proofs provided?					
2.4.1. If the application of the most recent version of the "Tool for the demonstration and assessment of additionality" is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	PDD	DR	Yes, additionallity of the proposed JI project was estimated according to the "Tool for the demonstration and assessment of additionallity" (version 06.0.0). Section B.2. of the PDD contains all explanations, descriptions and analyses.	**OK**	**OK**
2.4.2. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?	PDD	DR	Detailed analysis in Sections A.4.3., B.1. and B.2. of the PDD shows that emissions in the project scenario will be less than the emissions in the baseline scenario due to the implementation of the project activity.	**OK**	**OK**
2.4.3. Is it demonstrated that the project activity itself is not a likely baseline scenario?	PDD	DR	Yes, in Sections A.2., B.1. and B.2. of the PDD it is clearly demonstrated that the activity under this project is not a likely baseline scenario. **CL 07:** Since the implementation of energy efficiency measures implemented gradually, explain whether their realization was possible at their own expense for fast-payback projects. **CL 08:** Can reducing of payments for emissions serve as an incentive for implementation of the project.	**CL 07** **CL 08**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
2.5. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	PDD	DR	Baseline is set taking into account relevant national policies and circumstances (please see Sections B.1. and B.2. of the PDD). None of the alternatives listed in Section B.1., does not contradict the laws of Ukraine.	**OK**	**OK**
B.3. Description of how the definition of the project boundary is applied to the project					
3.1. Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: - under the control of the project participants; - reasonably attributable to the project; - significant?	PDD	DR	The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are: - under the control of the project participants, such as emissions from the consumption of electricity and natural gas during pellets an iron ore production; - reasonably attributable to the project, - significant, as it is stated above. **CL 09:** Is it possible to reduce the energy consumption (gas, electricity) from project implementation by other sources (diesel, etc.) which are not included in the project.	**CL 09**	**OK**
3.2. Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 3.1.	PDD	DR	Some sources were excluded from the project boundary based on the assessment of individual cases and	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
above?			taking into account the criteria indicated in paragraph 3.1. See **CL 09.**		
3.3. Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	PDD	DR	Project boundary and emission sources of the relevant gases are listed in Section B.3. of the PDD in Figures 9-10. **CAR 20:** Correct the name of the object in the block diagram (Fig. 6) and remove the consumption of diesel fuel from consideration. **CAR 21:** Provide a block-diagram for the project and baseline scenario.	**CAR 20** **CAR 21**	**OK**
3.4. Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	PDD	DR	Yes, there is justification of the exclusion of sources.	**OK**	**OK**
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
4.1 . Is the date of the baseline setting presented (in DD/MM/YYYY)?			The date of the baseline setting: 11/09/2012	**OK**	**OK**
4.2 . Is the contact information of persons setting the baseline provided?			Baseline is set by Public Joint Stock Company (PJSC) "Central Iron Ore Enrichment Works". Persons setting the baseline: Tymoshenko Pavlo Genadiyovych. Contact information is provided in Section B.4. of the PDD.	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
4.3 . Is the person/entity also a project participant listed in Annex 1 of the PDD?	PDD	DR	Public Joint Stock Company (PJSC) "Central Iron Ore Enrichment Works" is a project participant listed in Annex 1 of the PDD.	**OK**	**OK**
C. Duration of the project/crediting period					
C.1. Starting date of the project					
1.1. Is the project's starting date clearly defined?	PDD	DR	Project's starting date is not correct in Section C.1. of the PDD – 01/01/2003.		**OK**
1.2. Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	PDD	DR	The PDD contains information about the beginning of the project that does not meet indicated date in section C.1. **CAR 22:** Approving of the JI project was in 2002. Submit a document that confirmed the starting date of the project and insert this information in the PDD.	**CAR 22**	**OK**
1.3. Is the starting date after the beginning of 2000?	PDD	DR	Yes. The starting date is after the beginning of 2000	**OK**	**OK**
C.2. Expected operational lifetime of the project					
2.1. Is the project's operational lifetime clearly defined in years and months?	PDD	DR	Implemented measures subject to proper maintenance can operate over at least 17 years (204 month). See **CAR 22.**	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
C.3. Length of the crediting period					
3.1. Is the length of the crediting period specified in years and months?	PDD	DR	Crediting period is from 01/01/2008 to 31/12/2012. Duration is 5 years or 60 months	**OK**	**OK**
3.2. Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	PDD	DR	Crediting period starts only after 2008, the corresponding statement is present in the PDD.	**OK**	**OK**
3.3. If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	PDD	DR	Yes, it is states in Section C.3. of the PDD that the extension of the crediting period can occur with the consent of the host Party. Estimates of emission reductions for the periods before and after 2012 are presented separately in Section A.4.3.1. of the PDD. **CAR 23:** Attach in Section C.3. length of period after the first commitment period.	**CAR 23**	**OK**
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
1.1. Is it indicated in PDD a detailed theoretical description in a complete and transparent manner, as well as a justification of chosen monitoring plan using the step-wise approach?	PDD	DR	Justification of chosen monitoring plan is sufficient, its theoretical description is presented in Section D.1. of the PDD. Stepwise approach is not used. **CAR 24:** Provide justification of monitoring plan using a stepwise	**CAR 24**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			approach.		
