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Determination Report

DETERMINATION OF THE JI-PROJECT:

Revamping and Modernization of the Alchevsk Steel Mill, Ukraine

REPORT NO. 947241

April 23, 2008

TÜV SÜD Industrie Service GmbH

Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

Industrie Service

Report No.	Date of first issue	Revision No.	Date of this revision	Certificate No.
947241	2008-04-23	-	-	-

Subject: Determination of a JI Project	
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199, D-80686 Munich Federal Republic of Germany	**TÜV SÜD Contract Partner:** TÜV SÜD Industrie Service GmbH Carbon Management Service Westendstr. 199, D-80686 Munich Federal Republic of Germany
Client: «Unternehmen» 1818 H Street, N.W., Washinton, D.C 20433, USA	**Project Site(s):** Alchevsk Iron & Steel Works Alchevsk, Lugansk Region P.O. 94202, Ukraine
Project Title: Revamping and Modernization of the Alchevsk Steel Mill, Ukraine	
Applied Methodology / Version: Project specific	**Scope(s):** 3, 4, 9
First PDD Version: Date of issuance: 2007-03-09 Version No.: 3 Starting Date of GSP 2007-03-15	**Final PDD version:** Date of issuance: 2008-03-30 Version No.: 4
Estimated Annual Emission Reduction:	906 269 tons CO2e
Assessment Team Leader: Thomas Kleiser	**Further Assessment Team Members:** Konrad Tausche Alexej Kardashin

Summary of the Determination Opinion:

☒ The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the JI. Hence TÜV SÜD will recommend the project for registration in case letters of approval of all Parties involved will be available before the expiring date of the applied methodology(ies) or the applied methodology version respectively by the host country under track 2 of the JI.

☐ The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the project for registration and will inform the project participants and the JI Supervisory committee on this decision.

Abbreviations

ACM	Approved Consolidated Methodology
AIE	Accredited Independent Entity
AISW	Alchevsk Iron and Steel Works
AM	Approved Methodology
AMS	Automated Monitoring System
BFG	Blast Furnace Gas
BF	Blast Furnace
CAR	Corrective Action Request
CR	Clarification Request
CHP	Combined Heat and Power
COG	Coke Oven Gas
CSC	Continuous Casting
DFP	Designated Focal Point
DP	Determination Protocol
EIA / EA	Environmental Impact Assessment / Environmental Assessment
EN	English
ER	Emission reduction
ERU	Emission Reduction Unit
GHG	Greenhouse gas(es)
GSP	Global stakeholder process
IUD	Industrial Union of Donbass
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
KP	Kyoto Protocol
LD	Linz-Donawitz; Basic oxygen steelmaking process, i.e.converter
LF	Ladle Furnace
LoE	Letter of Endorsement
LoA	Letter of Approval
LSP	Local stakeholder process
MP	Monitoring Plan
N/A	not applicable

NGO	Non Governmental Organisation
OHF	Open-Hearth Furnace
PDD	Project Design Document
PIP	Project Implementation Plan
PP	Project Participant
TSU	Recently commissioned (tandem) Open-Hearth Furnaces
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

Table of Contents

1 INTRODUCTION

1.1 Objective

The Determination objective is an independent assessment by a Third Party (Accredited Independent Entity = AIE) of a proposed project activity against all defined criteria set for the registration under the Joint Implementation (JI). Determination is part of the JI project cycle and will finally result in a conclusion by the executing AIE whether a project activity is valid and should be submitted for registration to the JISC. The ultimate decision on the registration of a proposed project activity rests at the Joint Implementation Supervisory Committee and the Parties involved.

The project title of the GSP-PDD published on the above mentioned web pages was slightly revised. The origin project title was “Revamping and Modernization of the Alchevsk Steel Mill - Using Higher Efficiency Technology to replace Open Hearth Furnaces (OHF), Ingot Casting and Blooming Mills“.

The project activity discussed by this Determination report has been submitted under the final project title: “Revamping and Modernization of the Alchevsk Steel Mill”.

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of JI project activities the scope is set by:

- The Kyoto Protocol, in particular § 12
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Decisions by the JISC published under http://ji.unfccc.int
- Specific guidance by the JISC published under http://ji.unfccc.int
- The applied approved methodology
- The technical environment of the project (technical scope)
- Internal and national standards on monitoring and QA/QC
- Technical guideline and information on best practice

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.

Once TÜV SÜD receives a first PDD version, it is made publicly available on the internet at TÜV SÜD’s webpage as well as on the UNFCCC JI-webpage for starting a 30 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised and the final PDD forms the basis for the final evaluation as presented by this report. Further information on the first and on the final PDD version is presented at page 1.

The only purpose of a Determination is its use during the registration process as part of the JI project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the Determination opinion, which will go beyond that purpose.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a determination protocol was customised for the project, according to the Validation and Verification Manual (VVM). The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The determination protocol serves the following purposes:

- It organises, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent Determination process where the validator will document how a particular requirement has been validated and the result of the Determination.

The Determination protocol consists of three tables. The different columns in these tables are described in the figure below.

The completed Determination protocol is enclosed in Annex 1 to this report.

Determination Protocol Table 1: Conformity of Project Activity and PDD				
Checklist Topic / Question	***Reference***	***Comments***	***PDD in GSP***	***Final PDD***
The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further subdivided. The lowest level constitutes a checklist question / criterion.	*Gives reference to documents where the answer to the checklist question or item is found in case the comment refers to documents other than the PDD.*	*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. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any **Request** has to be substantiated within this column*	*Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (☑), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification Request (CR)** is used when the Determination team has identified a need for further clarification.*	*Conclusions are presented in the same manner based on the assessment of the final PDD version.*

Determination Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Clarifications and corrective action requests	***Ref. to table 1***	***Summary of project owner response***	***Determination team conclusion***
If the conclusions from table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	*Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.*	*The responses given by the client or other project participants during the communications with the Determination team should be summarised in this section.*	*This section should summarise the Determination team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".*

In case of a denial of the project activity more detailed information on this decision will be presented in table 3.

Determination Protocol Table 3: Unresolved Corrective Action and Clarification Requests		
Clarifications and corrective action requests	***Id. of CAR/CR 1***	***Explanation of the Conclusion for Denial***
If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.	*Identifier of the Request.*	*This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion.*

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body "climate and energy". The composition of an assessment team has to be approved by the Certification Body ensuring that the required skills are covered by the team. The Certification Body TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

The Determination team was consisting of the following experts (the responsible Assessment Team Leader in written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Thomas Kleiser	**ATL**	☑	☑	☑
Konrad Tausche	GHG-A	☑	☑	
Alexej Kardashin	GHG-A		☑	☑

Thomas Kleiser is head of division CDM and JI at TÜV SÜD Industrie Service GmbH. In this position he is responsible for validation, verification and certifications processes for GHG mitigation projects as well as trainings for internal auditors. As assessment team leader he already conducted numerous validations and verifications of CDM and JI projects. Before entering this department he worked as expert on air quality measurements and emissions inventories as well as on environmental auditing within the environmental branch of the company. Reflecting on earlier projects he is familiar with political, economical and technical random conditions in host country

Konrad Tausche, the former head of department of environmental measurement technique at the Frankfurt office of TÜV SÜD Industrie Service GmbH, supports the "TÜV Carbon Management Service" in Munich since Dec. 2006. He has an academic background in physical and chemical engineering. An additional economic study was completed with the academic degree of a Master of Business Administration and Engineering (MBA and Eng.). In his experience of 15 years he verified a lot of different energy, chemical and incineration plants, emission control and mitigation projects.

Alexej Kardashin is mechanical engineer and responsible for the carbon business of TÜV SÜD in Russia. He is a GHG auditor and he received extensive training on all aspects of the flexible

mechanisms of the Kyoto protocol. For this specific project he was responsible for the communication with the Russian project developer and the project participants.

2.2 Review of Documents

The first PDD version submitted by the client and additional background documents related to the project design and baseline were reviewed as initial step of the Determination process. A complete list of documents and proofs reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews

In the period of April 3rd- 4th , 2007 TÜV SÜD performed interviews on-site with project stakeholders to confirm selected information and to resolve issues identified in the first document review. The table in Annex II, reference 3 provides a list of all persons interviewed in the context of this on-site visit.

2.4 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the Determination is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD's positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the Determination process, the concerns raised and responses that have been given are summarised in chapter 3 below and documented in more detail in the Determination protocol in annex 1.

2.5 Internal Quality Control

As final step of a Determination the Determination report and the protocol have to undergo and internal quality control procedure by the Certification Body "climate and energy", i.e. each report has to be approved either by the head of the certification body or his deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

It rests at the decision of TÜV SÜD's Certification Body whether a project will be submitted for requesting registration by the JISC or not.

3 SUMMARY OF FINDINGS

As informed above all findings are summarized in table 2 of the attached Determination protocol. In total the assessment team expressed 27 Corrective Action Requests and 3 outstanding issues.

Most of the findings were stated because of a lack of information and transparency in the first version of the PDD. The monitoring plan was developed only rudimental and required improvements.

The methodological approach was not transparent, the calculation of the emission reductions were not traceable.

After all the open findings have been closed in the final version, the PDD is considered to be in compliance with the JI requirements.

