TÜV RHEINLAND (China) LTD. (TÜV RHEINLAND)

DETERMINATION REPORT

Determination of the Joint Implementation Project

Implementation of Energy Saving Measures at PJSC “Khartsyzsk Pipe Plant”

REPORT NO. 01 998 9105072316 - DR

REVISION NO. 02

CUSTOMER: PJSC “Khartsyzsk Pipe Plant”

DETERMINATION REPORT

Date of first issue: 28/10/2012	Project No: 01 998 9105072316
Executor: TÜV Rheinland (China) Ltd. (TÜV Rheinland)	Organizational unit: TÜV Rheinland Ukraine Ltd. Technical Competence Center
Customer: PJSC "Khartsyzsk Pipe Plant"	Client ref.: Zinchenko Yuriy Anatoliyovych

Summary:

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed a determination of the JI project "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant" 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 "Khartsyzsk Pipe Plant" revised the PDD and resubmitted it on 01/12/2012 as version 2.0.

The determination findings presented in this report relate to the project as described in the PDD version 2.0 dated 01/12/2012.

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 9105072316 – DR	Subject Group: JI Project	
Project name: "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant"		
Work carried out by: Dr. Valery Yakubovsky - Team Leader, Technical Competence Center Director; Ganna Zadnipriana – Auditor; Dmytro Rakovich – Trainee		☒ No distribution without permission from the Client or responsible organizational unit
Work verified by: Dr. Lixin Li –.Technical Reviewer TÜV Rheinland (China) Ltd. (TÜV Rheinland)		☐ Limited distribution
Determination Report approved by: Dr. Manfred Brinkmann – Accredited Independent Entity Operational Manager		☐ Unrestricted distribution
Date of this revision: 04/12/2012	Revision №: 02	Number of pages: **81**

Abbreviations

AIE	Accredited Independent Entity
BE	Baseline Emission
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CO_2	Carbon Dioxide
DNA	Designated National Authority
DR	Document Review
e	Equivalent
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	Greenhouse Gas
I	Interview
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
kW	Kilo Watt
kWh	Kilo Watt Hours
LoA	Letter of Approval
LoE	Letter of Endorsement
MoV	Means of Verification
MP	Monitoring Plan
MW	Mega Watt
MW•h	Mega Watt Hours
OSV	On Site Visit
PDD	Project Design Document
PE	Project Emissions
STHS	Stakeholder Survey
t	Tonne
tCO_2e	Tonnes of CO_2 equivalent
UNFCCC	United Nations Framework Convention on Climate Change

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1 DETERMINATION OPINION

The determination team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed a determination of the JI project "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant" in Ukraine (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 JI project "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant" 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 01/12/2012 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/ as well as a justification per the "Guidance on Criteria for Baseline Setting and Monitoring" (paragraphs 23 - 29), version 03.

Project participants used the following approach defined in paragraph 28 (c) of the DVM: Application of the "Combined Tool to identify baseline scenario and demonstrate additionality" version 04.0.0 (the most recent version of the Tool at the time of PDD development) for demonstration of the additionality. In line with this tool, the PDD version 2.0 dated 01/12/2012 provides 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 investment barriers and 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 1.1 dated 21/10/2012) 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 01/12/2012) 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 "Khartsyzsk Pipe Plant" has commissioned TÜV Rheinland (China) Ltd. (TÜV Rheinland) to determinate its JI project "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant" (hereafter called "Project") that is located in Donetsk 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 the project is provided in table 1.

Table 1 – JI Project brief information

Project Parties involved:	1. Ukraine (Host Party); 2. The Netherlands.
Title of the project:	"Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant"
Type of JI activity:	Large scale
Baseline and monitoring methodology:	JI specific approach
Project entity participant:	PJSC "Khartsyzsk Pipe Plant"
Other project participants:	Metinvest International SA
Location of the project:	Ukraine, Donetsk Region, Khartsyzsk
Starting date of the project:	22/01/2003
Length of the crediting period:	25 years or 300 months (01/01/2004-31/12/2028)
Length of the part of the crediting period before the first commitment period of the Kyoto Protocol:	4 years or 48 months (01/01/2004-31/12/2007)
Length of the part of crediting period within the first commitment period of the Kyoto Protocol:	5 years or 60 months (01/01/2008-31/12/2012)
Length of the part of the crediting period after the end of the first commitment period of the Kyoto Protocol:	16 years or 192 months (01/01/2013-31/12/2028)

The project aims at achieving of the greenhouse gas emissions reduction by decreasing of specific energy and natural gas consumption for pipe production PJSC "Khartsyzsk Pipe Plant".

PJSC "Khartsyzsk Pipe Plant", which belongs to Metallurgy Division of Metinvest Group, is one of the biggest in the CIS producer of longitudinally welded pipes of big diameter with inner or outer anticorrosion or smoothing coating for gas and oil long distance pipelines. Nowadays, the plant capacities allow producing more than a million tonnes of pipes annually, including 700 thousand tonnes of coated pipes. Khartsyzsk Pipe Plant includes two main production workshops: Pipe Welding Shop #2 (TESC-2) and Pipe Welding Shop #4 (TSC-4). TESC-2 specializes in the production of longitudinally welded pipes for the construction of trunk pipelines. TSC-4 consists of sites for external three-layer polyethylene coating and internal epoxide smooth

or anti-corrosion coatings on pipes of all assortment produced by the plant.

Within the proposed project the following measures were implemented: switch from heat energy consumption produced at TPP-1 of Khartsyzsk to own heat production, replacement of old installations with new (modern) more energy-efficient equipment; replacement of pumps, installation of frequency converters; replacement of lighting equipment to energy-efficient lamp; partial switch to the electrical energy use from natural gas burning in number of production processes; optimization of operation modes of key equipment with the purpose of achievement of energy-saving effect; improvement of energy consumption accounting and elimination of loses from interconnection tracks; improving thermal insulation of buildings.

Currently, most of the planned activities have been already implemented and resulted in the reduction of energy resources consumption for pipe production by PJSC "Khartsyzsk Pipe Plant" and generation of CO_2 emissions reduction.

Starting date of the JI project activity was 22/01/2003 when the Plant Commission for Energy Saving was created by Order OD #154.
The evidence document of starting date was provided by project participants to the determination team as supporting document (please refer to evidence document # /13/ in Table 2, section 3.1. of the Determination Report).

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 "Khartsyzsk Pipe Plant" 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 "Khartsyzsk Pipe Plant" revised the PDD and resubmitted it on 01/12/2012 as version 2.0.

The determination findings presented in this report relate to the project as described in the PDD version 2.0 dated 01/12/2012.

The following table outlines the documentation reviewed during the determination. The documents provided by PJSC "Khartsyzsk Pipe Plant" 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 "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant" dated 21/10/2011.
/2/.	PDD "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant", version 2.0 dated 01/12/2012.
/3/.	GHG emission reduction calculation spreadsheet in Excel format *HTZ_ER_PDD_2.0*.
/4/.	"Guidelines for users of the Joint implementation project design document form", version 04.
/5/.	"Guidance on Criteria for Baseline Setting and Monitoring", version 03.

/6/.	"Combined tool to identify the baseline scenario and demonstrate additionality", version 04.0.0
/7/.	Kyoto Protocol to the United Nations Framework Convention On Climate Change.
/8/.	Marrakech Accords, JI Modalities.
/9/.	JI guidelines. Appendix B to decision 9/CMP.1.
/10/.	"Joint implementation determination and verification manual", version 01.
/11/.	"Glossary of JI terms", version 03.
/12/.	Letter of Endorsement for the "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant" No. 3690/23/7 dated 30/11/2012.
Documents of Category 2	
/13/.	Order OD No.154 on Creation of the Plant Commission for Energy Saving dated 22/01/2003
/14/.	Passport T4.010.1 PS of the Induction unit Induction
/15/.	Passport of the induction unit Radyne
/16/.	Work Acceptance Certificates No.29, dated 31/07/12 (on installation of lighting equipment)
/17/.	Work Acceptance Certificates No.30 dated 31/07/12, (on installation of lighting equipment)
/18/.	Pumps Register (list of types, models, producers)
/19/.	Statistical information on volumes of energy consumption at PJSC "Khartsyzsk Pipe Plant" from 2002 till 2012.
/20/.	Report on induction furnaces adjustment proving measures implementation.
/21/.	Technical report on implementation of regime-up measures and environmental and thermal testing at furnaces #1 and 2 of flux drying lines TESC-2 UPF at PJSC "Khartsyzsk Pipe Plant"
/22/.	Passport of centrifugal monoblock plump KM10-20. PS
/23/.	Project on reconstruction of ceiling light of the pipe welding shop #2 of PJSC "Khartsyzsk Pipe Plant", 2012.
/24/.	Passport and instruction for Hangar luminaries
/25/.	Passport AFKA.676142.058 PS for luminaries of NSP 20-500, RSP 20-250, RSP 20-400, RSP 20-700 series
/26/.	Regime map of water boiler CPA-700 serial number #160117502 with burner TECNO-70G serial number #200007644, boiler station #5.
/27/.	Regime map of water boiler CPA-700 serial number #160104565 with burner TECNO-100G serial number #200006369, boiler station #5.
/28/.	Regime map of water boiler CPA-700 serial number #160108043 with

	burner TECNO-70G serial number #200006361, boiler station #10.
/29/.	Regime map of water boiler CPA-250 serial number #160114224 with burner TECNO-28G serial number #200007210 boiler station #9.
/30/.	Regime map of water boiler HM150 Jumbo serial number #366 with burner HSGI-22 serial number #000294 boiler station #11.
/31/.	Regime map of water boiler CPA-70 serial number #160099999 with burner CRONO 15-G serial number #200247547 boiler station #14.
/32/.	Regime map of water boiler CPA-70 serial number #160099998 with burner CRONO 15-G serial number #200247549 boiler station #13a.
/33/.	Regime map of water boiler CPA-70 serial number #160103328 with burner TECNO-70G serial number #200006269 boiler station #3.
/34/.	Regime map of water boiler CPA-500 serial number #160132773 with burner TECNO-70G serial number #200006680 boiler station #3.
/35/.	Regime map of water boiler THM-600/7 serial number #952 with gas burner WG 40N/1-A serial number. #5292746 boiler station #17.
/36/.	Regime map of water boiler CPA-350 serial number #160110515 with burner TECNO-38G serial number #200007014 boiler station #8.
/37/.	Regime map of water boiler CPA-300 serial number #160132785 with burner TECNO-38G serial number station #200006409 boiler station #4.
/38/.	Regime map of water boiler CPA-300 serial number. #160108838 with burner TECNO-38G serial number #200006735 boiler station #4.
/39/.	Technical characteristics of the boilers with the list of capacities, burners' types, producers' names
/40/.	Joint document containing technical characteristics of induction furnaces and their constituent units
/41/.	Acceptance Certificate #2 dated 10/03/2011 (on installation of Radyne furnace)
/42/.	Acceptance Certificate #25 dated 02/03/2009 (on installation of induction heating device)
/43/.	Acceptance Certificate #406 dated 13/12/2004 (on installation of induction heating device first line)
/44/.	Acceptance Certificate #857 dated 30/05/2007
/45/.	Acceptance Certificate #43 dated 31/05/2011 (on acceptance of Turbo Master TMX 1250 compressor)
/46/.	Acceptance Certificate #385 dated 08/11/2004 (on installation of individual heating systems)
/47/.	Acceptance Certificate #382 dated 08/11/2004 (on installation of individual heating systems)
/48/.	Acceptance Certificate #381 dated 08/11/2004 (on installation of water boilers, flues, pumps, etc.)
/49/.	Acceptance Certificate #386 dated 08/11/2004 (on installation of water boiler "Master" - 150, flues, pipelines, pumps, etc.)
/50/.	Acceptance Certificate #383 dated 08/11/2004 (on installation of water boiler