1.2. Does the PDD explicitly indicate the chosen approach used for monitoring with references on regulations?	PDD	DR	Project participant chose JI specific approach on monitoring in accordance with "Guidance on criteria for baseline setting and monitoring", version 03. For establishing of the monitoring plan was used: - "Tool to calculate baseline, project and/or leakage emissions from electricity consumption" (version 01); and - "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion" (version 02)	**OK**	**OK**
1.3. Is the applied methodology considered being the most appropriate one?	PDD	DR	Yes, chosen JI specific approach and Tools are relevant to this project.	**OK**	**OK**
1.4. If national or international monitoring standard has to be applied to monitor certain aspects of the project, is this standard identified and is the reference as to where a detailed description of the standard can be found provided?	PDD	DR	Yes, all relevant references are listed in Section D of the PDD.	**OK**	**OK**
1.5. Are the description of the assumptions, formulas, parameters, data sources and key factors indicated?	PDD	DR	Yes, it is in Section D.1. of the PDD. But not all formulas are described in section D. **CAR 25:** Please provide formulas for $PE_{ironore,\ y}$ (emissions from electricity consumption in the production of iron ore concentrate)	**CAR 25**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			See **CAR 25**		
1.5.1. Is it stated how uncertainties are taken into account and conservativeness is safeguarded?	PDD	DR	Yes, it is indicated in Section D.1. of the PDD. **CAR 26:** Explain how uncertainties are taken into account and provided conservative calculations.	**CAR 26**	**OK**
1.6. Is it described how the chosen approach is applied in the context of the project?	PDD	DR	Monitoring of projects will be assessed using option 2 (a) of Annex 2 "Guidance on criteria for baseline setting and monitoring", version 03.	**OK**	**OK**
1.7. Does the monitoring plan explicitly and clearly distinguish: 1) data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination regarding the PDD; 2) data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination regarding the PDD; 3) data and parameters that are monitored throughout the crediting period?	PDD	DR	All necessary information is explicitly and clearly stated in accordance with "Guidelines for users of the joint implementation project design document form", version 04. **CAR 27:** Please correct parameters NCV_{NG} in section D.1.1.1. PDD for the measurement method. **CAR 28:** Indicate equality 1 ton of CO_2 and 1 ton of CO_2e.	**CAR 27** **CAR 28**	**OK**
1.8. Are alternative tables used instead of using the tables provided in sections D.1.1.1., D.1.1.3., D.1.2.1., D.1.3.1. and D.2. in line with the approach regarding monitoring	PDD	DR	Not applicable	**OK**	**OK**

<table>
<tr><th>CHECKLIST QUESTION</th><th>Ref.*</th><th>MoV**</th><th>COMMENTS</th><th>Draft Concl.</th><th>Final Concl.</th></tr>
<tr><td>chosen for all data/parameters?</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1.8.1. Are all the required data / parameters according to the used methodology indicated?</td><td>PDD</td><td>DR</td><td>Not applicable</td><td>OK</td><td>OK</td></tr>
<tr><td>1.9. Checklist for parameters
<table>
<tr><th>Data Checklist</th><th>Parameter Title</th></tr>
<tr><td>Is the title in line with methodology?</td><td></td></tr>
<tr><td>Are data unit correctly expressed?</td><td></td></tr>
<tr><td>Is the appropriate description of parameter indicated?</td><td></td></tr>
<tr><td>Is the time of monitoring clearly indicated?</td><td></td></tr>
<tr><td>Is the source clearly referenced?</td><td></td></tr>
<tr><td>Is the correct value provided?</td><td></td></tr>
<tr><td>Has this value been verified?</td><td></td></tr>
<tr><td>Is the choice of data correctly justified or is the measurement method correctly described?</td><td>$A_{coal,y}$
$W_{coal,y}$</td></tr>
<tr><td>Ar quality control and quality assurance procedures indicated?</td><td>$A_{enrich,y}$.