History of the validation process

The audit team has been provided with a PDD in March 2007. Based on this documentation a document review and a fact finding mission in form of an on-site audit has taken place. Afterwards the client decided to revise the PDD according to the findings indicated in the audit process. The final PDD version submitted in March 2008 serves as the basis for the assessment presented herewith. Changes are not considered to be significant with respect to the qualification of the project as a JI project based on the two main objectives of the JI to achieve a reduction of anthropogenic GHG emissions by sources and to contribute to sustainable development.

Project description

The following description of the project as per PDD could be verified during the on-site audit:

OJSC Alchevsk Iron and Steel Works (AISW) plant is located in the city of Alchevsk in Lugansk Oblast, Eastern Ukraine. Beginning in 2004 the modernization program at AISW has the integrated objectives of applying more efficient technology, improving environmental performance, increasing capacity and therefore competitiveness (reducing costs per tonne of steel produced). This modernization program is planned to involve technology replacement or upgrade of all major components of the iron and steel making and finishing processes

The program's initial focus at AISW has been on steel production with the replacement of the old OHFs with two modern basic oxygen furnaces (Converters) integrated with continuous Slab Casters to replace the existing Blooming Mill.

The project generates emission reductions in the following ways:

- From a decrease in the direct energy required to create the same tons of steel end product. The use of fossil fuels (mainly natural gas) is also reduced due to more efficient technology.
- From a decrease of material input to create the same tons of steel end product. The pig iron consumption is reduced in Converter and Casting processes which are more efficient than baseline OHF technology. This reduction is obtained even though the share of pig iron usage will slightly increase in the project case.

In addition, the project design allows more efficient use of zero emission blast furnace gas for on-site electricity generation which partially displaces the electricity consumption form the grid.

The estimation of emission reductions in 5 years' crediting period is about 4.5 million tonnes CO_2e. Estimated annual average emission reductions reaches about 0.9 million tonnes of CO_2e.

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Baseline calculation

Since no applicable approved CDM methodologies are available for this kind of project, the baseline scenario is determined on project-specific approach. Hence no broader applicability criteria for this approach were defined.

A new OHF was commissioned in 2005. This replacement and expansion of the current capacities using existing technology of steel production with open hearth furnaces (OHFs) and casting/blooming instead of modern converters is to be seen as the business-as-usual (BAU) choice of AISW. This precedent investment decision confirms that the choice of this alternative is a realistic and credible alternative to the proposed project activity.

This already realized alternative serves as the baseline scenario.

The baseline parameters and variables will be monitored and measured on the most recently installed OHF by AISW ("benchmark"). The emission factors per output of production will be quantified for the baseline emissions on an *ex-post* basis.

Additionality

Initially missing background data and additional information and argumentation to prove the additionality were required to be submitted to the determination team. The project participants decided to revise the additionality argumenation by following the main aspects of the additionality tool. Hence the financial analysis was deleted from the line of arguments.

The revised additionality argumentation is based on a barrier analysis as the main item.

Several proofs were provided to the determination team - as cited in the PDD (see footnotes) - to document the argumentation concerning investment barriers and prevailing practice in the Ukraine.

The MINISTRY OF INDUSTRIAL POLICY OF UKRAINE states in a supporting letter, that the new LD Converters, Slab Casters, Vacuumator and Ladle-Furnace that will be built at OJSC "AISW" are the most modern alternative at the Ukrainian market and other steel plants are actively studying the experience of OJSC "AISW" on the exploitation of the state of art metallurgical equipment.

That underlines the argumentation that the implementation of this technology is the first of its kind in Ukraine.

The proof of the first consideration of using the Kyoto mechanism as an incentive to invest in the more energy efficient technology was provided to the determination team (see ref.: Minutes of Meeting of the Technical Council of the Plant, 26 May, 2003). As next step in the timeline of project realization negotiations have been launched for securing loans. Also for this aspect the early consideration is provable by relevant documents (letter from Societe Generale, Corporate & Investment Banking, 2004).

In the opinion of the determination team the additionality is given mainly by the argumentation, that the registration as a JI – project will alleviate the barrier due to prevailing practice, as evidenced by the document and sources mentioned above.

Outstanding Issues

Outstanding Issue No. 1:

According to the regulations established by the Joint Implementation Supervisory Committee (JI-SC) Letters of Approval (LoAs) for the project, from both involved countries (The Netherlands and Ukraine), have to be presented to the audit team before starting the official registration process for this project at the UNFCCC Joint Implementation Supervisory Committee (JI-SC).

Response:

The project will be presented to Ukraine and the Netherlands once the Determination Report has been finalized.

Conclusion:

This outstanding issue is still open

Outstanding Issue No. 2:

Ukraine`s national registry which is necessary for the registration of the generated ERU´s is still under development.

Response:

This outstanding issue is out of the direct influence of the project participants and is not a direct requirement for project registration.

Conclusion:

This outstanding issue is still open

Outstanding Issue No. 3:

During the GSP one comment on the project has been received.

Before starting the registration process for the project the GSP has to be closed on JI-SC website (already happened) and comments have to be considered in the final PDD as well as in the final determination opinion.

Response:

The project participants responded to the comment sufficiently (see chapter 4)

Conclusion:

This outstanding issue is closed

For any further detail about submitted CR or CAR please refer to Annex 1 Table 2 *Resolution of Corrective Action and Clarification Requests* of the Determination report.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on UNFCCC website by installing a link to TÜV SÜD's own website and invited comments by Parties, stakeholders and non-governmental organisations during a period of 30 days.

The following table presents all key information on this process:

webpage: http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=2685&Ebene1_ID=26&Ebene2_ID=803&mode=1	
Starting date of the global stakeholder consultation process: 2007-03-15	
Comment submitted by: 2007-04-11 Stanislav Lavrentiev	**Issues raised:** • BFG is formed as a by-product of reaction of coke, natural gas, iron oxides and fluxes. BFG contains, CO, CH_4, some CO_2 and other non-carbon gases. As cited in the PDD the BFG is used as a fuel for the Blooming Mill and CHP. Further CO_2 emissions are generated when BFG is combusted in these facilities as a result of oxidation of CO and CH_4: $2CO + O_2 = 2CO_2$; $CH_4+2O_2=CO_2+2H_2O$. Thus, the BFG cannot ne regarded as carbon-free fuel and emissions from the BFG utilization at the Blooming Mill and CHP must be taken into account as project emissions. • As it can be understood from calculations in this section industrial emissions were determined without considering the carbon stored at each process stage (sintering, coke and iron production). This approach leads to overestimation of CO_2 emissions and cannot be regarded as conservative.
Response by TÜV SÜD: It should be noted that sender of this comment is not known neither as an accredited NGO nor a directly effected stakeholder. Nonetheless TÜV SÜD and the project participants discussed and clarified during on-site mission in the issues rosen above. The response from the project participant (details see Annex 1, Table 3) covers the comment sufficiently. The PDD was revised to clarify this issue in more detail. The carbon content in the BFG is considered correctly. The statement concerning the storage of carbon is reasonable and the calculation approach between the baseline and the project takes this into account.	

5 DETERMINATION OPINION

TÜV SÜD has performed a Determination of the following proposed CDM project activity:

„*Revamping and Modernization of the Alchevsk Steel Mill*“ in the Ukraine.

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the JI. Hence TÜV SÜD will recommend the project for registration by the by the DFP of the host country under track 2 of the JI.

An analysis as provided by the applied methodology 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 as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final PDD version.

The Determination is based on the information made available to us and the engagement conditions detailed in this report. The Determination has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the JI project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the Determination opinion, which will go beyond that purpose.

This report had been submitted on basis of the latest publicly available regulations in the host country. This excludes assertive any mandatory requirement which will be appointed belated.

It is TÜV SÜD’s opinion that, with the exception of the formal approval of the project activity by the Parties involved the project (PDD in English, version 4 dated 2008-03-30) meets all relevant UNFCCC requirements and all relevant host country criteria for JI.

Munich, 2008-04-23

Werner Betzenbichler

Certification Body “climate and energy”
TÜV SÜD Industrie Service GmbH

Munich, 2008-04-23

Thomas Kleiser

Assessment Team Leader

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Annex 1: Determination Protocol

Table 1: Mandatory Requirements 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)	**OI 1**	The project is designed as a bi-lateral JI project with Ukraine as host country and The Nether-lands (via International Bank for Reconstruction and Develop-ment acting as a trustee for the Netherlands IBRD Carbon Fund) as investor (buyer) country. **Outstanding Issue No. 1:** a.) A formal Letter of Approval (LoA) / Letter of No Ob-jection from Ukraine as host country have not yet been signed by the Ukrainian Government regarding the provided JI project. But the regional and state authorities so far involved in this project already have indicated their acceptance of the project.

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			A required document for the Ukrainian LoA will be the "Final Determination Report" including this Determination Protocol and an Information Reference List. b.) The formal Letter of Approval (LoA) from the Netherlands as involved investor country also is not available at this stage of the project. A required document for the LoA also will be the "Final Determination Report" including this Determination Protocol and an Information Reference List. Both countries already have indicated their National Focal responsible for the approval process of JI-projects (see link: http://ji.unfccc.int/JI_Parties/Parties/index.html#Ukraine).