	"CPA" - 350, flues, pipelines, pumps, etc.)
/51/.	Acceptance Certificate #411 dated 13/12/2004 (on installation of individual heating sources Unit #17)
/52/.	Acceptance Certificate #23 dated 10/02/2009 (on installation of miniboiler houses Unit #6)
/53/.	Acceptance Certificate #377 dated 08/11/2004 (on installation of individual heating sources Unit #3)
/54/.	Passport of the boiler CPA 200 Registered number D 115H13-0365
/55/.	Boiler CPA 200 installation quality certificate dated October 2003
/56/.	Passport of the pump Caprari
/57/.	Specifications of the compressor Samsung Turbo Master dated 07/11/2010
/58/.	Order on use of equipment consuming gas during autumn and winter
/59/.	Official note as for providing information on Energy Saving Program at PJSC "Khartsyzsk Pipe Plant" in 2012 dated 18/09/2012 #3.1.3.-24/378
/60/.	Passport of gas meter serial number #8484
/61/.	Passport of gas meter serial number #091954
/62/.	Technical data on metering devices (drinking water, technical electric power, natural gas, heat power)
/63/.	Acceptance Certificate #764 dated 30/10/2004 (on repair of boilers, KVPiA, armature and insulation of premises)
/64/.	Acceptance Certificate #838 dated 28/02/2004 (on installation of boiler DOMIcompat F30 with circuit for hot water)
/65/.	Acceptance Certificate #392 dated 08/11/2004 (on installation of boiler Proterm-50, pumps, compensators, etc.)
/66/.	Acceptance Certificate #384 dated 30/11/2004 (on installation of boiler CPA-250, pumps, flues, pipelines, compensators, etc.)
/67/.	Statistical Information on providing repair and maintenance of burners
/68/.	Regime map of water boiler Proterm 50 STO serial number 03021001367 boiler station #4b.
/69/.	Regime map of water boiler CPA-200 serial number 160109006 with burner TECNO-28G serial number 200010959 boiler station #2.
/70/.	Regime map of water boiler CPA-200 serial number 160131108 with burner TECNO-28G serial number200008277 boiler station #2.
/71/.	Regime map of water boiler CPA-130 serial number 1600095151 with burner Crono-15 G2 serial number 200257391 boiler station #13.
/72/.	Regime map of water boiler CPA-130 serial number 1600098592 with burner Crono-15 G2 serial number 20046069 boiler station #12.
/73/.	Regime map of water boiler CPA-130 serial number 1600098593 with

	burner Crono-15 G2 serial number 200257393 boiler station #12.
/74/.	Regime map of water boiler Proterm-50 STO serial number 03021001359 boiler station #16a.
/75/.	Regime map of water boiler Vitogas-100 STO serial number 714330050006 with burner atmosphere type WG-96 G2 serial number 20046069 boiler station #1.
/76/.	Regime map of water boiler Vitogas-100 STO serial number 714330040029 with burner atmosphere type WG-96 G2 serial number 20046069 boiler station #1.
/77/.	Regime map of water boiler Proterm-50 STO serial number 03021001359 boiler station #16.
/78/.	Report on remains and use of fuel and lubricants for 2002
/79/.	Report on remains and use of fuel and lubricants for 2003
/80/.	Report on remains and use of fuel and lubricants for 2004
/81/.	Report on remains and use of fuel and lubricants for 2005
/82/.	Report on remains and use of fuel and lubricants for 2006
/83/.	Report on remains and use of fuel and lubricants for 2007
/84/.	Report on remains and use of fuel and lubricants for 2008
/85/.	Report on remains and use of fuel and lubricants for 2009
/86/.	Report on remains and use of fuel and lubricants for 2010
/87/.	Report on remains and use of fuel and lubricants for 2011
/88/.	Report on fuel, heat power and electric power consumption for 2002
/89/.	Report on fuel, heat power and electric power consumption for 2003
/90/.	Report on fuel, heat power and electric power consumption for 2004
/91/.	Report on fuel, heat power and electric power consumption for 2005
/92/.	Report on fuel, heat power and electric power consumption for 2006
/93/.	Report on fuel, heat power and electric power consumption for 2007
/94/.	Report on fuel, heat power and electric power consumption for 2008
/95/.	Report on fuel, heat power and electric power consumption for 2009
/96/.	Report on fuel, heat power and electric power consumption for 2010
/97/.	Report on fuel, heat power and electric power consumption for 2011
/98/.	Layout view of general electric scheme, technical data and principle of Micromaster 430
/99/.	Annex 1 to program order on PJSC "Khartsyzsk Pipe Plant" Plan of organizational and technical measures, aimed at economic consumption of raw materials and energy resources in 2007
/100/	Annex 1 to program order on PJSC "Khartsyzsk Pipe Plant" Plan of organizational and technical measures, aimed at economic consumption of raw materials and energy resources in 2008
/101/	Annex 1 to program order on PJSC "Khartsyzsk Pipe Plant" Plan of

	organizational and technical measures, aimed at economic consumption of raw materials and energy resources in 2009
/102/	Annex 1 to program order on PJSC "Khartsyzsk Pipe Plant" Plan of organizational and technical measures, aimed at economic consumption of raw materials and energy resources in 2010-2014
/103/	Technical data and urgent situation on energy accounting
/104/	Implementation of Energy Saving Program at PJSC "Khartsyzsk Pipe Plant" for 2005 (form 12-E3)
/105/	Implementation of Energy Saving Program at PJSC "Khartsyzsk Pipe Plant" for 2006 (form 12-E3)
/106/	Implementation of Energy Saving Program at PJSC "Khartsyzsk Pipe Plant" for 2007 (form 12-E3)
/107/	Implementation of Energy Saving Program at PJSC "Khartsyzsk Pipe Plant" for 2008 (form 12-E3)
/108/	Implementation of Energy Saving Program at PJSC "Khartsyzsk Pipe Plant" for 2009 (form 12-E3)
/109/	Implementation of Energy Saving Program at PJSC "Khartsyzsk Pipe Plant" for 2010 (form 12-E3)
/110/	Implementation of Energy Saving Program at PJSC "Khartsyzsk Pipe Plant" for 2011 (form 12-E3)
/111/	The conclusion of the state ecological expertise #03.10.224 on correspondence of project documentation with Environmental Protection regulations
/112/	Checking Certificate of working measuring instrument #02/04-1440, valid till 14/12/2017
/113/	Performance report according to the contract 31/531 dated 14 June 2000 assessment of environmental impacts for boilers of hot water supply to at PJSC "Khartsyzsk Pipe Plant"
/114/	Installation instructions and a passport for electricity meter EuroAlfa. Documents include equipment acceptance certificate dated 01/2005
/115/	Act on repair and replacement of connectors for pneumatic tools. Dated 2012.
/116/	Act dated 23/06/2011 on performing the revision of armature: repair, replacement, inspection and testing of the gas pipeline and leak connections
/117/	Act dated 23/06/2011 on performing the revision of armature: repair, replacement, inspection of plumbing systems
/118/	Certificate of registration Public Joint Stock Company "Khartsyzsk Pipe Plant" A01 #161357
/119/	Certificate AB #376369 from the unified state register of enterprises and organizations of Ukraine
/120/	Authorization of the formation of emissions into the atmosphere form

	#191135 №13-337 dated 24/01/2002
/121/	Authorization of the formation of emissions into the atmosphere form #191135 #13-5964 dated 11/09/2003 Valid till 01/04/05
/122/	Certificate #13-7871 dated 06.12.2007. on the extending the authorization dated 11/09/2003 till 01/08/2008
/123/	Authorization #1 415 000 000 – 14 for the emission of pollutants into the air from stationary sources dated 24/06/2008 #1105\03.2
/124/	Authorization #41.28 dated 18/03/2002 for waste disposal in 2002 valid till 01/01/2003 with annexes and limits
/125/	Authorization #41.33 dated 18/04/2003 for waste disposal in 2003 valid till 01/01/2004, with annexes and limits
/126/	Authorization #41.27 dated 31/03/2004 for waste disposal in 2004 valid till 01/01/2005, with annexes and limits
/127/	Authorization #41.7 dated 04/11/2004 for waste disposal in 2005 valid till 01/01/2006, with annexes and limits
/128/	Authorization #41.19 dated 16/11/2005 for waste disposal in 2006 valid till 01/01/2007, with annexes and limits
/129/	Authorization #41.28 dated 06/12/2006 for waste disposal in 2007 valid till 01/12/2007, with annexes and limits
/130/	Authorization #41.27 dated 19/12/2007 for waste disposal in 2008 valid till 31/12/2008, with annexes and limits
/131/	Authorization #41.27 dated 19/12/2007 for waste disposal in 2008 valid till 31/12/2008, with annexes and limits
/132/	Authorization #41.20 dated 24/11/2008 for waste disposal in 2009 valid till 31/12/2009, with annexes and limits
/133/	Authorization #41.09 dated 15/09/2009 for waste disposal in 2010 valid till 31/12/2010, with annexes and limits
/134/	Authorization #41.29 dated 06/07/2011 for waste disposal in 2011 valid till 31/12/2011, with annexes and limits
/135/	Accounting of waste and packaging materials and containers for 2009 (form 1-VT)
/136/	Accounting of waste and packaging materials and containers for 2010 (form 1-VT)
/137/	Accounting of waste and packaging materials and containers for 2011 (form 1-VT)
/138/	Report on Air Protection for 2004. Form 2-TP. Date of issue 11/09/03 #191135. Valid till 01/04/2005.
/139/	Report on Air Protection for 2005. Form 2-TP Date of issue 11/09/03 #191135. Valid till 01/05/2006.
/140/	Report on Air Protection for 2006. Form 2-TP Date of issue 11/09/03 #191135. Valid till 01/01/2008.
/141/	Report on Air Protection for 2007. Form 2-TP Date of issue 11/09/03

	#191135. Valid till 01/08/2008.
/142/	Report on Air Protection for 2008. Form 2-TP Date of issue 11/09/03 #1415000000-14. Validity term 5 years: till 26/04/2013
/143/	Report on Air Protection for 2009. Form 2-TP Date of issue 26/08/08 #1415000000-14. Valid till 01/04/2013
/144/	Report on Air Protection for 2010. Form 2-TP Date of issue 26/08/08 #1415000000-14. Validity term 5 years
/145/	Report on Air Protection for 2011. Form 2-TP Date of issue 26/08/08 #1415000000-14. Validity term 5 years
/146/	Invoice #34/10059000 for 1st class electricity consumed
/147/	Information on energy saving measures for 12 months of 2011 PJSC "Khartsyzsk Pipe Plant" form 12-EZ
/148/	Order of PJSC "Khartsyzsk Pipe Plant" on establishing of the shelf life of the information related to the joint implementation project OD No.158 dated 01/12/2012.