$W_{enrich,y}$</td></tr>
</table></td><td>PDD</td><td>DR</td><td>Not applicable</td><td>OK</td><td>OK</td></tr>
<tr><td colspan="6">D.1.1. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.</td></tr>
<tr><td>1.1.1. Is the option 1 used for monitoring of the emissions in the project scenario and the baseline scenario?</td><td>PDD</td><td>DR</td><td>The option 1 is used for monitoring of the emissions in the project scenario and the baseline scenario.</td><td>OK</td><td>OK</td></tr>
<tr><td colspan="6">D.1.1.1. Data to be collected in order to monitor emissions from the project, and how these data will be archived.</td></tr>
</table>

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
1.1.1.1. Are the data to be collected in order to monitor emissions from the project described?	PDD	DR	Table D.1.1.1. of the PDD includes data to be collected in order to monitor emissions from the project.	**OK**	**OK**
1.1.1.2. Is it indicated how the data will be archived?	PDD	DR	It is indicated how the data will be archived in Table D.1.1.1. of the PDD.	**OK**	**OK**
1.1.1.3. Is it indicated that data monitored are to be kept for two years after the last transfer of ERUs for the project?	PDD	DR	Documents and other data, verified by the monitoring and necessary for the determination and verification, as well as any other data relevant to the works under the project, will be kept at least for two years after the last transfer of ERUs. **CAR 29:** Please specify the period of data archiving in accordance with "Guidance on criteria for baseline setting and monitoring" (version 03) that monitoring data will be kept for two years after the last transfer of ERUs for the project.	**CAR 29**	**OK**
D.1.1.2. Description of formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO_2 equivalent).					
1.1.2.1 Are the formulae clearly and consistently indicated throughout the PDD?	PDD	DR	Formulae are clearly and consistently indicated throughout the PDD.	**OK**	**OK**
D.1.1.3. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived					
1.1.3.1. Are the data necessary for determining the baseline of anthropogenic	PDD	DR	Table D.1.1.3. of the PDD presents data to be collected for monitoring	**CAR 30** **CAR 31**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
emissions of greenhouse gases by sources within the project boundary described?			emissions from the project. **CAR 30:** Correct units of specific consumption of natural gas and electricity in the production of pellets from the baseline ($SFC_{pellets,NG,BC}$, $SEC_{pellets,elec,BC}$) **CAR 31:** Remove variable FTy (vehicles freight turnover during the project scenario mining rock transportation) from the list of variables in D.1.1.3.		
1.1.3.2. Is it indicated how data will be archived?	PDD	DR	It is indicated in Table D.1.1.3 of the PDD how this data will be archived.	**OK**	**OK**
D.1.1.4. Description of formulae used to estimate baseline emissions (for each gas, source etc.; emissions in units of CO_2 equivalent)					
1.1.4.1. Are the formulae clearly and consistently indicated throughout the PDD?	PDD	DR	Formulae are clearly and consistently indicated in Section D.1.1.4. of the PDD and throughout the PDD.	**OK**	**OK**
D.1.2. Option 2 - Direct monitoring of emission reductions from the project (values should be consistent with those in section E)					
1.2.1. Is the option 2 used for monitoring of the emissions in the project scenario and the baseline scenario?	PDD	DR	N/A	**OK**	**OK**
D.1.2.1. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived					
1.2.1.1. Are the data to be collected in order to monitor emissions from the	PDD	DR	Table D.1.2.1. of the PDD includes data to be collected in order to	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
project described?			monitor emissions from the project.		