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			In case of Ukraine the focal point is the: **Ministry of Environmental Protection** 35 Urytsky Str., Kyiv, P.O. 03035 Ukraine Phone: +380 44 206 3100 Fax: +380 44 206 3107 Email: secr@menr.gov.ua The responsible person for the approval of JI projects is Mr. Heorhiy Veremiychyk (annotation: he is not officially indicated on UNFCCC´s website currently). In case of The Netherlands the Focal Point is the: **Ministry of Economic Affairs**

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			SenterNovem Swentiboldstraat 21 Postbus 176130 AA Sittard Netherlands **Mr. Derk de Haan** Phone: +31 30 239 3413 Email: d.de.haan@senternovem.nl According to the regulations established by the Joint Implementation Supervisory Committee (JI-SC) Letters of Approval (LoAs) for the project, from both involved countries (The Netherlands and Ukraine), have to be presented to the audit team before starting the official registration process for this project at the UNFCCC Joint Implementation Supervisory Committee (JI-SC). This issue currently is out of the

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			influence of the project participants.
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)	See below	Table 2, Section B.2
3. The sponsor Party shall not aquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7	Kyoto Protocol Article 6.1 (c)	☑	Article 5 requires "…Annex I Parties to having in place, no later than 2007, national systems for the estimation of greenhouse gas emissions by sources and removals by sinks ". Article 7 requires "… Annex I Parties to submit annual green-house gas inventories, as well as national communications, at regular intervals, both including supplementary information to demonstrate compliance with the Protocol".

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			The Netherlands already have submitted their fourth national communications to UnNFCCC, see link: http://unfccc.int/resource/docs/natc/netnc4.pdf and a progress report: http://unfccc.int/resource/docs/dpr/net1.pdf ; both dated December 22nd, 2005, and they have submitted their National GHG Inventory Report, dated October 3rd, 2006, see links: http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/3734.php and http://www.greenhousegases.nl/ The Netherlands fulfil all their obligations as requested in case the project will run as second

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			track JI project. It cannot be confirmed finally at this stage whether The Netherlands also comply with all requirements to be fulfilled in case the project wants to run as first track JI project.
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)	☑	The project is additional to domestic actions in The Netherlands.
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	☑	The Ukrainian Government already has designated a national focal point (Joint Implementation Secretariat) - the contact data are: **Ministry of Environmental Protection** 35 Urytsky Str., Kyiv, P.O. 03035 Ukraine Phone: +380 44 206 3100 Fax: +380 44 206 3107

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Email: secr@menr.gov.ua On December 29th, 2005 the Ukrainian government adopted national procedures for the consideration and approval of JI projects. These procedures had to be approved finally by the Cabinet of Ministers of Ukraine. On February 22nd, 2006 the Cabinet of Ministers in Ukraine approved the decree #206. This decree submitted the order of evaluation and implementation of the JI projects in the frames of Kyoto protocol. The Netherlands also have published on April 13th, 2006 a Ministerial Decree for the approval in JI and CDM projects (based on Staatscourant/79, April 24th, 2005) - "Netherlands National Guidelines and Procedures for Approving Article 6 Projects,

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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			including the Consideration of Stakeholders" (see link: http://ji.unfccc.int/JI_Parties/Parties/Documents/Netherlands01.pdf Thus this mandatory requirement is fulfilled by both involved parties.
6. The host Party shall be a Party to the Kyoto Protocol	Marrakech Accords, JI Modalities, §21(a)/24	☑	Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at April 12th, 2004.
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts	Marrakech Accords, JI Modalities, §21(b)/24	☑	This issue can not be answered concluding and is out of the influence of the project participants. The Ukraine´s assigned amount is 100% of emissions in 1990. Currently, June 27th, 2006, Ukraine has submitted its

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REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			Second National Communications within in the framework of the Kyoto Protocol to UNFCCC - see link (in Russian language): http://unfccc.int/resource/docs/natc/ukrnc2r.pdf The question can be assessed finally when the project starts generating emission reductions beginning with February 1st, 2006.
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	**OI 2**	**Outstanding Issue No. 2:** This issue can not be answered finally now as the national registry in Ukraine is still under development and not yet finalised completely and officially. This issue is out of the influence of the project owner.

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
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	☑	A project documentation consisting further information such as a baseline study, a monitorring plan, information concerning environmental impacts of the project, concerning stakeholder consultations and concerning the financial background of the project has been submitted. During the on-site audits the auditor was allowed to look all relevant documents. Additional information was handed out to the validator in form of copies and .doc/.pdf documents during and after the on-site audit.
10. The project desing 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	**OI 3**	The PDD had been made public available via TÜV SÜD´s website for calling on stakeholders to comment CDM/JI projects www.netinform.net module "climate and energy" in the period from March 15th, 2007 to April 13th, 2007.

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			The link is: http://www.netinform.de/KE/Wegweiser/Guide2.aspx?ID=2686&Ebene1_ID=26&Ebene2_ID=803&mode=1 The publishing has been announced worldwide via Climate-L server. This is a widespread approach used for many such Global Stakeholder Processes (GSPs). One comment on the project has been received. Before starting the registration process for the project the GSP has to be closed on JI-SC website (already happened) and comments have to be considered in the final PDD as well as in the final determination opinion.

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
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)	See below	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	See below	Table 2, Section B.2
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	See below	Table 2, Section B.2

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
14. The baseline methodology shall exclude to earn CERs for decreases in activity levels outside the project activity or due to force majeure	Marrakech Accords, JI Modalities, Appendix B	See below	Table 2, Section B.2
15. The project shall have an appropriate monitoring plan	Marrakech Accords, JI Modalities, §33(c)	See below	Table 2, Section D

☑: Compliant; CAR: Corrective Action Request; CR: Clarification Request; OI: Outstanding Issue (due to missing institutions and guidelines)

Table 2: Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A. General Description of Project Activity The project design is assessed.					
A.1. Project Boundaries Project boundaries are the limits and borders defining the GHG emission reduction project.					
A.1.1. Are the project's spatial (geographical) boundaries clearly defined?	1	DR	Yes, the geographical boundaries are clearly defined in the PDD.	☑	☑
A.1.2. Are the project's system (components and facilities used to mitigate GHGs) boundaries clearly defined?	1,2	DR	**Corrective Action Request No. 1:** In principle the boundaries of the new planned facilities are described correctly. However there is some confusion about the inclusion of the input material in the schematic of the Project scenario (page 15, PDD).	**CAR 1**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A.2. Technology to be employed Validation of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The validator should ensure that environmentally safe and sound technology and know-how is used.					
A.2.1. Does the project design engineering reflect current good practices?	1	DR, I	Yes, the employed technology does reflect current good practice in the host country. The applied technology – slab casters, Lintz-Donawitz-converter, vacuum tank degassing, ladle furnace – is a worldwide common technology. The contractor of this technology (VOEST Alpine) is well known to be the market leader in construction these facilities.	☑	☑
A.2.2. 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?	5	DR, I	The project uses state of the art technology considering the experiences with such projects in Ukraine.	☑	☑
A.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	6	DR, I	It is not likely that the project technology will be substituted by a more efficient tech-nology in the next 20 - 30 years. As for JI projects currently only a project period of 5 years (years 2008 – 2012) it is	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			ensured that there is absolutely no risk that this technology will be substituted by another technology in this time.		
A.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1,2	DR	Yes. In chapter B.1 and B.2 of the PDD the need of the required training is stated. **Corrective action request No. 2:** But the aspects of training and maintenance have to be described more detailed in the revised PDD. (see chapter A.4.2; also to be integrated in the monitoring plan)	**CAR 2**	☑
A.2.5. Does the project make provisions for meeting training and maintenance needs?	1,2	DR	Except of the stated need of the required training (see A.2.4) there is no provision made for training and maintenance needs. Even for the maintenance of the existing monitoring equipment (baseline) no clearly defined procedures were provided. The project participants stated that the training of the personnel will be performed by the general contractor (Voest Alpine). However there was no training plan available.	**CAR 3**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Corrective Action Request No.3 : Additional information concerning the time schedule, measures, concerned employees (group), responsibilities for trainings and maintenance should be included in the final revised PDD (in chapter D - monitoring).		
B. Project Baseline The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.					
B.1. Baseline Methodology It is assessed whether the project applies an appropriate baseline methodology.					
B.1.1. Is the discussion and selection of the baseline methodology transparent?	2	DR, I	Currently there are no binding requirements that approved methodologies (as in case of CDM) - for example the approved methodologies for CDM projects – have to be applied for JI projects. So it is in the free decision of the project	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			developers whether they use an approved CDM-methodology for their project or whether they develop, in a transparent, plausible, re-traceable and conservative manner, a project specific JI-methodology. It has to be highlighted that in the existing project there is no approved CDM methodology that fits to the baseline and project scenario of this project. So the proceeding of the project participants to develop a project specific baseline methodology is acceptable and correct.		
B.1.2. Does the baseline methodology specify data sources and assumptions?	2	DR, I	Yes, partially, but not in total. There are several data (e.g. natural gas, coak oven gas) anticipated without any information about the data source or the basis of the assumption. In addition the PDD should be much more structured, to find and identify data and their sources. A summary list with explanation of abbreviations should be included in the PDD.	**CAR 4**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Corrective Action Request No. 4: Data and sources relevant for the baseline setting have to be elaborated more detailed.		
B.1.3. Does the baseline methodology sufficiently describe the underlying rationale for the algorithm/formulae used to determine baseline emissions (e.g. marginal vs. average, etc.)	2,25	DR	**Corrective Action Request No. 5 :** No, the described formulae to determine the baseline are not transparent and nearly not comprehensible. Besides this fact, there are expressions stated without any relation to the ambient calculation (i.e "ECIO b* EFECIOy " page 42). Especially because of the fact, that there's no underlying methodology, it's crucial to describe all formulae used in a traceable manner. Probably it's useful, to add more explanations and brake up this pyramiding of formulae especially from page 41 to page 47.	**CAR 5**	☑
B.1.4. Does the baseline methodology specify types of variables used (e.g. fuels used, fuel consumption rates, etc)?	2	DR	No, not completely. **Corrective Action Request No.6 :** In the formulae to determine the baseline	**CAR 6**	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			there is no specific declaration of used fuels e.g. in making pig iron, in preparing iron ore, in furnace process and so on. The same incompleteness of information is given in describing the reducing agents. Expressions like "If several are used…" (page 43) or "quantity of fuel fio used (measured in typical SI units for fuel- liter, m3, joules, etc.)" are not sufficient to understand the specific project situation.		
B.1.5. Does the baseline methodology specify the spatial level of data (local, regional, national)?		DR	See CAR 4		
B.2. Baseline Determination The choice of baseline will be validated with focus on whether the baseline is a likely scenario, whether the project itself is not a likely baseline scenario, and whether the baseline is complete and transparent.					
B.2.1. Is the application of the methodology and the discussion and determination of the chosen baseline transparent?	4	DR	In principle, yes. None of the existing approved methodologies can be directly applied to the project. While identifying the baseline and project emissions, the general principles of Annex B of 16/CP.7 (in particular: project-specific approach, taking conservative assumption, and taking into account relevant policies)	☑	☑