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 company PJSC "Khartsyzsk Pipe Plant were interviewed and their names are summarized in Table 3. The main topics of the interviews are summarized in Table 4.

Table 4 – Persons interviewed

No	Name	Position	Organization
1.	Komnatnyi Serhiy Vaslyovych	Chief engineer Of VGE	PJSC "Khartsyzsk Pipe Plant
2.	Buzanov Oleh Volodymyrovych	Electrician of TSC-4	PJSC "Khartsyzsk Pipe Plant
3.	Ivannikov Oleksandr Mykolayovych	Electrician of TESC-2	PJSC "Khartsyzsk Pipe Plant
4.	Rybin Oleksandr Yevheniyovych	Head of EnC	PJSC "Khartsyzsk Pipe Plant
5.	Shalimov Serhiy Yakovliyovych	Head of TO	PJSC "Khartsyzsk Pipe Plant
6.	Korniyenko Serhiy Mykolayovych	Head of section of OATP	PJSC "Khartsyzsk Pipe Plant
7.	Kolodochka Volodymyr Viktorovych	Head of Environment	PJSC "Khartsyzsk Pipe Plant

Table 5 – Interview topics

No.	Date	Interviewed organization	Interview topics
/1/	25/10/2012	PJSC "Khartsyzsk Pipe Plant	➢ Project design ➢ Project related legal issues ➢ Technical equipment ➢ Sustainable development issues ➢ Additionality ➢ Crediting period ➢ Monitoring plan ➢ Training history ➢ Management system ➢ Environmental impacts ➢ Stakeholder comments ➢ Approval by the host country

3.3 Resolution of Clarification and Corrective Action Requests

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 SSC 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 01/12/2012, 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 01/12/2012) 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: starting dates of project activity and crediting period; monitoring plan; estimation of GHG emission reductions.

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	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	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**

checklist question.		(I). N/A means not applicable.		**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

The 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
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 26 Corrective Action Requests (CARs), 5 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) The 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 01/12/2012 (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 a Party involved in the project, other than the host Party (The Netherlands) will be obtained before submitting 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 listed as project participants in PDD:

PJSC "Khartsyzsk Pipe Plant
Metinvest International SA

Detailed information regarding project participants is presented in section A.3. of the PDD. Contact information regarding project participants, where legal entities' names are listed clearly, is given in Annex 1 to 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 and FAR 02).

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 PJSC "Khartsyzsk Pipe Plant" selected the JI specific approach for identifying the baseline.

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 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 that the baseline for this JI project is established:

a) **By listing and describing plausible scenarios on the basis of conservative assumptions and selecting the most plausible one.**

Plausible future scenarios are listed below:
E1: Continuation of current situation that does not require any investments;
According to this alternative the existing equipment is used until its operational lifetime ends up. The alternative does not require any investments and costs, and is unattractive in long-term perspective, because the strategy of PJSC "Khartsyzsk Pipe Plant" under favourable conditions foresees future intensive development and growth in output.

E2: Continuation of existing situation, which requires the cost for equipment maintenance;
This alternative envisages the continuation of the same specific power and natural gas consumption, as well as at the pre-project level. After the equipment failure, its replacement would have been carried out element-by-element to the equipment with similar technical specification that would have not led to the emergence of energy-saving effect due to the lack of systematic approach and limited opportunities for optimizing of energy consumption.

E3: Partial implementation of the planned program of energy saving, financed by a project owner;

This alternative foresees a partial implementation of energy efficiency program, implementation of those measures, which do not require significant capital investment and a sound technical upgrade of the facilities. This option requires less money for its implementation. This option would not be appropriate due to the lack of a systematic approach; therefore the resulting effect would be much lower than the result from implementation of project activity. Whereas, while making a decision on the project the future income from the sale of ERUs was taken into account, in this case their volume was insufficient for a positive decision.

E4: Implementation of project activity financed by a third party;
According to this alternative, the introduction of programs aimed at energy efficiency improvement at the facilities of PJSC "Khartsyzsk Pipe Plant" would be performed and financed by a third party, i.e. energy service company. These companies offer to install some pieces of equipment and compensate the cost through the savings achieved. Given the large scale of implemented energy efficiency measures, this alternative could not be implemented due to the lack of energy service companies that could complete such a substantial order. In addition, while realizing this alternative, energy saving measures with not substantial effect, which lead to decrease of energy consumption along with the other measures, would not be implemented. Thus, the implementation of this alternative was unrealistic.

E5: Project implementation without JI incentives.
This option includes the implementation of the project activity without registration it as JI project in the absence of additional financial revenues from the sale of ERUs. This option requires significant capital investment and generates the same emissions reductions likewise in the project scenario.

All scenarios, except Scenario E2 – Continuation of the existing situation which requires the cost for equipment maintenance; face prohibitive barriers. Therefore, continuation of the existing situation is the most plausible future scenario and is the baseline scenario 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 following key factors:
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,

capital availability (including investment barriers), availability of technologies/techniques, skills and know-how and availability of the best available technologies/techniques were taken into account. The presented analysis demonstrates that the chosen baseline is the most plausible future scenario taking into account circumstances of metallurgical sector of Donbas for the moment of project realization.

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.

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. Values for parameters that were fixed ex-ante were calculated on the basis of historical data for year 2002 as the last year of the enterprise operation prior to the project implementation and using conservative assumptions.

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.**
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 as appropriate:

$BE_{TE,y}$	Baseline CO_2 emissions attributable to heat consumption, produced at TPP JSC "Sylur" of Khartsyzsk in the period y
$BE_{EC,y}$	Baseline CO_2 emissions attributable to the electricity consumption in the period y
$BE_{NG,y}$	Baseline carbon dioxide emissions due to natural gas combustion in the period y
$EF_{CO2,NG,y}$	Carbon dioxide emission factor for natural gas combustion
$NCV_{NG,y}$	Net calorific value of natural gas in the period y

$EF_{CO2,EL,y}$	Indirect specific carbon dioxide emissions in the period of consumption of electricity by consumers which are classified as 1st class according to the procedure for determining the classes of consumers, approved by the National Electricity Regulatory Commission of Ukraine from August 13, 1998 # 1052
P_y	Pipe production in the period y
$HC_{NG,BL,m}$	Baseline heat consumption, produced at TPP JSC "Sylur" of Khartsyzsk
η_{BL}	Boilers efficiency at TPP JSC "Sylur" Khartsyzsk, ratio
SEC_{BL}	Baseline specific electricity consumption for pipe production
$SFC_{NG,BL}$	Baseline specific natural gas combustion for pipe production
$C_{NG,y}$	Carbon content of natural gas (in the year y),
$OXID_{NG,y}$	Carbon oxidation factor for natural gas combustion (in the year y)
$PE_{EC,y}$	Project CO2 emissions attributable to the electricity consumption in period y
$PE_{NG,y}$	Project carbon dioxide emissions due to natural gas combustion in the period y
$EC_{PJ,y}$	Project electricity consumption for pipe production in the period y
$FC_{NG,PJ,y}$	Project natural gas consumption for pipe production in the period y
ER_y	Emission reduction under JI project in period y
LE_y	Leakage due to the project realization in period y
BE_y	Baseline emissions in period y
PE_y	Project emissions in period y

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 (refer to CARs 10, 11, 12).

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 the "Combined Tool to identify baseline scenario and demonstrate additionality" version 04.0.0 (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 04.0.0 was the most recent version of the "Tool".

The following steps are taken as per "Combined Tool to identify baseline scenario and demonstrate additionality" version 04.0.0:
Step 1. Identification of alternatives to the project activity;
Step 2. Barrier analysis;
Step 3. Investment 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.

As per "Combined Tool to identify baseline scenario and demonstrate additionality" version 04.0.0 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**:

- E5: Project implementation without JI incentives.

This option includes the implementation of the project activity without registration it as JI project in the absence of additional financial revenues from the sale of ERUs. This option requires significant capital investment and generates the same emissions reductions likewise in the project scenario.

(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:**

- E3: Partial implementation of the planned program of energy saving, financed by a project owner;

This alternative foresees a partial implementation of energy efficiency program, implementation of those measures, which do not require significant capital investment and a sound technical upgrade of the

facilities. This option requires less money for its implementation. This option would not be appropriate due to the lack of a systematic approach; therefore the resulting effect would be much lower than the result from implementation of project activity. Whereas, while making a decision on the project the future income from the sale of ERUs was taken into account, in this case their volume was insufficient for a positive decision.

- E4: Implementation of project activity financed by a third party;

According to this alternative, the introduction of programs aimed at energy efficiency improvement at the facilities of PJSC "Khartsyzsk Pipe Plant" would be performed and financed by a third party, i.e. energy service company. These companies offer to install some pieces of equipment and compensate the cost through the savings achieved. Given the large scale of implemented energy efficiency measures, this alternative could not be implemented due to the lack of energy service companies that could complete such a substantial order. In addition, while realizing this alternative, energy saving measures with not substantial effect, which lead to decrease of energy consumption along with the other measures, would not be implemented. Thus, the implementation of this alternative was unrealistic.

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

- E1: Continuation of existing situation that does not require any investment;

According to this alternative the existing equipment is used until its operational lifetime ends up. The alternative does not require any investments and costs, and is unattractive in long-term perspective, because the strategy of PJSC "Khartsyzsk Pipe Plant" under favourable conditions foresees future intensive development and growth in output.