1.2.1.2. Is it indicated how the data will be archived?	PDD	DR	Table D.1.2.1. of the PDD indicates how the data will be archived.	**OK**	**OK**
1.2.1.3. Is it indicated that data monitored are to be kept for two years after the last transfer of ERUs for the project?	PDD	DR	Please see Section D.1 "Archiving, storage and procedure of documentation turnover"	**OK**	**OK**
D.1.2.2. Description of formulae used to calculate emission reductions from the project (for each gas, source etc.; emissions/emission reductions in units of CO2 equivalent)					
1.2.2.1. Are the formulae clearly and consistently indicated throughout the PDD?	PDD	DR	The formulae are clearly and consistently indicated in the PDD.	**OK**	**OK**
D.1.3. Treatment of leakage in the monitoring plan					
1.3.1. Are data and information that will be collected in order to monitor leakage effects of the project described, if applicable?	PDD	DR	N/A	**OK**	**OK**
1.3.2. Are formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO_2 equivalent) described?	PDD	DR	N/A	**OK**	**OK**
D.1.4. Description of formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions/emission reductions in units of CO_2 equivalent)					
1.4.1. Are the formulae clearly and consistently indicated throughout the PDD?	PDD	DR	Description of formulas is clearly and consistently indicated in Section D.1.4. of the PDD.	**OK**	**OK**
D.1.5. Where applicable, in accordance with procedures as required by the host Party, information on the collection and archiving of information on the environmental impacts of the project					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
1.5.1. Is information on the collection and archiving of information on the environmental impacts of the project indicated?	PDD	DR	Collection and archiving of the information on the environmental impacts of the project will be carried out based on the approved EIA in accordance with the Host Party legislation. **CAR 32:** Scheme of energy consumption and combustive materials at technological stages (Fig. 8) should not be considered in section D.1.5.	**CAR 32**	**OK**
1.5.2. Is reference to the relevant host Party regulation(s) provided?	PDD	DR	All references presented in Section F.1	**OK**	**OK**
1.5.3. If not applicable is it stated so?	PDD	DR	-	**OK**	**OK**
D.2. Quality control (QC) and quality assurance (QA) procedures undertaken for data monitored					
2.1. Are the quality assurance and control procedures for the monitoring process established? This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request?	PDD	DR	Quality control and quality assurance procedures undertaken for data monitored are indicated in tabular format in Section D.2. of the PDD. However, the information requires clarification. **CAR 33:** Please correct section D.2. considering requests above.	**CAR 33**	**OK**
2.2. Are data corresponded with those in section D.1?	PDD	DR	Yes. Data are corresponded with those in section D.1 of the PDD.	**OK**	**OK**
D.3. Please describe the operational and management structure that the project operator will apply in implementing the monitoring plan					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
3.1 Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project?	PDD	DR	The project owner – PJSC "Central Iron Ore Enrichment Works", accomplished all the required actions to implement principles of this monitoring plan into its organizational and quality management structure. The operational and management structure are presented in section D.3. of the PDD in figure 9. **CAR 34:** Provide an explanation. What is the company "CPB" in the structure of monitoring (Figure 9) and mark the transition to data of the MG.	**CAR 34**	**OK**
3.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	PDD	DR	Yes. All relevant responsibilities and institutional arrangements for data collection and archiving are clearly provided.	**OK**	**OK**
3.3. Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?	PDD	DR	Monitoring plan, on the whole, reflects good monitoring practices appropriate to the type of object.	**OK**	**OK**
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
4.1. Is the contact information of person(s)/entity(ies) establishing the monitoring plan provided?	PDD	DR	The contact information of person establishing the monitoring plan is provided.	**OK**	**OK**
4.2. Is the person/entity also a project participant listed in Annex 1 of the PDD?	PDD	DR	Necessary information isn't given in Section D.4. of the PDD.	**OK**	**OK**
E. Estimation of greenhouse gases emission reductions					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
E.1. Estimated project emissions					
1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due to the project (for each gas, source etc.; emissions in units of CO_2 equivalent)?	PDD	DR	Yes, there is such explanation. Formulas used to estimate project emissions (through energy consumption and natural gas consumption) are described in Section D of the PDD.	**OK**	**OK**
1.1.1. Is there a description of calculation of GHG project emissions in accordance with the formula? (Supporting documentation)	PDD	DR	The description of calculation of GHG project emissions is provided in EXCEL electronic files as supporting documentation. Calculations are performed according to these formulas. The results of these calculations are presented in Section E.1. of the PDD.	**OK**	**OK**
1.1.2. Have conservative assumptions been used to calculate project GHG emissions?	PDD	DR	Assumptions which were used to calculate project GHG emissions are conservative. **CAR 35:** What conservative assumptions were used to calculate project emissions of greenhouse gases?	**CAR 35**	**OK**
E.2. Estimated leakage					
2.1. Are described the formulae used to estimate leakage due to the project activity where required (for each gas, source etc.; emissions in units of CO_2 equivalent)?	PDD	DR	Leakage are not considering in this project.	**OK**	**OK**
2.1.1. Is there a description of calculation of leakage in accordance with the formula? (supporting documentation)	PDD	DR	N/A	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
2.2. Have conservative assumptions been used to calculate leakage?	PDD	DR	N/A	**OK**	**OK**
2.3. If not applicable, is it stated in the PDD?	PDD	DR	Yes.	**OK**	**OK**
E.3. Sum of E.1 and E.2.					