* MoV = Means of Verification, DR= Document Review, I= Interview

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			have been adhered to.		
B.2.2. Has the baseline been determined using conservative assumptions where possible?		DR	In general yes. But see CAR 28	☑	☑
B.2.3. Has the baseline been established on a project-specific basis?		DR	Yes, the baseline is based project-specific.	☑	☑
B.2.4. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	20	DR, I	Yes, the baseline does take into account the major national and/or sectoral policies, macro-economic trends and political developments.	☑	☑
B.2.5. Is the baseline determination compatible with the available data?	25	DR, I	Yes, generally the baseline determination is compatible with the available data.	☑	☑
B.2.6. Does the selected baseline represent a likely scenario in the absence of the project?	22, 23	DR, I	Yes, the baseline does represent a likely scenario in the non project case, because the origin existing production was upgraded in 2005. This modernized production line based on the old technology is proposed to be the baseline scenario.	☑	☑

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B.2.7.	Is it demonstrated that the project activity itself is not a likely baseline scenario (e.g. through (a) a flow-chart or series of questions that lead to a narrowing of potential baseline options, (b) a qualitative or quantitative assessment of different potential options and an indication of why the non-project option is more likely, (c) a qualitative or quantitative assessment of one or more barriers facing the proposed project activity or (d) an indication that the project type is not common practice in the proposed area of implementation, and not required by a Party's legislation/regulations)?	20, 21, 22, 23, 27, 28, 39, 41	DR, I	The assessment team has not found indicative evidence that demonstrates that the project is not a likely baseline scenario. It should be demonstrated that the technology is not a business as usual project in the host country or that the technology is not common practice in the proposed area of implementation. In addition the investment analysis is not persuasive due to the fact, that on the one hand the Net Present Value of the Project Scenario is higher than the NPV of the baseline scenario. On the other hand the expected additional revenue from the emission reduction units leads to an increase of the IRR of 1% to a value of 22.4%. So from an economically point of view the additional revenue can not be considered as the decisive factor in choosing the project scenario. (Note: The IRR-method should be only used in combination with a defined benchmark and is not mentioned to compare different scenario with different investments and cash flows). Other barriers mentioned in the PDD like	**CAR 7**	

			"Carbon finance revenue provide not only additional cash flow less dependent on commercial risks, but also additional comfort for lenders through due diligence by the carbon investors and the World Bank. In this way JI was crucial in making this project financeable" should be confirmed by provided evidence. The CDM-project additionality tool "Tool for the demonstration and assessment of additionality" has not been applied for this JI-project. The given explanations can not demonstrate that the project is not financial attractive and that there are different barriers which normally prevent such a project. As evidence for the additionality of the project additional information and clarification needs to be submitted to the determinator. 1.) Proof that JI has been considered from the first beginning (planning of the project – a board decision to go for this project only under the pre-condition that this project can be realised as JI project has to be		

			submitted to the determinator. 2.) Evidence (from an independent source) that this technology is not business as usual in the region has to be submitted to the determinator. 3.) If available other evidence for additionality 4.) It's recommended, to use the "tool for additionality" in order to provide a traceable and clearly structured approach. **Corrective Action Request No. 7:** Missing background data and additional information and argumentation to prove the additionality have to be submitted to the validator.		
B.2.8. Have the major risks to the baseline been identified?		DR	Yes, the major risks are described in the PDD and reflected on the project scenario.	☑	☑
B.2.9. Is all literature and sources clearly referenced?	2	DR	Mostly yes, in form of footnotes or anywhere else in the text – some are summarized in the Annex 3 - References. But not all sources are described. For example the PDD mention "Natural Gas is anticipated at 0.00212 tonnes of CO2/Nm3	**CAR 8**	☑

			Coke Oven Gas is anticipated in 0.807 tonnes CO2/1000m3" without any reference. **Corrective Action No. 8:** It should be considered whether a separate annex listing the different documents to establish the baseline could be added also as separate annex to the PDD to make the process more descriptive and transparent. But predominantly all mentioned values should be referenced.		
C. Duration of the Project/ Crediting Period It is assessed whether the temporary boundaries of the project are clearly defined.					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?		DR	Yes, the starting date of the project is stated in the PDD with the 24 August 2005 and defined with the start of production of the new installed Slab Caster 1. The operational lifetime is defined as 40 years which is a plausible assumption for this type of project.	☑	☑
C.1.2. Is the project's crediting time clearly defined?		DR	Yes, it lasts from January 1st, 2008 until the end of 2012 (corresponding to the first	☑	☑

			commitment period under the Kyoto protocol).		
D. Monitoring Plan The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed.					
D.1. Monitoring Methodology It is assessed whether the project applies an appropriate baseline methodology.					
D.1.1. Does the monitoring methodology reflect good monitoring and reporting practices?	1,2, 29, 20, 25, 31	DR, I	Mostly yes, but not in all aspects. The monitoring methodology has been developed on a project-specific basis. In several points the monitoring concept currently still is too in-transparent: The following information is missing: • Which parameters are calculated ex-ante and which have to be (re-)calculated ex-post. A separate table illustrating this considering all parameters to be monitored would be helpful in this point. • A drawing showing where the meters are installed (separately for baseline and project scenario) would lead to a better understanding of the	**CAR 9** **CAR 10**	☑

			monitoring concept. It is very important to explain which parameters are measured where, to describe the single installed devices and with which data collecting system the values are calculated and archived. In case of project scenario an overview of all envisaged measurement devices including data collecting system has to be provided, even if they can not be specified in every detail. In addition a comprehensive list of all specific measurement devices used for this project, including information about ranges (physical and output signal) next/last calibration/maintenance with a clear reference to the formulae developed in the pdd should be elaborated. • Table D.2. indicates the QA and QC procedures for parameters of Baseline and Project scenario. The Data (indicated table and ID number) are not consistent with the related tables. For example "B&P-15" are totally different parameter. Probably there is some confusion in the table D1.1.1 and D 1.1.3.		

			• Table D1.1.1 and D 1.1.3. shows some more confusion (e.g. what is the difference between B-18 and B 11?) • Calibration requirements and procedures, responsible companies (third parties) in Ukraine and relevance for the project are not mentioned detailed enough in the monitoring plan. • The realisation of all measurements should be explained • Chapter D.3 is too limited currently. The data flow, frequencies of data collection and internal reporting and reviews should be added to the monitoring plan. Further information has to be added to the given information. • Will there be a project specific manual for the monitoring process • Will the monitoring plan be integrated in the existing ISO 9000 management system • Training and maintenance are not		

			addressed in the monitoring plan. **Corrective Action Request No. 9:** Especially because of the monitoring methodology has been developed on a project-specific it's crucial to describe all monitoring devices and reporting tools clearly. The monitoring plan has to be elaborated much more detailed in the above mentioned points. **Corrective Action Request No. 10:** The described parameter for baseline and project scenario in combination with the QC and QA are not consistent. Please revise the related tables in the PDD.		
D.1.2.	Is the selected monitoring methodology supported by the monitored and recorded data?			See D.1.1.	☑	☑
D.1.3.	Are the monitoring provisions in the monitoring methodology consistent with the project boundaries in the baseline study?		DR, I	Yes, basically the monitoring provisions are in line with the project boundaries. But see CARs mentioned above	☑	☑
D.1.4.	Have any needs for monitoring outside the project boundaries been evaluated and if so, included as applicable?	2	DR, I	**Corrective Action Request No. 11:** There are several needs for monitoring outside the project boundaries, where the	**CAR 11**	☑

			exactly data and the origin or if they are measured or calculated are not described exactly in the PDD (e.g. P-36, P-38, P-43 and so on) The description must be much more detailed.		
D.1.5. Does the monitoring methodology allow for conservative, transparent, accurate and complete calculation of the ex post GHG emissions?	2	DR, I	No, the project specific monitoring methodology is not transparent. See CARs mentioned above	☑	☑
D.1.6. Is the monitoring methodology clear and user friendly?			See D.1.5	☑	☑
D.1.7. Does the methodology mitigate possible monitoring errors or uncertainties addressed?	2,25	DR, I	**Corrective Action Request No. 12:** The level of accuracy and uncertainty for each monitored parameter should be added (information under D.2 is considered to be not sufficient) and quantified.	**CAR 12**	☑
D.2. Monitoring of Project Emissions It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.2.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the project		DR, I	See CAR 9	☑	☑