- E2: Continuation of existing situation, which requires the cost for equipment maintenance;

This alternative envisages the continuation of the same specific power and natural gas consumption, as well as at the pre-project level. After the equipment failure, its replacement would have been carried out element-by-element to the equipment with similar technical specification that would have not led to the emergence of energy-saving effect due to the lack of systematic approach and limited opportunities for optimizing of energy consumption.

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 which requires cost for equipment maintenance 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. Barrier analysis.

The barrier analysis (step 2) was applied by the project participants in accordance with the "Combined Tool to identify baseline scenario and demonstrate additionality" version 04.0.0 to identify if the proposed project faced any barriers preventing its realization. During assessment of barrier analysis by the determination team the "Guidelines for objective demonstration and assessment of barriers" (Version 01) was taken into account.

PDD analysis allowed TÜV Rheinland (China) Ltd. (TÜV Rheinland) to estimate the presented arguments stating that the main barrier that prevented the implementation of project activities is financial barrier. The total cost of the implemented activities under the project is about 32 496.8 thousand UAH. This is a significant cost, which the project owner did have at the time of making the decision on implementation of the project activities, and they should be involved in capital market.
Project participants provided information that the Project is being realized under conditions of investment climate of Ukraine that is far from being favourable. Ukraine is a country of high risk for business and investment. The risk of investing in Ukraine is additionally confirmed by the country rating according to international rating agency Moody's and the corresponding risk premium.

As discussed during the roundtable of OECD (Organization for Economic Cooperation and Development) on the development of business and investment climate in Ukraine, the existing legal framework is not only inadequate, but significantly sabotages the development of market economy in Ukraine. According to Western press reports, the following conclusion can be made: the tax and legal system reforming has improved the situation by adopting the Commercial Code, Civil Code and Tax Code dated January 1, 2004, but there are still unsatisfactory elements that represent a risk for foreign investors. It is believed that Ukraine is heading in the right direction with the introduction of significant reforms, but it still has a long way to realizing their full potential. Frequent and unpredictable changes in the legal system along with the contradictory and inconsistent Civil and Commercial Codes do not allow transparent and stable legal conditions for business. This is seen by international companies as a source of great uncertainty, which makes risky predictions about future business goals and strategies.

According to various sources and as described above, the investment climate in Ukraine is risky and unfavourable, private capital from domestic or international sources are not available or accessible only at excessively high price because of real and perceived risks of doing business in Ukraine.

Thus the existence of financial barrier would prevent the implementation of the above listed alternatives to the project activity, but alternatives E2 – "Continuation of existing situation, which requires the cost for equipment maintenance".

The determination team assessed through the desk review of the PDD and supporting documents that barrier analysis is presented in a transparent manner and provides all the relevant assumptions according to the "Combined Tool to identify baseline scenario and demonstrate additionality" (Version 04.0.0) and "Guidelines for objective demonstration and assessment of barriers" (Version 01)

Step 3. Investment analysis.

This step was not applied by project participants as per "Combined Tool to identify baseline scenario and demonstrate additionality" (Version 04.0.0)

Step 4. Common practice analysis.

Plants in Ukraine with comparable level of production, though with different range of products, are following: JSC "INTERPIPE NTZ", JSC "Interpipe NMTZ" and JSC "Interpipe Niko Tube" (Nall=4).
Energy efficiency measures in the same amount as of the project owner are implemented at none of the listed enterprises. According to the Report on the implementation of the State Development Programme and reforming mining and metallurgical complex for the period until 2011, PJSC "Khartsyzsk Pipe Plant" implemented the most extensive modernization in the field* (Ndiff=4)
Calculating factor F=1- Ndiff/Nall, reflecting the number of plants that use the same practice as in the project activity, among all plants, which have the same level of production as the plant, where project activity was implemented.
F=1- 4/4=0
The proposed project activity is considered as common practice in the relevant field and within certain geographic territory for the implementation of both following requirements:
(a) factor F larger than 0.2;
(b) Nall - Ndiff larger than 3.

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 "Combined Tool to identify baseline scenario and demonstrate additionality" (Version 04.0.0). All the key pieces of evidence for the investment barrier were

*
http://www.google.com.ua/url?sa=t&rct=j&q=&esrc=s&source=web&cd=13&ved=0CCoQFjACOAo&url=http%3A%2F%2Fppa.gov.ua%2Ffiles%2Fzvit%2Fzvit-gmk2011.docx&ei=yHFcUJj_MorLswat-oDQAg&usg=AFQjCNG4yiVjQyig72Xq3639L9U9ZjGfkA&cad=rja

checked. The evidences were transparently reviewed by the determination team and considered to be effective.

Sufficient evidences of additionality were presented by the project participants AIE in the PDD and as proving documents. All the 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 clearly demonstrates that the proposed project activity faced barriers preventing its implementation. Common practice analysis was carried out showing that the proposed project activity is one of the first 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.

Identified problem areas for additionality of the project, project participants' responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Determination report (refer to CARs 13.14).

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.

- CO_2 emissions due to heat production by the natural gas fired boilers at TPP-1 of Khartsyzsk;
- CO_2 emissions due to electricity consumption generated by power plants connected to the United Energy System of Ukraine;
- CO_2 emissions due to natural gas combustion

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

- CO_2 emissions due to electricity consumption generated by power plants connected to the United Energy System of Ukraine;
- CO_2 emissions due to natural gas combustion

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 figure 5 and the details were provided by table 10 in section B.3. of 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 (refer to CAR 15).

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 21/01/2003. This is the date of creation and the beginning of work of the Commission for Energy Saving, main aim of which is identifying and further maximum optimization of the most significant energy consumption in the production. The starting date of the project is after the beginning of 2000.

the expected operational lifetime of the project in years and months is 25 years or 300 months.

the length of the crediting period (01/01/2008 – 31/12/2012) in years and months is 5 years or 60 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 before the first commitment period of the Kyoto Protocol – 01/01/2004 – 31/12/2007.

Length of the part of crediting period before 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 – 01/01/2008 – 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 – 01/01/2013 – 31/12/2028.

Length of the part of crediting period after the first commitment period of the Kyoto Protocol is 16 years or 192 months.

The starting date of the crediting period is after the date the first emission reductions are generated by 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 # /14, 15, 57/ 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) (please refer to evidence documents # /14, 15, 57/ in Table 2, section 3.1. of 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 PJSC "Khartsyzsk Pipe Plant" 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.

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.

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.

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.

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

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.

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 7 and 8 below.

Table 7 – 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.

Parameter	Unit	Description
$HC_{NG,BL}$	GJ	Baseline heat consumption, produced at TPP JSC "SYLUR" of Khartsyzsk
η_{BL}	ratio	Boilers efficiency at TPP JSC "SYLUR" of Khartsyzsk
SEC_{BL}	MWh/t	Baseline specific electricity consumption for pipe production
$SFC_{NG,BL}$	1000 m^3/t	Baseline specific natural gas combustion for pipe production

There are no such data and parameters in the project 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.

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

Parameter	Unit	Description
$EC_{PJ,y}$	MWh	Project electricity consumption for pipe production
$FC_{NG,PJ,y}$	1000 m^3	Project natural gas consumption for pipe production
$EF_{CO2,EL,y}$	tCO_2/ MWh	Indirect specific carbon dioxide emissions in the period of consumption of electricity by consumers which are classified as 2nd class according to the procedure for determining the classes of consumers, approved by the National Electricity Regulatory Commission of Ukraine from August 13, 1998 # 1052
$C_{NG,y}$	tC/TJ	Carbon content of natural gas
$NCV_{NG,y}$	GJ/1000 m^3	Net calorific value of natural gas
$OXID_{NG,y}$	ratio	Oxidation factor of natural gas
P_y	t	Pipe production

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:

$BE_{HC,y}$	Baseline CO_2 emissions attributable to heat consumption, produced at TPP JSC "SYLUR" of Khartsyzsk in the period y
$BE_{EC,y}$	Baseline CO_2 emissions attributable to the electricity consumption in the period y
$BE_{NG,y}$	Baseline carbon dioxide emissions due to natural gas combustion in the period y
$EF_{CO2,NG,y}$	Carbon dioxide emission factor for natural gas combustion
$NCV_{NG,y}$	net calorific value of natural gas in the period y

$EF_{CO2,EL,y}$	Indirect specific carbon dioxide emissions in the period of consumption of electricity by consumers which are classified as 1st class according to the procedure for determining the classes of consumers, approved by the National Electricity Regulatory Commission of Ukraine from August 13, 1998 # 1052
P_y	Pipe production in the period y
$HC_{NG,BL,m}$	Baseline heat consumption, produced at TPP JSC "SYLUR" of Khartsyzsk
η_{BL}	Baseline heat consumption, produced at TPP JSC "SYLUR" of Khartsyzsk
SEC_{BL}	Baseline specific electricity consumption for pipe production
$SFC_{NG,BL}$	Baseline specific natural gas combustion for pipe production
$C_{NG,y}$	Carbon content of natural gas (in the year y)
$OXID_{NG,y}$	Carbon oxidation factor for natural gas combustion (in the year y)
$PE_{EC,y}$	Project CO_2 emissions attributable to the electricity consumption in period y
$PE_{NG,y}$	Project carbon dioxide emissions due to natural gas combustion in the period y
$EC_{PJ,y}$	Project electricity consumption for pipe production in the period y
$FC_{NG,PJ,y}$	Project natural gas consumption for pipe production in the period y
ER_y	Emission reduction under JI project in period y
LE_y	Leakage due to the project realization in period y
BE_y	Baseline emissions in period y
PE_y	Project emissions in period y,

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.

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.

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

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.

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 # /148/ in Table 2, section 3.1. of the Determination Report).

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 relate 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 # /60, 61, 62, 112, 114/ 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 (refer to CARs 19-23, CL 05).

4.8 Leakage

In accordance with paragraphs 40 - 41 of the DVM this area focuses on checking of the assessment of the potential leakage in the project.

The project "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant" used the JI specific approach for baseline setting.

Due to the project implementation no leakages are expected.

The problem areas for project's leakage were not identified.

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:

$ER_y = BE_y - PE_y - LE_y$
Where:
ER_y – GHG emission reductions in the year *y* [tCO_2e];
BE_y – Sum of GHG emissions in baseline scenario in the year *y* [tCO_2e];
PE_y – Sum of GHG emissions in project scenario in the year *y* [tCO_2e];
LE_y – Leakages of GHG emissions due to Project activity in the 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:

$$BE_y = BE_{HC,y} + BE_{EC,y} + BE_{NG,y}$$

where:

$BE_{HC,y}$ Baseline CO_2 emissions attributable to heat consumption, produced at TPP JSC "SYLUR" of Khartsyzsk in the period y, t CO_2;

$BE_{EC,y}$ Baseline CO2 emissions attributable to the electricity consumption in the period y, t CO_2;

$BE_{NG,y}$ Baseline carbon dioxide emissions due to natural gas combustion in the period y, t CO_2.