3.1. Does the sum of E.1. and E.2. represent the project activity emissions?	PDD	DR	Yes. The sum of E.1. and E.2. represents the project activity emissions.	**OK**	**OK**
E.4. Estimated baseline emissions					
4.1. Are the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline described (for each gas, source etc.; emissions in units of CO2 equivalent)?	PDD	DR	Formulae used to estimate baseline emissions, are explained in Section D. of the PDD.	**OK**	**OK**
4.1.1. Is there a description of calculation of GHG baseline emissions in accordance with the formula? (supporting documentation)	PDD	DR	Explanation of calculating baseline emissions is given in electronic files EXCEL as supporting documentation. Calculations are performed according to specified formulae. The results of these calculations are presented in Section E.1. of the PDD.	**OK**	**OK**
4.2. Have conservative assumptions been used to calculate baseline emissions?	PDD	DR	Yes, they were used. Conservative assumptions were used to calculate baseline emissions.	**OK**	**OK**
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	PDD	DR	Emission reductions achieved due to the project are listed in Section E.6.	**OK**	**OK**
E.6. Table providing values obtained when applying formulae above					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
6.1. Is the data provided under this section in consistency with data as presented by other chapters E of the PDD?	PDD	DR	The data provided under section E.6. is in consistency with data presented by other sections of the PDD.	**OK**	**OK**
6.2. Is there a table providing the total value of emission reductions?	PDD	DR	Yes. A table which provided the total value of emission reductions located in section E.	**OK**	**OK**
F. Environmental impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
1.1. Has an analysis of the possible environmental impacts of the project been sufficiently described?	PDD	DR	Yes, please see Section F of the PDD.	**OK**	**OK**
1.2. Are transboundary environmental impacts considered in the analysis?	PDD	DR	Transboundary impacts were not observed. There are no impacts that would have occured within the area of any other country and that are caused by the proposed project activity which is physically located entirely within Ukraine	**OK**	**OK**
1.3. Are all regulations and sources clearly referenced?	PDD	DR	The Host Party for this project is Ukraine. Environmental Impact Assessment (EIA) is the part of the Ukrainian project planning and permitting procedures. Reviewing EIA after project implementation is not required because the source of emissions remains unchanged and doesn`t increase.	**OK**	**OK**
F.2. If environmental impacts are considered significant by the project participants or the host Party, provision of					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
conclusions and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party					
2.1. Is a viewpoint regarding significant environmental impacts of the project participants or the host Party indicated?	PDD	DR	Yes, in Section F.2. of the PDD the project participants concluded that the proposed project has a positive impact on the environment.	**OK**	**OK**
2.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA)?	PDD	DR	Yes, see Section F.2. of the PDD.	**OK**	**OK**
2.3. Have conclusions and all references to the supporting documentation on the analysis of the environmental impacts been indicated?	PDD	DR	-	**OK**	**OK**
G. Stakeholders' comments					
G.1. Information on stakeholders' comments on the project, as appropriate					
1.1. Have relevant stakeholders been consulted and how?	PDD	DR	Any stakeholder consultation processing for the JI projects is required by the Host Party. Stakeholder comments will be collected during the time of this PDD publication in the internet during the determination procedure. No comments were received.	**OK**	**OK**
1.1.1. Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	-	**OK**	**OK**
1.2. Is there a list of stakeholders from whom comments on the project have been received?	PDD	DR	-	**OK**	**OK**
1.3. Is the nature of comments provided?	PDD	DR	-	**OK**	**OK**
1.4. Has due account been taken of any	PDD	DR	-	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
stakeholder comments received?					
Annexes					
Annex 1. Contact information on project participants					
1.6. Is the information provided in consistency with the one given under section A.3?	PDD	DR	Yes, the information provided in Annex 1 is in a consistency with the one given under Section A.3.	**OK**	**OK**
1.7. Are the mandatory fields for each organisation listed in section A.3. of the PDD filled notably organisation, name of contact person, street, city, postal code, country, telephone number(s) and fax number or e-mail address?	PDD	DR	Yes. The mandatory fields for each organization listed in section A.3. of the PDD are filled.	**OK**	**OK**
Annex 2. Baseline information					
2.1. Is a table containing the key elements of the baseline (including variables, parameters and data sources) provided?	PDD	DR	Baseline information is provided in Section B of this PDD.	**OK**	**OK**
2.2. If additional background information on baseline data is provided: is this information in consistency with data presented by other sections of the PDD?	PDD	DR	There is no additional background information.	**OK**	**OK**
Annex 3. Monitoring plan					
3.1. Is the detail description of all key elements of monitoring plan provided?	PDD	DR	All necessary information is presented in Section D of the PDD.	**OK**	**OK**
3.2. Is the provided information on monitoring plan in consistency with data presented in section D of the PDD?	PDD	DR	The information on monitoring plan is in a consistency with the one given under Section D of the PDD.	**OK**	**OK**

Ref.* - gives reference to Category 1 and Category 2 documents (see section 3.1. of the Determination Report) where the answer to the checklist question or item is found.