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	boundary during the crediting period?				
D.2.2.	Are the choices of project GHG indicators reasonable?		DR	Yes, generally the choice of the indicators is reasonable.	☑	☑
D.2.3.	Will it be possible to monitor / measure the specified project GHG indicators?		DR, I	In principal yes, all indicated GHG parameters can be monitored and/or measured.	☑	☑
D.2.4.	Will the indicators enable comparison of project data and performance over time?		DR, I	Yes – under the precondition that the CARs mentioned above will be solved.		
D.3.	**Monitoring of Leakage** It is assessed whether the monitoring plan provides for reliable and complete leakage data over time.					
D.3.1.	Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?		I	There should be no leakage as long as the old technology employed is decommissioned and not used again somewhere else. **Corrective Action Request No. 13:** The project developer must document that the previous equipment is decommissioned.	**CAR 13**	☑
D.3.2.	Have relevant indicators for GHG leakage been included?			See D.3.1.	☑	☑
D.3.3.	Does the monitoring plan provide for the collection and archiving of all relevant data			See D.3.1.	☑	☑

	necessary for determining leakage?				
D.3.4.	Will it be possible to monitor the specified GHG leakage indicators?			See D.3.1.	☑ ☑
D.4.	**Monitoring of Baseline Emissions** It is established whether the monitoring plan provides for reliable and complete project emission data over time.				
D.4.1.	Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining the baseline emissions during the crediting period?			See CAR 9 and CAR 10	☑ ☑
D.4.2.	Is the choice of baseline indicators, in particular for baseline emissions, reasonable?			Yes, if CAR 7 is solved.	☑ ☑
D.4.3.	Will it be possible to monitor the specified baseline indicators?			In general, yes. But see CAR 9 and CAR 10	☑ ☑
D.5.	**Monitoring of Environmental Impacts** It is checked that choices of indicators are reasonable and complete to monitor sustainable performance over time.				
D.5.1.	Does the monitoring plan provide for the collection and archiving of relevant data on environmental impacts?	13	DR, I	No negative environmental impacts are expected due to the EIA.	☑ ☑
D.5.2.	Will it be possible to monitor the specified environmental impact indicators?			This is not necessary for this project.	☑ ☑

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D.6. Project Management Planning It is checked that project implementation is properly prepared for and that critical arrangements are addressed.					
D.6.1. Is the authority and responsibility of project management clearly described?	2	DR, I	**Corrective Action Request No. 14:** The responsibilities and the structure of the project management (building the new facilities) are not described in the PDD.	**CAR 14**	☑
D.6.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	2	DR, I	**Corrective Action Request No. 15:** In the PDD there are mentioned responsible parties for monitoring the data. In chapter D.3 there is some general description. However the description currently is not detailed and clear enough. For example it's not mentioned who is responsible for preparing the monitoring report.	**CAR 15**	☑
D.6.3. Are procedures identified for training of monitoring personnel?			See CAR 2	☑	☑
D.6.4. Are procedures identified for emergency preparedness where emergencies can result in unintended emissions?	2, 29, 30, 31	DR, I	**Corrective Action Request No. 16:** No, there are no statements about emergencies mentioned in the PDD. Please add these statements.	**CAR 16**	☑

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D.6.5. Are procedures identified for calibration of monitoring equipment?			There's a general notice of intention described in the Annex 3 of the PDD. But even for the baseline monitoring equipment there were no sufficient calibration procedures provided during the on-site visit. **Corrective Action Request No. 17:** Please provide procedures for calibration of all monitoring equipment.	**CAR 17**	☑
D.6.6. Are procedures identified for maintenance of monitoring equipment and installations?	2, 29, 30, 31	DR, I	Maintenance procedures are not considered in the PDD. **Corrective Action Request No. 18:** Please provide procedures for maintenance of all monitoring equipment and installations.	**CAR 18**	☑
D.6.7. Are procedures identified for monitoring, measurements and reporting?	2, 29, 30, 31	DR, I	No procedures for monitoring, measurements and reporting could be identified. **Corrective Action Request No. 19:** Please provide procedures for monitoring, measurements and reporting.	**CAR 19**	☑

D.6.8. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?			No such procedures could be identified could be identified during the on-site audit. **Corrective Action Request No. 20:** Please provide for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation).	**CAR 20**	☑
D.6.9. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	2, 25, 29, 30, 31	DR, I	No such procedures could be identified during the on-site audit. **Corrective Action Request No. 21:** Please provide procedures for dealing with possible monitoring data adjustments and uncertainties.	**CAR 21**	☑
D.6.10. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	2	DR	No such procedures could be identified during the on-site audit. **Corrective Action Request No. 22:** Please provide procedures for internal audits of GHG project compliance with operational requirements where applicable.	**CAR 22**	☑
D.6.11. Are procedures identified for project performance reviews?	2	DR	Except of general statements ("The World Bank will serve an oversight function reviewing documentation at regular intervals and addressing any problems that arise") no	**CAR 23**	☑

			procedures could be identified. **Corrective Action Request No. 23:** Please describe and provide exact procedures for project performance reviews.		
D.6.12. Are procedures identified for corrective actions?	2, 10, 30, 31	DR, I	No **Corrective Action Request No. 24:** Please provide procedures for corrective actions.	**CAR 24**	☑
E. Calculation of GHG Emissions by Source It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.					
E.1. Predicted Project GHG Emissions The validation of predicted project GHG emissions focuses on transparency and completeness of calculations.					
E.1.1. Are all aspects related to direct and indirect GHG emissions captured in the project design?		DR	Yes, project emissions, baseline emissions and leakage are discussed in the PDD.	☑	☑
E.1.2. Are the GHG calculations documented in a complete and transparent manner?	2, 25, 26	DR, I	No, the provided excel calculation file uses abbreviations, which are not explained anywhere. In addition, no reference to the formulae developed in the PDD is given in a	**CAR 25**	☑

			transparent or traceable manner. **Corrective Action Request No. 25:** Please describe GHG calculations documented in a complete and transparent manner.		
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?		DR	Yes, the reduced specific amount of scrap in the project scenario, which is counted for zero GHG emissions, is a conservative approach.	☑	☑
E.1.4. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?		DR	Uncertainties are not quantified. **Corrective Action Request No. 26:** Please address uncertainties in the GHG emissions estimates. See also CAR 12	**CAR 26**	☑
E.1.5. Have all relevant greenhouse gases and source categories listed in Kyoto Protocol Annex A been evaluated?		DR, I	Yes. Electricity generation and consumption/ fuel combustion/ material input are the relevant sectors/source in this category.	☑	☑
E.2. Leakage Effect Emissions It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed.					
E.2.1. Are potential leakage effects beyond the chosen	2	DR	It is plausible, that no leakage effects occur	☑	☑

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project boundaries properly identified?			as described in the PDD. See D.3.1.		
E.2.2. Have these leakage effects been properly accounted for in calculations?			See E.2.1.	☑	☑
E.2.3. Does the methodology for calculating leakage comply with existing good practice?			See E.2.1.	☑	☑
E.2.4. Are the calculations documented in a complete and transparent manner?			See E.2.1.	☑	☑
E.2.5. Have conservative assumptions been used when calculating leakage?			See E.2.1.	☑	☑
E.2.6. Are uncertainties in the leakage estimates properly addressed?			See E.2.1.	☑	☑
E.3. Baseline Emissions The validation of predicted baseline GHG emissions focuses on transparency and completeness of calculations.					
E.3.1. Have the most relevant and likely operational characteristics and baseline indicators been chosen as reference for baseline emissions?		DR, I	Yes, under the pre-condition that all CARs concerning this topic mentioned above will be solved.	☑	☑
E.3.2. Are the baseline boundaries clearly defined and do they sufficiently cover sources and sinks for baseline emissions?		DR, I	Yes, under the pre-condition that all CARs concerning this topic mentioned above will be solved.	☑	☑
E.3.3. Are the GHG calculations documented in a complete and transparent manner?		DR, I	No, the provided excel calculation file has no reference to the formulae developed in	☑	☑

			the PDD. So the calculations are not transparent or traceable. See CAR 25		
E.3.4. Have conservative assumptions been used when calculating baseline emissions?		DR, I	Yes, in general. But it's not clearly stated in the PDD on footnote 4 of page 41, what happens if there are changes of operations of the OHF line, which lead to higher baseline emissions. In this case a conservative approach would be a cap on the recent or the historical data. **Corrective Action Request No. 27:** Pleas clarify in order to be conservative what happens if there are changes of operations of the OHF line, which lead to higher baseline emissions. In this case a conservative approach would be a cap on the recent or the historical data	**CAR 27**	☑
E.3.5. Are uncertainties in the GHG emission estimates properly addressed in the documentation?			See CAR 26	☑	☑
E.3.6. Have the project baseline(s) and the project emissions been determined using the same appropriate methodology and conservative assumptions?			See CAR 28	☑	☑