The detailed algorithms and formulae for estimating emissions in the baseline scenario of the project are described under sections D.1 and Annex 2. of the PDD. The details of the calculation are provided in the GHG emission reductions calculation spreadsheet in Excel format.

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

$$PE_y = PE_{EC,y} + PE_{NG,y}$$

where:

$PE_{EC,y}$ Project CO2 emissions attributable to the electricity consumption in period y, t CO_2;

$PE_{NG,y}$ Project carbon dioxide emissions due to natural gas combustion in the period y, t CO_2.

The detailed 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.

No leakages take place during the project activities

$$LE_y = 0$$

where

LE_y Leakage due to the project realization in period y, tCO_2e

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:	360 134
Leakage, tCO_2e	0
Emissions for the baseline scenario, tCO_2e:	739 955
Emission reductions, tCO_2e:	379 821
Annual average of estimated emission reductions, tCO_2e:	94 955

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:	540 435
Leakage, tCO_2e	0
Emissions for the baseline scenario, tCO_2e:	1 021 563
Emission reductions, tCO_2e:	481 128
Annual average of estimated emission reductions, tCO_2e:	96 226

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 – 31/12/2028**
Emissions for the project scenario, tCO_2e:	1 923 552
Leakage, tCO_2e	0
Emissions for the baseline scenario, tCO_2e:	4 049 680
Emission reductions, tCO_2e:	2 126 128
Annual average of estimated emission reductions, tCO_2e:	132 883

The problem areas for GHG emission reductions calculation were not identified.

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 host Party for the project is Ukraine. The conclusion and all references to supporting documentation of environmental impacts are provided in section F of the PDD.

In general, the environmental impact of the project activity implementation is positive. Reducing of electricity consumption has an indirect positive impact on the environment through reduction of greenhouse gases and other products of fuel combustion at thermal power plants. Reducing the consumption of fossil fuels (natural gas) leads to the reduction of products of their combustion into the atmosphere; as well as indirectly to elimination of negative environmental impacts during their extraction and transportation by reducing the demand for them.

Implementation of the project activity also has a positive social impact through reducing overall emissions of pollutants into the air and improving working conditions at the factory.

No transboundary effects are identified. Impacts that occur in any other country, and caused by the implementation of this project physically located entirely within Ukraine, were not identified.

The Environmental Impact Assessment (EIA) was designed for the project activity. EIA established that environmental impact of the project activity does not exceed the acceptable level and thus the project was approved for implementation.

The evidence documents of environmental impacts were provided by project participants to the determination team as supporting documents (please refer to evidence documents # /111, 113, 120-145/ in Table 2 – Documents reviewed during the determination in section 3.1. of the Determination Report).

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 (refer to CARs 24, 25).

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. No stakeholder consultation process 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.
The public was informed on plans for reconstruction and equipment replacement by posting information on the company website. As an example of such publications is the material on reconstruction of ceiling lighting*, etc. Informing of stakeholders was conducted as a part of mandatory publication of Statement on impact in the local media in accordance with the procedure of preparation and examination of the EIA approved by the State Construction Standard DBN A.2.2.-1-2003: "Structure and Contents of the Environmental Impact Assessment Report (EIR) for Designing and Construction of Production Facilities, Buildings and Structures" State Committee Of Ukraine On Construction And Architecture, 2004.

The evidence documents related to the stakeholder consultation were provided by project participants to the determination team as supporting documents (please refer to evidence documents # /111, 113/ in Table 2, section 3.1. of the Determination Report).

The problem areas for stakeholder consultation were not identified.

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 small-scale projects, determination regarding land use, land-use change and forestry projects, determination regarding programmes of activities is not applicable to this JI project.

* http://pipe.metinvestholding.com/ua/press/news/show/1832

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 1.1 dated 21/10/2012) on the website http://www.tuv.com.ua on 02/10/2012 and invited for comments by Parties, stakeholders and UNFCCC accredited observers till 02/11/2012.

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

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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. "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 (Letter of Approval) a final Determination Report should be submitted to the State Environmental

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			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 demonstrate compliance with the Protocol". The Netherlands submitted its Initial Report on 21 Desember, 2006 p: *http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/initial_report_final_191206.pdf* Its review took place on 2 October 2007: *http://unfccc.int/documentation/docu*

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			ments/advanced_search/items/6911.php?priref=600004490#beg
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**	The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.
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 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.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
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 tCO2e 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 registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities, §21(d)/24	**OK**	The designed system of the 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 submitted PDD that contains all information needed 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.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			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 scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	**OK**	Please refer to Table 2, 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.
General description of the project					
A.1. Title of the project					
Does the provided title of the JI project represent project activity?	PDD	PD	It does. Project name: "Implementation of Energy Saving Measures at PJSC "Khartsyzsk Pipe Plant"	OK	OK
Is (are) the sectoral scope(s) to which the project pertains presented?	PDD	PD	Sectoral scope: 3. Energy Consumption.	OK	OK
Are the version number and date of the document presented?	PDD	PD	Initial version of the PDD: 1.1 dated 21/10/2012 Final version of the PDD: 2.0 dated 01/12/2012	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	PD	The purpose of the project is indicated in section A.2. Summarizing explanation of the situation existing prior to the starting date of the project, baseline scenario and project scenario are also provided.	OK	OK
2.2. Is the history of the Project including its JI component summarized?	PDD	PD	The history of the Project including its JI component is summarized in section A.2.	OK	OK
2.2.1. Is it clarified how the proposed project activity reduces emissions GHG that would occur in the baseline scenario?	PDD	PD	It is clarified in section A.2 how the proposed project activity reduces emissions GHG that would occur in the baseline scenario. **CAR 01** State in the PDD that the project is also aimed at termination of heat consumption, produced at TPP JSC "SYLUR"	**CAR 01**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
A.3. Project participants					
Are project participants and Party(ies) involved in the project listed?	PDD	PD	Yes, they are. Two project participants from two Parties involved, PJSC "Khartsyzsk Pipe Plant" (Ukraine) and Metinvest International SA (The Netherlands) are listed in the PDD.	OK	OK
Is contact information provided in Annex 1 of the PDD that is indicated in section A.3?	PDD	PD	Yes, it is. Project participants' contact information is provided in Annex 1 of the PDD that is indicated in section A.3	OK	OK
Is it indicated, if the Party involved is a host Party?	PDD	PD	Yes, it is. The Host Party is Ukraine.	OK	OK
Is it indicated, if it is the case, if the Party involved wishes to be considered as a project participant?	PDD	PD	None of the parties involved wishes to be considered as a project participant?	OK	OK
A.4. Technical description of the project					
A.4.1. Location of the project					
4.1.1. Host Party(ies)	PDD	PD	Ukraine	OK	OK
4.1.2. Region/State/Province etc.	PDD	PD	Donetsk Region	OK	OK
4.1.3. City/Town/Community etc.	PDD	PD	Khartsyzsk	OK	OK
4.1.4. Detail of the physical location, including information allowing the unique identification of the project (maximum one page)					
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	PD	Clear information regarding location of the project activity is provided which allows for a clear identification of the site: geographical coordinations of the project are given. This section does not exceed one page. **CAR 02** Correct the format of the stated geographical coordinates.	**CAR 02**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
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	PD	Activity under the project is aimed at implementation of the complex of energy saving measures: Replacement of old installations with new (modern) more energy-efficient equipment; Replacement of pumps, installation of frequency converters; Replacement of lighting equipment to energy-efficient lamps; Partial switch to the electrical energy use from natural gas burning in number of production processes; Optimization of operation modes of key equipment with the purpose of achievement of energy-efficiency effect; Improvement of energy consumption accounting and elimination of loses from interconnection tracks; Improving thermal insulation of buildings. **CAR 03** Provide evidence documentation regarding realization of mentioned measures. **CL 01** During site visit it was revealed that the name of the enterprise supplying heat energy to PJSC "Khartsyzsk Pipe Plant" is not TPP-1. Please, indicate the correct name. Change everywhere in the PDD. **CAR 04** Provide evidence documentation for technical characteristics indicated in tables3, 4, and 5.	**CAR 03, CAR 04, CAR 05, CL 01**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			CAR 05 Provide evidence documentation regarding personnel training.		
4.2.1.1. Does the project design engineering reflect current good practices?	PDD	PD	**CL 02** Indicate if project design engineering reflects current good practices.	**CL 02**	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	PD	**CL 03** Indicate if the project uses state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country.	**CL 03**	OK
4.2.1.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	PDD	PD	**CL 04** Indicate if the project technology is likely to be substituted by other or more efficient technologies within the project period.	**CL 04**	OK
4.2.2. Are all relevant technical data and the implementation schedule indicated?	PDD	PD	All relevant technical data and the implementation schedule are indicated in section A.4.2. **CAR 06** Provide evidence documentation for data indicated in table 5.	**CAR 06**	OK
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	PD	Anthropogenic emissions of greenhouse gases by sources by the proposed project will be reduced as a result of reduction of specific electricity power and natural gas consumption for production purposes. **CAR 07** Indicate in PDD (A.4.3.) that the project is also aimed at termination of heat power consumption produced at HPP of JSC "Sylur".	**CAR 07**	OK

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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	PD	In the absence of the proposed project, the reduction of GHG emissions would not be possible because without the replacement of equipment an introduction of energy management techniques, integrated of production process control measures and optimization of energy consumption, the specific energy resources consumption would remain at the pre-project level, and thus GHG emissions would be the same as before the project realization.	OK	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	PD	Yes they are. The estimates of anticipated total reductions are provided in tonnes of CO2 equivalent. This section does not exceed one page. **CAR 08** Correct the anticipated total emission reductions indicated in section A.4.3.	**CAR 08**	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	PD	The length of the crediting period and estimates of total as well as annual emission reductions using the appropriate tabular format is provided in section 4.3.1.1.	OK	OK
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	PD	The annual average of estimated green gases emission reductions is 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.	OK	OK
A.5. Project approval by the Parties involved					
5.1. Are written project approvals by the Parties	PDD	PD	See. **CAR 01**.	**CAR**	OK