MoV** - Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.

TABLE 3 – RESOLUTION OF CORRECTIVE ACTION AND CLARIFICATION REQUESTS

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
FAR 01. The project has no written project approvals by Parties involved.	Table 1, checklist question 1	Approval by the Parties involved will be obtained after a positive determination opinion, under the law of the Parties.	Endorsement from Ukraine (Host Party) was obtained from the National Authority as the Letter of Endorsement No. 3581/23/7 dated 22/11/2012 **Issue is temporarily closed and pending for a decision before the first verification of the project.**
Correction Action Request			
CAR 01: Please provide a more accurate map of the location of the project activity.	Table 2, checklist question A.4.1.4.1	Fig. 2, 3, 4 were added to the PDD.	**Issue is closed.**
CAR 02: Provide clarifying information about the location of all components of the project (mines and production).	Table 2, checklist question A.4.1.4.1	Required information was added to the PDD.	**Issue is closed.**
CAR 03: How is the Mine Giant - Deep related to the proposed project?	Table 2, checklist question A.4.1.4.1	Mine Gigant-Glyboka belongs to PJSC "Central Iron Ore Enrichment Works"	**Issue is closed.**
CAR 04: In PDD 3 subprojects are indicated, but described and discussed during on-site visit only two. Correct the error or provide necessary information.	Table 2, checklist question A.4.2	The necessary corrections were made in the PDD	**Issue is closed.**

CAR 05: Provide a list of future activities planned under the project of enterprise modernization.	Table 2, checklist question A.4.2	Information on measures for further years was added to the PDD (see.p.12 of PDD version 02)	**Issue is closed.**
CAR 06: Provide technical information of main power equipment involved in the project activities.	Table 2, checklist question A.4.2.2	Technical data of the main energy equipment participating in the project was added to the PDD version 02.	**Issue is closed.**
CAR 07: Please provide an implementation schedule of major measures in sub-projects in tabular form with the indicated dates.	Table 2, checklist question A.4.2.2	The implementation schedule of major measures for sub-projects was added in new version 2.0 of the PDD.	**Issue is closed.**
CAR 08: Please specify which conservative assumptions were used for indicating the baseline.	Table 2, checklist question B.1.3.1	Baseline and monitoring for the proposed Joint Implementation project are based on the applying of conservative assumptions in accordance with"Guidance on criteria for baseline setting and monitoring".	**Issue is closed.**
CAR 09: Describe more widely the barriers of Alternative 1.2.	Table 2, checklist question B.1.3.1	The required changes were made in the PDD.	**Issue is closed.**
CAR 10: Correct designation of standard variables according to appendix B to "Guidance on criteria for baseline setting and monitoring".	Table 2, checklist question B.1.3.6	Indication of standard variables in version 02 of the PDD was corrected in accordance with Appendix B of"Guidance on criteria for baseline setting and monitoring".	**Issue is closed.**
CAR 11: Describe parameters EF_{CO2NG} (emission factor for natural gas combustion) and W_{NG} (carbon content in NG).	Table 2, checklist question B.1.8	Description of parameter WNG, y was added to section B.1 of the PDD version 02. Emission factor for combustion of natural gas is calculated value. Description of all parameters used for calculation was provided in the PDD.	**Issue is closed.**
CAR 12: Provide values in the	Table 2, checklist	Table 4 and Table 5 were added to	**Issue is closed.**

tables that will be fixed at the stage of determination. Provide a separate table with the parameters which are fixed and those that will be monitoring throughout the lifetime of the project.	question B.1.8	the PDD.	