E.4. Emission Reductions Validation of baseline GHG emissions will focus on methodology transparency and completeness in emission estimations.					
E.4.1. Will the project result in fewer GHG emissions than the baseline scenario?		DR, I	Yes, the project will result in fewer GHG emissions than the baseline scenario.	☑	☑
F. Environmental Impacts Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the validator.					
F.1.1. Has an analysis of the environmental impacts of the project activity been sufficiently described?	12, 13	DR, I	Yes, the description of the environmental impacts is sufficient. The local stakeholder process was performed correctly.	☑	☑
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	12, 13	DR, I	Yes, the approved EIA was provided to the determination team.	☑	☑
F.1.3. Will the project create any adverse environmental effects?		DR, I	No, the project will not create any adverse environmental effects.	☑	☑
F.1.4. Are transboundary environmental impacts considered in the analysis?		DR, I	Yes, but negative transboundary environmental impacts are not expected for this project.	☑	☑
F.1.5. Have identified environmental impacts been addressed in the project design?	2	DR	Yes. See comments under F.1.1	☑	☑

F.1.6. Does the project comply with environmental legislation in the host country?	13		Yes, the approved EIA includes the formal approval by the State Environmental Expertise authorities.	☑	☑

Table 3: Resolution of Corrective Action and Corrective Action Requests

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
Outstanding Issue No. 1: According to the regulations established by the Joint Implementation Supervisory Committee (JI-SC) Letters of Approval (LoAs) for the project, from both involved countries (The Netherlands and Ukraine), have to be presented to the audit team before starting the official registration process for this project at the UNFCCC Joint Implementation Supervisory Committee (JI-SC).	No. 1	The project will be presented to Ukraine and the Netherlands once the Determination Report has been finalized.	☑ This issue is finally out of the direct influence of the project participants.
Outstanding Issue No. 2: National Registry in Ukraine: This issue can not be answered finally now as the national registry in Ukraine is still under development and not yet	No. 8	Out of project owner control	☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
finalised completely and officially. This issue is out of the influence of the project owner.			
Outstanding Issue No. 3: One comment on the project has been received. Before starting the registration process for the project the GSP has to be closed on JI-SC website (already happened) and comments have to be considered in the final PDD as well as in the final determination opinion.	No. 10	It is assumed that 100% of the carbon from coke entering the blast furnace is emitted as CO2 in the calculations. The carbon that makes up BFG comes mainly from coke. This means that BFG which contains Carbon in the form of CO, CO2, and CH4 which when burned will be released as CO2 is already counted in the calculations as having formed CO2 when burned as coke in the blast furnace. There is no reason to double count this carbon as emission. There is no carbon 'stored' at the end of each intermediate steel processes. Carbon is either released or passed on in the next process stage. Since the final product in both the baseline and project case is exactly the same tonnage of steel, the exact same amount of carbon will be 'stored' in both the	The response from the project participant covers the comment sufficiently. The PDD was revised to clarify this issue in more detail. The carbon content in the BFG is considered correctly. The statement concerning the storage of carbon is reasonable and the calculation approach between the baseline and the project takes this into account. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
		baseline and project case in the final product of steel. Section D.1 of PDD is also updated concerning this question.	
Corrective Action Request No. 1: In principle the boundaries of the new planned facilities are described correctly. However there is some confusion about the inclusion of the input material in the schematic of the Project scenario (page 15, PDD).	A.1.2.	The project boundary will encompass all of the technological changes resulting from the proposed project. OHFs/Converters, Blooming/Casting, Sinter Plant, Blast Furnaces, CHP, lime, oxygen and compressed air production included into the boundary. Electricity grid, natural gas supply and Coke plant are excluded as they are not in the control of Project Entity. Electricity, natural gas and coke used in baseline and project cases are included in calculations. Scrap has no impact on emissions based on chosen, conservative approach. All CO_2 emissions associated with the project are therefore captured.	The scheme is updated in the revised PDD and shows the project boundaries transparently. ☑
Corrective Action Request No. 2:	A.2.4.	Deputy Director of the Plant is responsible	The monitoring plan and Chapter A.4

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
The aspects of training and maintenance have to be described more detailed in the revised PDD. (see chapter A.4.2; also to be integrated in the monitoring plan)		for training of personnel. Training is provided for technical specialists and managers of the AISW on continuous basis. Technical experts of VAI presented in Alchevsk continuously supervise the project and train the staff for the project. The staff has also internships at partner steel plants, e.g. at partner plant DMKD that has old Converters and old Continuous Casting technology in place. A detailed training programme is provided to the Determinator. Chief Engineer has the main project responsibility. Maintenance of the project will be carried out based on AISW's internal requirements and contracts with suppliers (VAI) and supervised by Director-General of the AISW.	indicate a general overview about maintenance procedures and training of the stuff including the responsibilties. The maintenance is based on national requirements, AISW's internal requirements and will be supported by the supplier of technical equipment (VAI). A training programm was provided which shows the already performed and envisaged measures to keep the stuff familiar with the equipment. Regarding the complexity of this project and the amount of different needs for maintenance and training this description in the revised PDD is considered to be sufficient. ☑
Corrective Action Request No.3 : Additional information concerning the time schedule, measures, concerned	A.2.5.	Time schedule and measures implemented by the project are indicated in section A.4.2, of the PDD.	A scheme is provided in the PDD which shows the time schedule of the projects implementation, the different

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
employees (group), responsibilities for trainings and maintenance should be included in the final revised PDD (in chapter D - monitoring)		The monitoring plan will be implemented by different specialists of the AISW under supervision of Chief Energy Specialist and managed by Director General of the Plant. Pls. see section D.3. AISW will finally regulate JI monitoring through a specially adopted Internal Regulation based on established monitoring practises. It will be the order of Director General of the Plant. All the documents will be translated into Ukrainian. Internal Regulation will be in place by initial verification. Pls. see also replies to CAR3 and the revised section A.4.2. and D.3. in PDD.	contractors and suppliers as well as the general responsibilities. A more detailed description of the responsibilities as well as procedures for maintenance, calibrations and actions to be done in case of malfunctions are cited in the monitoring plan. For the project scenario similar additional procedures will be developed taking into account ISO 9001. ☑
Corrective Action Request No. 4: Data and sources relevant for the baseline setting have to be elaborated more detailed	B.1.3.	The main data source is the day-to-day records, quarterly records and annual records of Alchevsk steel mill for baseline and upstream processes for the project case. The main project data source is the technical specifications of VAI, the technology provider. Details are given in ER	The emission factors per output of production will be quantified for the baseline technology *ex-post*. All parameters, with the exception of IPCC default values as indicated in the PDD will be measured and or monitored *ex-post*. The data sources and the data flow is

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
		Calculation Sheet. For grid electricity, Erutp factors have been utilized to be replaced by official Ukrainian factors once available. For Natural gas and Coke Oven gas the most recent conversion factors and typical net caloric values from Ukrainian National Inventory report has been used. Caloric values of fuels will be monitored based of reports provided by suppliers and checked as applicable by AISW Laboratory. IPCC defaults for reducing agents will be used. Pls. see the Annex 2 of PDD for details Abbreviations are also included in Annex 3.	described to be electronically and in paper form. ☑
Corrective Action Request No. 5 : The described formulae to determine the baseline are not transparent and nearly not comprehensible. Besides this fact, there are expressions stated without any relation to the ambient calculation (i.e "ECIO b* EFECIOy " page 42).	B.1.3.	Formulae have been updated and made more clear in PDD with added explanations in section D.1.1.4. Pls. see also tables D.1.1.1 and D.1.1.3.	The revised PDD includes the information about calculation of baseline emissions transparent and traceable. Besides the formulae descriptive explanation were added. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
Especially because of the fact, that there's no underlying methodology, it's crucial to describe all formulae used in a traceable manner. Probably it's useful, to add more explanations and brake up this pyramiding of formulae especially from page 41 to page 47.			
Corrective Action Request No.6 : In the formulae to determine the baseline there is no specific declaration of used fuels e.g. in making pig iron, in preparing iron ore, in furnace process and so on. The same incompleteness of information is given in describing the reducing agents. Expressions like "If several are used…" (page 43) or "quantity of fuel fio used (measured in typical SI units for fuel- liter, m3, joules, etc.)" are not sufficient to understand the specific situation.	B.1.4.	Fuels, materials and units have been specified in sections D 1.1.1 and D.1.1.3 for the project and baseline scenarios, respectively. Fuels and materials are also indicated in Annex 3 and Emission Reduction Calculation Spreadsheet.	The revised PDD includes a sufficient description of the formulae used. The approach is traceable now with the help of additional information given in the monitoring plan and the provided calculation spreadsheet. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
Corrective Action Request No. 7: Missing background data and additional information and argumentation to prove the additionality have to be submitted to the determination team	B.2.7.	The main steps of CDM "Tool for the demonstration and assessment of additionality (version 03) were used in the updated version of the PDD, although it is not required for JI projects. The requirements of the Step 1 of the Additionality tool ("Identification of alternatives to the project activity consistent with current laws and regulations") are followed in the Section B.1 ("Description and justification of the baseline chosen") and the Steps from 3 through 4 are followed in the section B.2 of the PDD. The background data and additional information accessible from publicly available independent sources are referenced in the updated PDD, as well as the relevant decisions and data from AISW/IUD and the concerned authorities. References will be provided to the Determinator.	The project developer provided the determination team with background data and additional information to follow the argumentation of additionality. The baseline scenario is mainly justified by the fact that the project owner made an investment choice in 2002 to construct a production line by using the traditional technology (Open Hearth Furnaces and Blooming Mills). The installation of the modern technology was considered but evaluated to be too risky (lack of experience). In addition the significant capital investment and difficulties of crediting and the considerably greater time for construction led finally to the realization of the old technology in 2005 (see ref: Protocol # 11 of the Technical Council of the AISW, 22 November 22, 2002).