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involved attached? Are they unconditional?			**CAR 09** Please, provide Letter of Endorsement for the project.	**09**	
B. Baseline					
B.1 Description and justification of the baseline chosen					
Is it indicated in the PDD: **CAR 03.** 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; **CAR 04.** a justification of baseline setting; references on regulations according to baseline setting?	PDD	PD	The PDD describes the baseline chosen in a complete and transparent manner in accordance with the "Guidelines for users of the Joint Implementation Project Design Document Form", version 04, and the "Guidance on criteria for baseline setting and monitoring", version 03 (paragraphs 23-29). A detailed description of the baseline is presented in section B.1. Project participants "Guidance on criteria for baseline setting and monitoring", version 03 (paragraphs 23-29) pants have chosen a JI specific approach for baseline setting.	OK	OK
Does the PDD explicitly indicate the approach used for identifying the baseline with references on regulations?	PDD	PD	In accordance with the Paragraph 9 of the Guidance the project participants selected an approach for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (JI specific approach) (option a).	OK	OK
Is it indicated in the PDD that baseline was established:					
by listing and describing plausible (alternative) future scenarios on the basis of conservative assumptions and selecting the most plausible one?	PDD	PD	The baseline scenario was established by listing and describing plausible scenarios on the basis of conservative assumptions and selecting the most plausible one.	OK	OK

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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?	PDD	PD	Section B.1. of the PDD explains in detail, in what way key factors, in accordance with the Guidance on criteria for baseline setting and monitoring", version 03 (paragraphs 23-29), were taken into account. The analysis was made 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	OK	OK
in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?	PDD	PD	Section B.1. of the PDD explains in detail, in what way key factors, in accordance with the Guidance on criteria for baseline setting and monitoring", version 03 (paragraphs 23-29), were taken into account. **CAR 10** Indirect specific carbon dioxide emissions in the period of consumption of electricity by consumers which are classified as 2nd class are indicated in table form in section B.1. While during the site visit it was revealed that the plant is the 1st class electricity consumer. Please change and recalculate emission reductions if needed. **CAR 11** Please provide evidences that PJSC "Khartsyzsk Pipe Plant" is the 1st class electricity consumer.	**CAR 10, CAR 11**	OK
taking into account of uncertainties and using conservative assumptions?	PDD	PD	The baseline scenario was established taking into account of uncertainties and using conservative assumptions.	OK	OK
in such a way that emission reduction units (ERUs) cannot be earned for decreases in activity	PDD	PD	The baseline scenario was established in such a way that emission reduction units (ERUs)	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
levels outside the project activity or due to force majeure?			cannot be earned for decreases in activity levels outside the project activity or due to force majeure.		
by drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring"?	PDD	PD	The baseline scenario was established by drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring". **CAR 12** In section B.1. in a table form the parameter "Baseline heat consumption, produced at TPP-1" is indicated not in accordance with Annex B of the "Guidance on criteria for baseline setting and monitoring", version 03. Change everywhere in the PDD.	**CAR 12**	OK
1.4. If a multi-project emission factor is used, does the PDD provide appropriate justification?	PDD	PD	The baseline scenario was established using specific approach to joint implementation projects. Multi-project emission factors were not used.	OK	OK
1.5. Are the title, reference number and version of the approved CDM methodology clearly indicated in the context of the project?	PDD	PD	The baseline scenario was established using specific approach to joint implementation projects. The approved CDM methodologies were not used.	OK	OK
1.6. Is the applied version of the CDM methodology the most recent one and/or is this version still applicable?	PDD	PD	The baseline scenario was established using specific approach to joint implementation projects. The approved CDM methodologies were not used.	OK	OK
1.7. Is it described how the chosen approach is applied in the context of the project?	PDD	PD	Section B.1. describes in detail in what way the chosen approach application is appropriate in the context of the project.	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	PD	The key information and data used to establish the baseline (variables, parameters, data sources were indicated in a relevant table form.	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
1.9. Are all regulations and sources clearly referenced to?	PDD	PD	All regulations and sources are clearly referenced to.	OK	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					
2.1. Is the demonstration of project additionality indicated and described in the PDD using the step-wise approach?	PDD	PD	The demonstration of project additionality is indicated and described in the PDD using the step-wise approach in accordance with the applied "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 04.0.0)	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	PD	Project additionality is demonstrated in the PDD using the "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 04.0.0). The recommendations of the "Guidelines for objective demonstration and assessment of barriers" (Version 01) were also taken into account.	OK	OK
2.3. Is it described how the chosen approach is applied in the context of the project?	PDD	PD	It is described in section B.2. how the chosen approach is applied in the context of the project.	OK	OK
2.4. 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	PD	The demonstration of project additionality is indicated and described in the PDD using the "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 04.0.0) The recommendations of the "Guidelines for objective demonstration and assessment of barriers" (Version 01) were also taken into account. All explanations, descriptions and analyses are made in accordance with the selected tool or method in Section B.2.	**CAR 13**	OK

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			CAR 13 Please, add the list of alternatives to the project activity to step 1. Identification of alternatives to the project activity.		
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	PD	An analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario is not included. **CAR 14** Please, add an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario.	**CAR 14**	OK
2.4.3. Is it demonstrated that the project activity itself is not a likely baseline scenario?	PDD	PD	The project Baseline scenario was established by enumeration and description of plausible scenarios on the basis of conservative assumptions and choice of the most plausible one. It was demonstrated that the project activity itself is not a plausible baseline scenario.	OK	OK
2.5. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	PDD	PD	Yes, they are. Brief description of national policies and circumstances relevant to the baseline of the proposed project activity is summarized.	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	PD	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; - significant? **CAR 15** Please, add CO_2 emissions, attributed to natural gas combustion, to the list of GHG emission sources under the project scenario.	**CAR 15**	OK

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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. above?	PDD	PD	The project boundary is defined on the basis of a case-by-case assessment with regard to the criteria referred to in 3.1. above.	OK	OK
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	PD	The delineation of the project boundary and the gases and sources included are appropriately described and justified in section B.3. of the PDD by using a figure or flow chart as appropriate.	OK	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	PD	All gases and sources included are explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified in section B.3 of the PDD.	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)?	PDD	PD	The date of the baseline setting is presented in DD/MM/YYYY in section B.4 of the PDD.	OK	OK
4.2 . Is the contact information of persons setting the baseline provided?	PDD	PD	The contact information of persons/company setting the baseline is provided in section B.4 of the PDD.	OK	OK
4.3 . Is the person/entity also a project participant listed in Annex 1 of PDD?	PDD	PD	Yes, it is. The person/entity also a project participant is listed in Annex 1 of 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	PD	The project's starting date is 21 January 2003. This is the date of creation and the beginning of work of the Commission for Energy Saving, main aim of which is identifying and further	**CAR 16**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			maximum optimization of the most significant energy consumption in the production. **CAR 16** Please, provide the evidence documentation regarding the starting date of the project.		
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	PD	The stated project's starting date is the date on which real action of the project began.	OK	OK
1.3. Is the starting date after the beginning of 2000?	PDD	PD	Yes, it is. 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	PD	The project's operational lifetime is 25 years or 300 months. **CAR 17** Please, provide the evidence documentation regarding the project's operational lifetime.	**CAR 17**	OK
C.3. Length of the crediting period					
Is the length of the crediting period specified in years and months?	PDD	PD	Yes, it is. The length of the first crediting period under the project is 5 years or 6T months (01/01/2008-31/12/2012).	OK	OK
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	PD	Yes, it does. 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.	OK	OK
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	PD	Yes, it does. The crediting period extends beyond 2012 and the PDD does not state that the extension is subject to the host Party approval. **CAR 18** Please state in section C.3 that the extension of the crediting period is subject to	**CAR 18**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			the host Party approval Estimates of emission reductions are presented separately for those until 2012 and those after 2012.		
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	PD	The monitoring plan is established in accordance with appendix B of the JI guidelines and further Guidance on Baseline Setting and Monitoring, Version 03, and Guidelines for Users of the JI PDD Form, Version 04. The description of the monitoring plan chosen is provided using the step-wise approach.	OK	OK
1.2. Does the PDD explicitly indicate the chosen approach used for monitoring with references on regulations?	PDD	PD	Yes, it does. Option *a* provided by the Guidelines for the Users of the Joint Implementation Project Design Document Form, Version 04* is applied: JI specific approach is used for the monitoring plan.	OK	OK
1.3. Is the applied methodology considered being the most appropriate one?	NA	NA	Not applied	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	PD	**CL 05** Please, indicate if national or international monitoring standard was applied to monitor certain aspects of the project.	**CL 05**	OK
1.5. Are the description of the assumptions, formulas, parameters, data sources and key factors indicated?	PDD	PD	Monitoring plan provides the description of the assumptions, formulas, parameters, data	OK	OK

*http://ji.unfccc.int/Ref/Documents/Guidelines.pdf

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			sources and key factors (section D of the PDD)		
1.5.1. Is it stated how uncertainties are taken into account and conservativeness is safeguarded?	PDD	PD	**CAR 19** Indicate how uncertainties are taken into account and conservativeness is safeguarded in the monitoring plan**.**	**CAR 19**	OK
1.6. Is it described how the chosen approach is applied in the context of the project?	PDD	PD	It is described in section D how the chosen approach is applied in the context of the project.	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	PD	**CAR 20** Please, state clearly in the monitoring plan: 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.	**CAR 20**	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 chosen for all data/parameters?	NA	NA	Not applied	OK	OK
1.8.1. Are all the required data / parameters according to the used methodology indicated?	NA	NA	Not applied	OK	OK
1.9. Checklist for parameters Data Checklist | Paramete	NA	NA	Not applied	OK	OK

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r Title					
Is the title in line with methodology?					
Are data unit correctly expressed?					
Is the appropriate description of parameter indicated?					
Is the time of monitoring clearly indicated?					
Is the source clearly referenced?					
Is the correct value provided?					
Has this value been verified?					
Is the choice of data correctly justified or is the measurement method correctly described?					
Are quality control and quality assurance procedures indicated?					
D.1.1. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario					
1.1.1. Is the option 1 used for monitoring of the emissions in the project scenario and the baseline scenario?	PDD	PD	According to section D of the PDD, the option 1 is used for monitoring of the emissions in the project scenario and the baseline scenario.	OK	OK
D.1.1.1. Data to be collected in order to monitor emissions from the project, and how these data will be archived					
1.1.1.1. Are the data to be collected in order to monitor emissions from the project described?	PDD	PD	The data to be collected in order to monitor emissions from the project are described in section D.1.1.1. of the PDD.	OK	OK
1.1.1.2. Is it indicated how the data will be archived?	PDD	PD	These data will be kept in electronic and paper.	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	PD	Production reports, reports on electricity and natural gas consumption, Reports in forms # 4-MTP and # 11-MTP and other documents required for determination and verification, as	**CAR 21**	OK