CAR 13: Value of Net Calorific Value (NCV_{NG}) of natural gas in the baseline scenario should not be fixed.	Table 2, checklist question B.1.8	Corrected	**Issue is closed.**
CAR 14: Provide parameter $OXID_{NG}$ for period before 2008, the full name of the source and reference.	Table 2, checklist question B.1.8	2006 IPCC Guidance (Volume 2. Energy. Paragraph 2.1 p.2.6) states that in case of absence of more recent data oxidation factor should be taken as 1. In calculations for the proposed project values similar to 2008-2010 (0.995), were taken in account. This is the conservative assumption and leads to lower emission reduction, than in case of using oxidation factor equal to 1.	**Issue is closed.**
CAR 15: Please provide the full name of reference source to regulatory document that is the data source for baseline parameters.	Table 2, checklist question B.1.9	Sources of data for baseline parameters are specified in section B.1 in tabular format. References were provided where it is possible.	**Issue is closed.**
CAR 16: Please provide the reference to regulatory document that is the data source for carbon content in natural gas.	Table 2, checklist question B.1.9	Reference to source for carbon content of natural gas was added. Please, see Section B.1. of the PDD version 2.0.	**Issue is closed.**
CAR 17: Establishing of specific energy consumption to the amount of output products	Table 2, checklist question B.1.9	Data for 2000 was not saved at the enterprise, and it makes impossible taking the average data for three	**Issue is closed.**

is supplied with data for 2001. Please confirm that this year selected as most conservative, or use average data for 3 years.		years (the implementation of measures was started in 2003 that is why this year cannot be taken as base year). Analysis of indicators for 2001 and 2002 have shown that in 2002 results of energy efficiency were lower than in 2001. In 2002 planning and preparation of JI project implementation was conducted. Thus, application of 2001 as the base year is considered to be maximally correct and conservative.	
CAR 18: Provide justification of the applicability of used approach with a clear and transparent description and a link to the relevant regulations.	Table 2, checklist question B.2.2	The baseline for this project was chosen according to "Guidance on criteria for baseline setting and monitoring" (version 03). Correspondingly to the document, the selection of the baseline can be stated on a certain approach that is used only for a specific JI project, or on a standard approach with the use of methodologies including small-scaled that are approved by the Joint Implementation Supervisory Committee. Since this project consists of several subprojects that are aimed at different key factors allowing to reduce greenhouse gas emission, the baseline was identified on the basis of certain approach. According to "Guidance on criteria for baseline setting and monitoring" (version 03) for such projects, based on the	**Issue is closed.**

		certain approach, specific methodological parts can be included into the baseline setting, that are approved by the Joint Implementation Supervisory Committee. The methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality" (version 03.0.1) was chosen for the project baseline setting. The required references were provided in section B.1 of the PDD version 02.	
CAR 19: Provide a link to data on foreign investment.	Table 2, checklist question B.2.2	Data on foreign investment was provided in section B.1 of the PDD version 02.	**Issue is closed.**
CAR 20: Correct the name of the object in the block diagram (Fig. 6) and remove the consumption of diesel fuel from consideration.	Table 2, checklist question B.3.3	Corrected	**Issue is closed.**
CAR 21: Provide a block-diagram for the project and baseline scenario.	Table 2, checklist question B.3.3	Figure 10 was added to the PDD.	**Issue is closed.**
CAR 22: Approving of the JI project was in 2002. Submit a document that confirmed the starting date of the project and insert this information in the PDD.	Table 2, checklist question C.1.2	The necessary document was provided.	**Issue is closed.**
CAR 23: Attach in Section C.3. length of period after the first commitment period.	Table 2, checklist question C.3.3	8 years (96 months)	**Issue is closed.**
CAR 24: Provide justification of	Table 2, checklist	Description of the approach chosen	**Issue is closed.**

monitoring plan using a stepwise approach.	question D.1.1	was provided in step-by-step manner. See section D.1 of version 02 of the PDD.	
CAR 25: Please provide formulas for $PE_{ironore, y}$ (emissions from electricity consumption in the production of iron ore concentrate).	Table 2, checklist question D.1.5	Formulae 1.1 was added to the PDD	**Issue is closed.**
CAR 26: Explain how uncertainties are taken into account and provided conservative calculations.	Table 2, checklist question D.1.5.1	Baseline and monitoring for the proposed Joint Implementation project are based on the applying of conservative assumptions in accordance with "Guidance on criteria for baseline setting and monitoring". See also answers on CAR 14 and CL 04. Uncertainty level of data is low. Description is provided in section D.2.	**Issue is closed.**
CAR 27: Please correct parameters NCV_{NG} in section D.1.1.1. PDD for the measurement method.	Table 2, checklist question D.1.7.	Corrected	**Issue is closed.**
CAR 28: Indicate equality 1 ton of CO_2 and 1 ton of CO_2e.	Table 2, checklist question D.1.7.	The relevant information was added to the PDD in sections D.1.1.2 and D.1.1.4.	**Issue is closed.**