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
			The methodological approach is to use this production line as the baseline scenario. The additionality argumentation is based on a barrier analysis as the main item. Several proofs were provided to the determination team - as cited in the PDD (see footnotes) - to document the argumentation concerning investment barriers and prevailing practice in the Ukraine. The MINISTRY OF INDUSTRIAL POLICY OF UKRAINE states in a supporting letter, that the new LD Converters, Slab Casters, Vacuumator and Ladle-Furnace that will be built at OJSC “AISW” are the most modern alternative at the Ukrainian market and other steel plants are actively studying the experience of OJSC “AISW” on the exploitation of the state of art metallurgical equipment.

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
			That underlines the argumentation that the implementation of this technology is the first of its kind in Ukraine. The proof of the first consideration of using the Kyoto mechanism as an incentive to invest in the more energy efficient technology was provided to the determination team (see ref.: Minutes of Meeting of the Technical Council of the Plant, 26 May, 2003). As next step in the timeline of project realization negotiations have been launched for securing loans. Also for this aspect the early consideration is provable by relevant documents (letter from Societe Generale, Corporate & Investment Banking, 2004). ☑
Corrective Action Request No. 8: It should be considered whether a	B.2.9.	Sources of all values are referenced in Annex 2.	☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
separate annex listing the different documents to establish the baseline could be added also as separate annex to the PDD to make the process more descriptive and transparent. But predominantly all mentioned values should be referenced.		Additional Documents provided during the determination process to the Determinator are listed in Annex 2.	
Corrective Action Request No. 9: Especially because of the monitoring methodology has been developed on a project-specific it's crucial to describe all monitoring devices and reporting tools clearly. The monitoring plan has to be elaborated much more detailed in the above mentioned points.	D.1.1.	All parameters with the exception of IPCC default values will be monitored *ex-post.* Monitoring outline for baseline and project cases has been included in Annex 3. A detailed monitoring device table has been provided for the baseline case including range, accuracy and calibration information (included in Monitoring Database). Same devices are also used for the project case for Blast Furnaces and Sinter Plant. The rest of the devices for Converters and Continuous Casting will be defined for the project case by initial verification. All project monitoring will be based on state-of-the art	The revised monitoring plan includes all required information. The Calculation Spreadsheet "Monitoring Database" specifies all measurement equipment including accuracies, ranges, identifier of the meters. The allocation to parameter in the PDD is clearly indicated. The reporting tool was provided to the determination team The revised monitoring plan makes references to internal instructions of the project owner concerning monitoring procedures and responsibilities. These

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
		monitoring devices as required by the relevant Ukrainian legislation and Guiding Metrological Instructions of AISW (provided to the Determinator). Table D.2. has been revised in PDD. Pls. note that Data variables for the baseline and project case refer to equivalent parts of the process. Pls. also see added explanations in tables D.1.1.1, 1.1.3 and D.2. Note that all parameters are not relevant for the current configuration of the Project as Monitoring Plant takes into account possible changes. If for example, oxygen production will shift from using electricity to other fuels, this change will be captured by Monitoring Plan/Database. All monitoring will be based on Guiding Metrological Instructions of AISW. These Instructions have been developed in accordance with ISO 9000 requirements. Instructions also define procedures for calibration and maintenance of monitoring	guiding meteorological instructions are used in the baseline and are envisaged for the projects parameters. Arrangement drawings of the installation locations for the baseline and project scenario are provided in the PDD. A general description of the Data flow and storage of all data including measures of data cross check and internal reviews is found to be sufficient for this highly complex project. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
		equipment. Pls see also replies to CAR2 concerning training and maintenance and CAR3 concerning JI monitoring procedures.	
Corrective Action Request No. 10: The described parameter for baseline and project scenario in combination with the QC and QA are not consistent. Please revise the related tables in the PDD.	D.1.1.	Pls. see the revised tables in the section D.2. of the PDD.	The tables were revised accordingly. ☑
Corrective Action Request No. 11: There are several needs for monitoring outside the project boundaries, where the exactly data and the origin or if they are measured or calculated are not described exactly in the PDD (e.g. P-36, P-38, P-43 and so on) The description must be much more detailed.	D.1.4.	All the parameters having an impact on GHG emissions are included in Monitoring Plan/Database. Pls. see also the response to CAR1.	The revised version of the PDD includes now additional information to understand the project boundaries as well as origin of each single parameter. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
Corrective Action Request No. 12: The level of accuracy and uncertainty for each monitored parameter should be added (information under D.2 is considered to be not sufficient) and quantified.	D.1.7.	Accuracy and uncertainty is included in table D.2.and in Monitoring devices table included in Monitoring Database for the baseline case. Devices related to Sinter Plant and Blast Furnaces also apply to the project case, and the rest of the project devices will be defined by Initial Verification. All project monitoring will be based on state-of-the art monitoring devices as required by the relevant Ukrainian legislation and guided by AISW's Guiding Metrological Instructions. Schematics of monitoring points for the baseline and project cases are provided in Annex 3.	The uncertainties – as far as the information of the metering devices is available at this stage - are sufficiently indicated in the PDD. The monitoring plan indicates that best available techniques will be used for all metering devices in the project scenario. ☑
Corrective Action Request No. 13: The project developer must document that the previous equipment is decommissioned.	D.3.1.	Currently the old Open Hearth Furnaces are in operation but will be shut down. This will be verified at verification stage	The evidence of decommissioning the old Open Hearth Furnaces must be provided to the verifier in order to avoid rebuilding at another location. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
Corrective Action Request No. 14: The responsibilities and the structure of the project management (building the new facilities) are not described in the PDD.	D.6.1.	Pls see the revised section A.4.2. of the PDD.	A scheme and description of projects construction and responsibilities is included in the revised PDD. ☑
Corrective Action Request No. 15: In the PDD there are mentioned responsible parties for monitoring the data. In chapter D.3 there is some general description. However the description currently is not detailed and clear enough. For example it's not mentioned who is responsible for preparing the monitoring report.	D.6.2.	The general coordination and reporting of the monitoring results will be responsibility of Chief Energy Specialist, and actual monitoring will be designated to his deputies. All production shops and specialists of the plant will be involved into the preparation of monitoring report under coordination of Chief Energy Specialist. Pls. see section D.3. and table 4 for details	The responsibilities are described in the PDD. The chief engineer has the overall project responsibility. ☑
Corrective Action Request No. 16: No, there are no statements about emergencies mentioned in the PDD.	D.6.4.	No major emergencies are expected having a major influence on ERs. Should there be unusual events related to emissions, these	This statement is integrated in the Monitoring Plan. Because of the chosen methodological approach the

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
Please add these statements.		can be captured at monitoring and verification stage.	determination team doesn't see any emergencies neither. ☑
Corrective Action Request No. 17: Please provide procedures for calibration of all monitoring equipment.	D.6.5.	The procedures for calibration of all monitoring equipment are described in the following internal AISW instructions: Guiding Metrological Instructions I.19.0.1-07 and Guiding Metrological Instructions I.19.1.1-07. The instructions have been developed in accordance with ISO 9001 and national requirements. They secure required accuracy and unity of all the measurements.	The related Guiding Metrological Instructions were provided and found to be sufficient. These instructions are also mentioned in the monitoring plan of the revised PDD to be used for projects monitoring equipment, too. ☑
Corrective Action Request No. 18: Please provide procedures for maintenance of all monitoring equipment and installations.	D.6.6	The Chief Metrological Specialist of the AISW is in charge for maintenance of the monitoring equipment and installations as well as for their accuracy and unity as it is required by paragraphs 2.1.1, 3.1.1, 7.1 of the AISW Regulation ПП 229-Э-056-863/02-2005 "On metrological services of	The related Guiding Metrological Instructions were provided and found to be sufficient. These procedures are also mentioned in the monitoring plan of the revised PDD. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
		the iron works" and p. 6.3 Guiding Metrological Instructions I.19.0.1-07. In case of defect is discovered by responsible specialist in the monitoring equipment the actions of the personnel are determined by Guiding Metrological Instructions I.19.0.1-07 (p.5.4.4).	
Corrective Action Request No. 19: Please provide procedures for monitoring, measurements and reporting.	D.6.7.	Monitoring is integral part of current AISW operations. The recorded information is used for optimization of production and material efficiency. The results are used by technical personnel of AISW. JI monitoring will be part of this monitoring. Measurements are conducted on continuous basis and automatically according with the Guiding Metrological Instructions. Three detailed instructions at AISW regulate the monitoring procedures and responsibilities under Guiding Metrological Instructions (Russian abbreviation is РМИ). - (РМИ-I-19.0.1-07) "Metrological product	The related Guiding Metrological Instructions were provided and found to be sufficient. These procedures are also mentioned in the monitoring plan of the revised PDD. Responsible specialists for monitoring as well as the reporting are described . ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
		quality assurance." - (РМИ-I-19.0.2-07) "Metrological expertise of documentation." - (РМИ-I-19.1.1-07) "Management of measurement technique". According to national legislative requirements the instructions will be revised every 3 years. The measurement of the parameters included into the monitoring plan of the project is envisaged by the provisions of the Guiding Metrological Instructions I.19.1.1-07 (paragraph 5.3.2). The general coordination and reporting of the monitoring will be responsibility of Chief Energy Specialist.	
Corrective Action Request No. 20: Please provide for day-to-day records handling (including what records to keep, storage area of records and how to process performance	D.6.8.	Every production Shop is responsible for preparing the data. Data are sent to Chief Energy Specialist for processing. On the basis of received data, Chief Energy Specialist fills Monitoring Database and	This response from the project participant is included in the PDD and found to be sufficient. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
documentation).		prepares Monitoring Report. The data are compiled in daily, quarterly and annual records and kept in electronic and paper format. All data is finally sent and stored in Planning Department.	
Corrective Action Request No. 21: Please provide procedures for dealing with possible monitoring data adjustments and uncertainties.	D.6.9.	Best available techniques are used in order to minimise uncertainties. All the equipment used for monitoring purposes is in line with national legislative requirements, standards and AISW's Guiding Metrological Instructions.	☑
Corrective Action Request No. 22: Please provide procedures for internal audits of GHG project compliance with operational requirements where applicable.	D.6.10.	Internal Audits are in line with ISO 9001 standards and national requirements. In details they are explained in Guiding Metrological Instructions	The related Guiding Metrological Instructions were provided and found to be sufficient. These procedures are also mentioned in the monitoring plan of the revised PDD. ☑
Corrective Action Request No. 23: Please describe and provide exact procedures for project performance	D.6.11.	The information provided by specialists of the AISW will be reviewed, cross-checked and corrected as applicable based on	The related Guiding Metrological Instructions were provided and found to be sufficient. These procedures are