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			well as any other data that are relevant to the operation of the project will be kept for at least two years after the last transfer of ERUs. **CAR 21** Please, provide the evidence documentation proving that data monitored are to be kept for two years after the last transfer of ERUs for the project.		
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	PD	**CAR 22** Please, make the formulae be clearly and consistently indicated throughout the PDD.	**CAR 22**	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 emissions of greenhouse gases by sources within the project boundary described?	PDD	PD	The data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary are described in section D.1.1.3. of the PDD.	OK	OK
1.1.3.2. Is it indicated how data will be archived?	PDD	PD	These data will be kept in electronic and paper.	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	PD	See **CAR 22**	**CAR 22**	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?	NA	NA	Not applied.	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					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
1.2.1.1. Are the data to be collected in order to monitor emissions from the project described?	NA	NA	Not applied.	OK	OK
1.2.1.2. Is it indicated how the data will be archived?	NA	NA	Not applied.	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?	NA	NA	Not applied.	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?	NA	NA	Not applied.		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	PD	Project participants note in section D.1. 3 of the PDD that leakages resulting from the project realization are not expected.	OK	OK
1.3.2. Are formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO2 equivalent) described?	PDD	PD	Formulae used to estimate leakage are described in section D.1.3.2 of the PDD.	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	PD	See **CAR 22**	**CAR 22**	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					
1.5.1. Is information on the collection and archiving of information on the environmental impacts of the project indicated?	PDD	PD	Information on the collection and archiving of information on the environmental impacts of the project is indicated in section D.1.5 of the	OK	OK

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			PDD.		
1.5.2. Is reference to the relevant host Party regulation(s) provided?	PDD	PD	Reference to the relevant host Party regulation(s) is provided in section F.1. of the PDD.	OK	OK
1.5.3. If not applicable is it stated so?	PDD	PD	All the required information is provided in section D.1.5 of the PDD.	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	PD	The quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request are established in section D.2 of the PDD.	OK	OK
2.2. Are data corresponded with those in section D.1?	PDD	PD	Data in section D.2 of the PDD are corresponded with data in section D.1	OK	OK
D.3. Please describe the operational and management structure that the project operator will apply in implementing the monitoring plan					
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	PD	The operational and management structure that the project participant will implement in order to monitor emission reduction and any leakage effects generated by the project is described in section D.3 of the PDD.	OK	OK
3.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	PDD	PD	Responsibilities and institutional arrangements for data collection and archiving are clearly provided. As monitoring plan does not provide implementation of any separate procedures for data collection and GHG emission reductions	OK	OK

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			will be calculated using standard reports, namely, "Report on rests and use of energy materials and products of petroleum" (form #4 MTP) and "Report on the use of fuel, heat and electricity energy" (form #11-MTP). On the basis of this documentation JI project consultant-worker of PJSC "Khartsyzsk Pipe Plant" will prepare Monitoring reports.		
3.3. Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?	PDD	PD	The monitoring plan, on the whole, reflects good monitoring practices appropriate to the project type. To calculate the amount of GHG emissions of the project (in baseline and project scenarios) the data of internal standard reporting, which are collected and processed independently from the JI project for commercial purposes of business activity, using the rules and procedures for collecting, processing and carrying out cross-checks will be used, and recorded in the "Report on rests and use of energy materials and products of petroleum" (form #4 MTP) and "Report on the use of fuel, heat and electricity energy" (form #11-MTP). This approach meets good practice of monitoring plans development. . **CAR 23** Please, provide copies of the "Reports on rests and use of energy materials and products of petroleum" (form #4 MTP) and "Reports on the use of fuel, heat and electricity energy" (form #11-MTP) for the period 2002-2011.	**CAR 23**	OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
4.1. Is the contact information of person(s)/entity(ies)	PDD	PD	The contact information of person(s)/entity(ies)	OK	OK

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establishing the monitoring plan provided?			establishing the monitoring plan is provided in section D.4 of the PDD.		
4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	PDD	PD	The person/entity is also a project participant listed in Annex 1 of PDD	OK	OK
E. Estimation of greenhouse gases emission reductions					
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	PD	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) are described in section D.1.1.2 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	PD	Description of calculation of GHG project emissions in accordance with the formula is provided in section D.1.1.2 of the PDD and in the calculation spreadsheet in Excel format.	OK	OK
1.1.2. Have conservative assumptions been used to calculate project GHG emissions?	PDD	PD	Conservative assumptions have been used to calculate project GHG emissions.	OK	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	PD	Due to the project implementation no leakages are expected.	OK	OK
2.1.1. Is there a description of calculation of leakage in accordance with the formula? (supporting documentation)	PDD	PD	Due to the project implementation no leakages are expected.	OK	OK
2.2. Have conservative assumptions been used to calculate leakage?	PDD	PD	Due to the project implementation no leakages are expected.	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
2.3. If not applicable, is it stated in the PDD?	PDD	PD	Due to the project implementation no leakages are expected.	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	PD	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	PD	The formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline are described (for each gas, source etc.; emissions in units of CO_2 equivalent) in section D.1.1.4 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	PD	Description of calculation of GHG baseline emissions in accordance with the formula is provided in section D.1.1.4 of the PDD and in the calculation spreadsheet in Excel format.	OK	OK
4.2. Have conservative assumptions been used to calculate baseline emissions?	PDD	PD	Conservative assumptions have been used to calculate baseline emissions.	OK	OK
E.5. Difference between E.4. and E.3. representing the emission reductions due to the project					
Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	PDD	PD	The difference between E.4. and E.3. represents the emission reductions due to the project during a given period.	OK	OK
E.6. Table providing values obtained when applying formulae above					
6.1. Are the data provided under this section in consistency with data as presented by other chapters E of the PDD?	PDD	PD	The data provided under this section are in consistency with data as presented by other chapters E of the PDD.	OK	OK
6.2. Is there a table providing the total value of emission reductions?	PDD	PD	There is a table providing the total value of emission reductions.	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
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					
Has an analysis of the possible environmental impacts of the project been sufficiently described?	PDD	PD	Project participants have made an analysis of the possible environmental impacts of the project. Implementation of the project activity also has a positive social impact through reducing overall emissions of pollutants into the air and improving working conditions at the factory. **CAR 24** Please, provide evidence information regarding the analysis of the possible environmental impacts of the project.	**CAR 24**	OK
Are transboundary environmental impacts considered in the analysis?	PDD	PD	No transboundary effects are identified	OK	OK
Are all regulations and sources clearly referenced?	PDD	PD	The required references to relevant regulatory documents are provided.	OK	OK
F.2. If environmental impacts are considered significant by the project participants or the host Party, provision of 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	PD	**CAR 25** Please, indicate a viewpoint regarding significant environmental impacts of the project participants or the host Party in section F.2.	**CAR 25**	OK
2.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA)?	PDD	PD	Host Party requirements for an Environmental Impact Assessment (EIA) are presented in Ukrainian State Construction Standard DBN A.2.2.-1-2003: "Structure and Contents of the Environmental Impact Assessment Report (EIR) for Designing and Construction of	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			Production Facilities, Buildings and Structures", 2004.		
2.3. Have conclusions and all references to the supporting documentation on the analysis of the environmental impacts been indicated?	PDD	PD	Conclusions and all references to the supporting documentation on the analysis of the environmental impacts have been indicated.	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	PD	No stakeholder consultation process 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.	OK	OK
1.1.1. Have appropriate media been used to invite comments by local stakeholders?	PDD	PD	No stakeholder consultation process 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	OK	OK
1.2. Is there a list of stakeholders from whom comments on the project have been received?	PDD	PD	No comments on the project have been received.	OK	OK
1.3. Is the nature of comments provided?	PDD	PD	No comments on the project have been received.	OK	OK
1.4. Has due account been taken of any stakeholder comments received?	PDD	PD	No comments on the project have been received.	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
Annexes					
Annex 1. Contact information on project participants					
Is the information provided in consistency with the one given under section A.3?	PDD	PD	The information provided is in consistency with the one given under section A.3.	OK	OK
Are the mandatory fields for each organization 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	PD	The mandatory fields for each organisation listed in section A.3. of the PDD are filled notably organisation, name of contact person, street, city, postal code, country, telephone number(s) and fax number or e-mail address.	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	PD	Tables containing the key elements of the baseline (including variables, parameters and data sources) are provided.	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	PD	Additional background information on baseline data is in consistency with data presented by other sections of the PDD.	OK	OK
Annex 3. Monitoring plan					
3.1. Is the detail description of all key elements of monitoring plan provided?	PDD	PD	The detail description of all key elements of monitoring plan is provided 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	PD	The detail description of all key elements of monitoring plan is provided in section D of the PDD.	OK	OK
Annex 3. Information on characteristics of key technical parameters of the technology used in the project					
4.1. Is the information presented in Annex reliable?	PDD	PD	The information presented in Annex 4 is in consistency with information received during determination visit to the site.	**CAR 26**	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			CAR 26 Please, indicate the types of frequency converters in Annex 4 of the PDD.		
4.2. Dose the information presented correspond to data indicated in other sections of the PDD?	PDD	PD	The information presented corresponds to data indicated in other sections 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, issue a checklist 16	Response 1: To obtain project approval by host Party, final determination report needs to be submitted for consideration to the State Environmental Investment Agency of Ukraine. Written approval by The Netherlands (JI project participant different from the host Party) will be obtained before the firs verification report is submitted for the publication.	Conclusion 1: The issue will be closed after relevant documents are provided..
CAR 01. State in the PDD that the project is also aimed at termination of heat consumption, produced at TPP JSC "SYLUR"	Table 2, issue a checklist A.2	Response 1: This information has been added to section A.2 of the PDD, version 2.0 dated 01/12/2012	Conclusion 1: Information was checked. The issue is closed.
CAR 02. Correct the format of the stated geographical coordinates.	Table 2, issue a checklist A.4	Response 1: the format of the stated geographical coordinates has been corrected in the PDD, version 2.0 dated 01/12/2012.	Conclusion 1: Information was checked. The issue is closed.
CAR 03. Provide evidence documentation regarding realization of mentioned measures.	Table 2, issue a checklist A.4.2	Response 1: Copies of the following documents were provided as evidence documentation: Acceptance Certificates #29, dated 31/07/12 (on installation of lightning equipment) Acceptance Certificates #30 dated 31/07/12, (on installation of lightning equipment) Report on adjustment of induction furnaces, which proves the fact of conducting the works Technical report on the implementation of regime-commissioning and thermal environmental testing at furnaces #1 and 2 of flux drying lines TESC-2 UUPF of PJSC	Conclusion 1: Documents and information were checked. The issue is closed.