CAR 29: Please specify the period of data archiving in accordance with "Guidance on criteria for baseline setting and monitoring" (version 03) that monitoring data will be kept for two years after the last transfer of ERUs for the project.	Table 2, checklist question D.1.1.1.3	Corrected	**Issue is closed.**
CAR 30: Correct units of specific consumption of natural	Table 2, checklist question D.1.1.3.1	Corrected	**Issue is closed.**

gas and electricity in the production of pellets from the baseline ($SFC_{pellets,NG,BC}$, $SEC_{pellets,elec,BC}$)			
CAR 31: Remove variable FTy (vehicles freight turnover during the project scenario mining rock transportation) from the list of variables in D.1.1.3.	Table 2, checklist question D.1.1.3.1	Variable FTy was excluded from the PDD.	**Issue is closed.**
CAR 32: Scheme of energy consumption and combustive materials at technological stages (Fig. 8) should not be considered in section D.1.5.	Table 2, checklist question D.1.5.1	Corrected	**Issue is closed.**
CAR 33: Please correct section D.2. considering requests above.	Table 2, checklist question D.2.1	Necessary corrections were made in the PDD version 02.	**Issue is closed.**
CAR 34: Provide an explanation. What is the company "CPB" in the structure of monitoring (Figure 9) and mark the transition to data of the MG.	Table 2, checklist question D.3.1	The mentioned company was included to the PDD due to mistake. Information concerning the mentioned company was excluded from the PDD version 02.	**Issue is closed.**
CAR 35: What conservative assumptions were used to calculate project emissions of greenhouse gases?	Table 2, checklist question E.1.1.2	Baseline and monitoring for the proposed Joint Implementation project are based on the applying of conservative assumptions in accordance with "Guidance on criteria for baseline setting and monitoring". See also answers on CAR 14 and CL 04.	**Issue is closed.**
Clarification Request			
CL 01: Explain whether the	Table 2, checklist question A.4.2	No. There is no motivation for the enterprise to implement the	**Issue is closed.**

activities: • The implementation of commercial accounting; • Organizational measures; • Implementation of AMR as those that will not take place without the income from the sale of carbon credits.		mentioned measures. Organization measures are the part of system that need significant efforts from the relevant departments and connected with risk of production stoppage in case of measures failure.	
CL 02: Please provide an explanation that the applied technology will not undergo any changes in the case of increasing of production.	Table 2, checklist question A.4.2.1.3	Technology is quite flexible and has significant margin of safety. The production amounts are connected with external demand. Thus, the technology will not be changed in case of production volumes increase.	**Issue is closed.**
CL 03: Please provide an explanation whether any energy saving measures would be carried out in the absence of the Kyoto component.	Table 2, checklist question A.4.3.2	In case of Kyoto component absence measures on energy saving would not be conducted due to the reasons provided in barrier analysis. Effect from the implementation of separate measures would be significantly lower than in case of complex project.	**Issue is closed.**
CL 04: Explain why the beginning of implementation period before the 2008 has taken as 2004 since the activity is started from 2003.	Table 2, checklist question A.4.3.1.1	Start of crediting period is the beginning of the next year after beginning of project activity. Emission reduction for the part of 2003 was neglected. This is the conservative assumption.	**Issue is closed.**
CL 05: Please provide an explanation of the procedure for receiving Letter of Approval from The Netherlands.	Table 2, checklist question A.5.1	Information was added to section A.5	**Issue is closed.**
CL 06: Explain which factors are affected on specific energy	Table 2, checklist question B.1.8	The factors that influent the specific energy resources consumption are	**Issue is closed.**

consumption for the production of concentrate and pellets (quality of raw materials, energy quality, weather events, etc.). Whether there is not linear energy consumption from technological factors?		quality of raw materials, quality of energy resources, weather conditions etc. All this factors do not influent significantly on the amount of emission reductions. Besides, the influent is both on project and baseline scenario, therefore the influent is neglected.	
CL 07: Since the implementation of energy efficiency measures implemented gradually, explain whether their realization was possible at their own expense for fast-payback projects.	Table 2, checklist question B.2.4.3	The description of why it is impossible to implement some measures for own funding is provided in section B.2 of the PDD.	**Issue is closed.**
CL 08: Can reducing of payments for emissions serve as an incentive for implementation of the project.	Table 2, checklist question B.2.4.3	Reduction of fee cannot be the motivation for the JI project because in case of fee reduction project still stays financially unattractive. That is caused by the impossibility of involvement of additional investments. Financial barriers are provided more substantially in section B.1 of the PDD, reduction of fees does not solve the mentioned barriers.	**Issue is closed.**
CL 09: Is it possible to reduce the energy consumption (gas, electricity) from project implementation by other sources (diesel, etc.) which are not included in the project.	Table 2, checklist question B.3.1	Reduction of energy resources consumption (e.g. diesel fuel) was also achieved as a result of project implementation, but it was excluded from the calculation for the purpose of conservativeness. These components do not influent on the project as a whole.	**Issue is closed.**