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
reviews		Guiding Metrological Instructions. In addition, World Bank will supervise the implementation of the Monitoring Plan.	also mentioned in the monitoring plan of the revised PDD. ☑
Corrective Action Request No. 24: Please provide procedures for corrective actions.	D.6.12.	Pls. see the reply for CAR23.	☑
Corrective Action Request No. 25: Please describe GHG calculations documented in a complete and transparent manner.	E.1.2.	GHG calculations are revised and presented in a transparent way in section E of PDD and attached Emission Reduction Calculation Spreadsheet linked to Monitoring Database.	The formulae to calculate the Emission Reductions are described transparently. Detailed estimations of project and baseline emissions are included in Annex 3. A comprehensive summary is given in section E. The given figures comply with these provided in the calculation sheets "Emission Reductions" and "Monitoring Data Base". ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
Corrective Action Request No. 26: Please address uncertainties in the GHG emissions estimates. See also CAR 12.	E.1.4.	Uncertainties are generally low with the exception of estimated limestone (with limited potential impact on ERs) in furnace process for the baseline. All other parameters are or will be measured with accurate and regularly calibrated monitoring devices. Pls. see table D.2. in PDD and Device listing in Monitoring Database.	The uncertainties – as far as the information of the metering devices is available at this stage - are sufficiently indicated in the PDD. The monitoring plan indicates that best available techniques will be used for all metering devices in the project scenario. The impact on the ERs of the total CO2 from limestone for the furnace process must be judged during the verfication process under the aspect of materiality. ☑
Corrective Action Request No. 27: Please clarify in order to be conservative what happens if there are changes of operations of the OHF line, which lead to higher baseline emissions. In this case a conservative approach would be a cap on the	E.3.4.	Project as well as baseline emissions depend e.g. on the composition of the input in the steel making process, in particular on the amount of pig iron consumed to produce a ton of steel (specific consumption). The optimization of the input composition in the steel making process is linked to the amounts of scrap and pig iron within the	The project developer explained reasonable that the input composition depends on different criteria which are not clearly to be determined in advance. The ex-post monitoring of the input material ensures the possibility to

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
recent or the historical data.		predetermined technical limits and depending on availability of scrap on the market and market prices differential for scrap and pig iron. Currently the consumption of pig iron is 72 % in OHFs and is expected to increase up to 75% when old OHFs are shut down and the price of scrap is expected to increase (calculated as percentage of the total input of pig iron and scrap into the steel making process). Project pig iron usage is expected to increase to 82%. The specific consumption of pig iron will be monitored *ex-post* and baseline and project emissions are adjusted respectively during monitoring. At verification the verifying AIE shall check that specific consumption of pig iron in the baseline and compare it with initial specific consumption estimates as per the information provided in the PDD. If the specific pig iron consumption differs significantly from initial specific consumption estimates, then it should be verified that this	compare the amount of material input in the baseline and project scenario. The determinator agrees, that the real specific consumption is to be checked by the verifier taking into account historical data. If some unreasonable differences occur, the reason for this must be assessed and judged conservatively taking into consideration the principle of materiality. ☑

Draft report clarifications and corrective action requests	Ref. to checklist question in table 1 and table 2	Summary of project owner response	Determination conclusion
		is not intentional, and that the same economic and technical triggers were applied to the observed (monitored) specific pig iron consumption in the project scenario. This approach is based on approved CDM methodology AM0009 to deal with the uncertainly of a major parameter for calculation of baseline emissions (i.e. forecast of production of oil and flared gas). Pls. also note that chosen approach is conservative as scrap is counted a zero emission input, and more scrap is consumed in the baseline case. This could lead to GHG emission reductions at other plants as more scrap is freed up to replace pig iron.	

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Industrie Service

Annex 2: Information Reference List

Reference No.	Document or Type of Information
1	Final Project Design Document for JI project "Revamping and Modernization of the Alchevsk Steel Mill", dated 30.03, 2008 PDD version 4
2	Project Design Document for JI project "Revamping and Modernization of the Alchevsk Steel Mill - Using Higher Efficiency Technology to replace Open Hearth Furnaces (OHF), Ingot Casting and Blooming Mills", dated 09.03, 2007 PDD version 3
3	On-site and on-line interviews conducted on April 3rd- 4th , 2007 by auditing team of TÜV SÜD Determination team: Konrad Tausche — Project Manager — TÜV SÜD Alexej Kardashin — GHG Auditor — TÜV SÜD Interviewed persons: Belakh Olga — Head of Planning & Econom Department — AISW Fokin Igor — Deputy Energetic General — AISW Bremze Georgy — Deputy Energetic General — AISW Sidorov Pavel — Metrologist General, Shop PSI Head — AISW Ageeva Valentina — Deputy Head of Environmental Prc. — AISW Menyailo Valentin — Head of Safety Department — AISW Sqvkov Vladimir — Senior Master of Technics Control Unit — AISW Pavlonikov Valery — Capital Construction - Head of Unit — AISW Shulzkenko Viktov — Quality Control Deputy - Head of Unit — AISW Voledymyr Nosov — Consortium Industrial Group International Infrastructure — AISW Gondareva Natalia — Foreign Trade Department engineer — AISW Kurakovskiy Vladiv — Deputy Director General Economics — AISW Vovchak Vasyl — IDEE Director of Department — Institute for Environment and Energy Conservation Roman Shalko — Interpreter — AISW

Reference No.	Document or Type of Information
4	UNFCCC homepage http://www.unfccc.int including the JI section
5	Scheme of renovation OJSC "AMK"
6	Project presentation (hard copy).
7	Law of Ukraine concerning measurement devices 113/98-BP of 15.05.2004
8	Permission of factory calibration lab Nr.06544-5-2-4
9	Scope of factory calibration lab Nr. 06544-5-2-4
10	Certificate of QMS (TUV Rheinland) Nr. 01100005131
11	Quality policy of factory from 23.05.03
12	Permission of commission concerning the project. From 22.08.05 Nr.582 Issued by safety technical commission
13	The possible impact on environmental (OVOS) TM-103172 of 24.02.04
14	The report of technical expertise of the project by Ukraine expertise company of 18.08.2001
15	The newspaper "Lights" (Огни) from 26.02.04 comment: information about the project and invitation for open discussion.
16	The list of measuring devices from 14.02.07
17	The report of meeting OJSC "AMK" . comment : there was solution about establishing of the project.
18	The Contract Nr. AMK-MS/T11052005 (of 11.05.2005) between OJSC "Alchevsk iron and steel works" and VOEST-Alpine Industrie Anlagenbau GmbH & Co. Regarding the supply of plant and equipment for LD converter
19	The Contract Nr. AMK-MS/S11052005 (from 11.05.2005) between OJSC "Alchevsk iron and steel works" and VOEST-Alpine Industrie Anlagenbau GmbH & Co. Regarding the provision of supervision services and overall project management services related to the construction, erection of the new LD converter
20	Supporting Letter from the Ministry of Industrial Policy of Ukraine
21	Supporting Letter from Societe Generale
22	Minutes of the Meeting of the Technical Council of the Plant, 26 May, 2003
23	Protocol # 11 of the Technical Council of the AISW, 22 November 22, 2002
24	Training program

Reference No.	Document or Type of Information
25	Annual Monitoring Database
26	Emission Reduction Calculation Spreadsheet (including a Listing of Monitoring Devices)
27	Financial Calculations for Baseline and Project Cases
28	Financial Calculations for Baseline and Project Cases
29	Guiding Metrological Instructions: RMI-I-19.0.1-07, "Metrological product quality assurance."
30	Guiding Metrological Instructions: RMI-I-19.0.2-07, "Metrological expertise of documentation."
31	Guiding Metrological Instructions: RMI-I-19.1.1-07, "Management of measurement technique"
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