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
		"Khartsyzsk Pipe Plant" Project of implementation of reconstruction of ceiling light in the pipe welding shop #2 PJSC "Khartsyzsk Pipe Plant" 2012. Acceptance Certificate #2 dated 10/03/2011 (on Installation of the furnace Radyne) Acceptance Certificate #25 dated 02/03/2009 (on installation of induction heating device) Acceptance Certificate #406 dated 13/12/2004 (on installation of induction heating device first line) Acceptance Certificate #43 dated 31/05/2011 (on reception of compressor Turbo Master TMX 1250) Acceptance Certificate #385 dated 08/11/2004 (on installation of individual heating systems) Acceptance Certificate #381 dated 08/11/2004 (on installation of water boilers, gas flues, pumps, etc.) Acceptance Certificate #383 dated 08/11/2004 (on installation of water boiler "CPA" - 350, gas flues, pipelines pumps, etc.) Order on the use of equipment that uses gas in the autumn-winter Acceptance Certificate #764 dated 30/10/2004 (on repair of boilers, instrumentation, armature and insulation of buildings).	
CL 01. During site visit it was revealed that the name of the enterprise supplying heat energy to	Table 2, issue a checklist A.4.2	<u>Response 1:</u> The correct name is TPP JSC "SYLUR". It	<u>Conclusion 1:</u> Information was checked. The

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
PJSC "Khartsyzsk Pipe Plant" is not TPP-1. Please, indicate the correct name. Change throughout in the PDD.		was changed throughout the PDD version 2.0 date 01/12/2012.	issue is closed.
CAR 04. Provide evidence documentation for technical characteristics indicated in tables3, 4, and 5.	Table 2, issue a checklist A.4.2	Response 1: Copies of the following documents were provided as evidence documentation: Passport T4.010.1 PS for induction unit Induction Passport for induction unit Radyne Specifications for compressor Samsung Turbo Master dated 07/11/2010	Conclusion 1: Documents and information were checked. The issue is closed.
CAR 05. Provide evidence documentation regarding personnel training.	Table 2, issue a checklist A.4.2	Response 1: Copies of the following documents were provided as evidence documentation.	Conclusion 1: Documents and information were checked. The issue is closed.
CL 02. Indicate if project design engineering reflects current good practices.	Table 2, issue a checklist A.4.2	Response 1: Project design engineering reflects current good practices. This information was added to section A.4.2 of the PDD, version 2.0 dated 01/12/2012	Conclusion 1: Information was checked. The issue is closed.
CL 03. Indicate if the project uses state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country.	Table 2, issue a checklist A.4.2	Response 1: The project uses state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country. This information was added to section A.4.2 of the PDD, version 2.0 dated 01/12/2012	Conclusion 1: Information was checked. The issue is closed.
CL 04. Indicate if the project technology is likely to be substituted by other or more efficient technologies	Table 2, issue a checklist A.4.2	Response 1: The project technology is unlikely to be substituted by other or more efficient	Conclusion 1: Information was checked. The

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
within the project period.		technologies within the project period. This information was added to section A.4.2 of the PDD, version 2.0 dated 01/12/2012	issue is closed.
CAR 06. Provide evidence documentation for data indicated in table 5.	Table 2, issue a checklist A.4.2	Response 1: Copies of the following documents were provided as evidence documentation: Passport T4.010.1 PS for induction unit Induction Passport for induction unit Radyne Specifications for compressor Samsung Turbo Master dated 07/11/2010	Conclusion 1: Documents and information were checked. The issue is closed.
CAR 07. Indicate in the PDD (A.4.3.) that the project is also aimed at termination of heat power consumption produced at HPP of JSC «Sylur».	Table 2, issue a checklist A.4.3	Response 1: This information was added to section A.2 of the PDD, version 2.0 dated 01/12/2012	Conclusion 1: Information was checked. The issue is closed.
CAR 08. Correct the anticipated total emission reductions indicated in section A.4.3.	Table 2, issue a checklist A.4.3	Response 1: The anticipated total emission reductions indicated in section A.4.3 has been corrected in the PDD, version 2.0 dated 01/12/2012	Conclusion 1: Information was checked. The issue is closed.
CAR 09. Please, provide Letter of Endorsement for the project.	Table 2, issue a checklist A.5	Response 1: Letter of Endorsement for the project has been provided. Relevant information was added to section A.5 of the PDD, version 2.0 dated 01/12/2012	Conclusion 1: Documents and information were checked. The issue is closed.
CAR 10. Indirect specific carbon dioxide emissions in the period of consumption of electricity by consumers which are classified as 2nd class are indicated in table form in section B.1. While during the site visit it was revealed that the plant is	Table 2, issue a checklist B.1	Response 1: Indirect specific carbon dioxide emissions factors in the period of consumption of electricity by consumers were classified as those related to the 1st class electricity consumer in the PDD, version 2.0 dated 01/12/2012. Proper factors were used in	Conclusion 1: Information was checked. The issue is closed.

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
the 1st class electricity consumer. Please change and recalculate emission reductions if needed.		calculation spreadsheet that is why there is no need in recalculating emission reductions.	
CAR 11. Please provide evidences that PJSC "Khartsyzsk Pipe Plant" is the 1st class electricity consumer.	Table 2, issue a checklist B.1	Response 1: Copy of the following document was provided as evidence documentation: Invoice #34/10059000 for 1st class electricity consumed.	Conclusion 1: Documents and information were checked. The issue is closed.
CAR 12. In section B.1. in a table form the parameter "Baseline heat consumption, produced at TPP-1" is indicated not in accordance with Annex B of the "Guidance on criteria for baseline setting and monitoring", version 03. Change everywhere in the PDD.	Table 2, issue a checklist B.1	Response 1: The parameter has been adjusted in accordance with Annex B of the "Guidance on criteria for baseline setting and monitoring", version 03 in the PDD, version 2.0 dated 01/12/2012.	Conclusion 1: Information was checked. The issue is closed.
CAR 13. Please, add the list of alternatives to the project activity to step 1. Identification of alternatives to the project activity.	Table 2, issue a checklist B.2	Response 1: The list of alternatives to the project activity has been added to step 1. Identification of alternatives to the project activity in the PDD, version 2.0 dated 01/12/2012.	Conclusion 1: Information was checked. The issue is closed.
CAR 14. Please, add an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario.	Table 2, issue a checklist B.2	Response 1: The analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario has been added to sectionB.2 of the PDD, version 2.0 dated 01/12/2012.	Conclusion 1: Information was checked. The issue is closed.
CAR 15. Please, add CO_2 emissions, attributed to natural gas combustion, to the list of GHG emission sources under the project scenario.	Table 2, issue a checklist B.3	Response 1: CO_2 emissions, attributed to natural gas combustion, were added to the list of GHG emission sources under the project scenario in section B.3 of the PDD, version 2.0 dated	Conclusion 1: Information was checked. The issue is closed.

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
		01/12/2012.	
CAR 16. Please, provide the evidence documentation regarding the starting date of the project.	Table 2, issue a checklist C.1	Response 1: Copy of the following document was provided as evidence documentation: Order OD #154 dated 22/01/2003 on Creation of plant Commission for Energy Saving The starting date of the project was changed according to this Order in the PDD version 2.0 dated 01/12/2012.	Conclusion 1: Documents and information were checked. The issue is closed.
CAR 17. Please, provide the evidence documentation regarding the project's operational lifetime.	Table 2, issue a checklist C.2	Response 1: Copies of the following documents were provided as evidence documentation: Passport T4.010.1 PS for induction unit Induction Passport for induction unit Radyne Specifications for compressor Samsung Turbo Master dated 07/11/2010	Conclusion 1: Documents and information were checked. The issue is closed.
CAR 18. Please state in section C.3 that the extension of the crediting period is subject to the host Party approval.	Table 2, issue a checklist C.3	Response 1: This information has been added to section C.3 of the PDD, version 2.0 dated 01/12/2012.	Conclusion 1: Information was checked. The issue is closed.
CL 05. Please, indicate if national or international monitoring standard was applied to monitor certain aspects of the project.	Table 2, issue a checklist D.1	Response 1: Neither national nor international monitoring standards were applied.	Conclusion 1: The issue is closed.
CAR 19. Indicate how uncertainties are taken into account and conservativeness is safeguarded in the monitoring plan**.**	Table 2, issue a checklist D.1	Response 1: Information regarding how uncertainties are taken into account and conservativeness is safeguarded was added to section D.1 of the PDD, version 2.0 dated 01/12/2012.	Conclusion 1: Information was checked. The issue is closed.

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
CAR 20. Please, state clearly in the monitoring plan: 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.	Table 2, issue a checklist D.1	Response 1: Information regarding 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 Was clearly stated in section D.1 of the PDD, version 2.0 dated 01/12/2012.	Conclusion 1: Information was checked. The issue is closed.
CAR 21. Please, provide the evidence documentation proving that data monitored are to be kept for two years after the last transfer of ERUs for the project.	Table 2, issue a checklist D.1.1	Response 1: Copy of the following document was provided as evidence documentation: Order of PJSC "Khartsyzsk Pipe Plant" on establishing the shelf life of the information related to the joint implementation project OD #158 dated 01/12/2012.	Conclusion 1: Documents and information were checked. The issue is closed.
CAR 22. Please, make the formulae be clearly and consistently indicated throughout the PDD.	Table 2, issue a checklist D.1.2	Response 1: Numeration of formulae was presented in a different format to differentiate formulae used for preliminary estimation of baseline emissions from those to be used during	Conclusion 1: The issue is closed.

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
		monitoring process. The PDD was not changed.	
CAR 23. Please, provide copies of the "Reports on rests and use of energy materials and products of petroleum" (form #4 MTP) and "Reports on the use of fuel, heat and electricity energy" (form #11-MTP) for the period 2002-2011.	Table 2, issue a checklist D.3	Response 1: Copies of the "Reports on rests and use of energy materials and products of petroleum" (form #4 MTP) and "Reports on the use of fuel, heat and electricity energy" (form #11-MTP) for the period 2002-2011 have been provided.	Conclusion 1: Documents and information were checked. The issue is closed.
CAR 24. Please, provide evidence information regarding the analysis of the possible environmental impacts of the project.	Table 2, issue a checklist F.1	Response 1: Copy of the following document was provided as evidence documentation: The conclusion of the state ecological expertise #03.10.224 on correspondence of project documentations to Environmental Protection regulations.	Conclusion 1: Documents and information were checked. The issue is closed.
CAR 25. Please, indicate a viewpoint regarding significant environmental impacts of the project participants or the host Party in section F.2.	Table 2, issue a checklist F.2	Response 1: Project participants consider environmental impacts of the project to be positive. It was mentioned in section F.2 1 of the PDD, version 2.0 dated 01/12/2012.	Conclusion 1: Information was checked. The issue is closed.
CAR 26. Please, indicate the types of frequency converters in Annex 4 of the PDD.	Table 2, issue a checklist Annex 4	Response 1: The types of frequency converters have been indicated in Annex 4 of the PDD, version 2.0 dated 01/12/2012.	Conclusion 1: Information was checked. The issue is closed.