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# Determination Report

**GLOBAL CARBON B. V.**

DETERMINATION OF THE JI-PROJECT:  
UTILIZATION OF COAL MINE METHANE AT THE  
COAL MINE SUKHODILSKA-SKHIDNA

REPORT NO. 1042259

**2008, November 07**

TÜV SÜD Industrie Service GmbH  
Carbon Management Service  
Westendstr. 199 - 80686 Munich – GERMANY

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<b>Subject:</b> Determination of a CDM Project	
<b>Accredited TÜV SÜD Unit:</b> TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich Federal Republic of Germany	<b>TÜV SÜD Contract Partner:</b> TÜV SÜD Industrie Service GmbH Carbon Management Service Westendstr. 199 - 80686 Munich Federal Republic of Germany
<b>Client:</b> Global Carbon B. V. Benoordenhoutsweg 23 2596 BA The Hague The Netherlands	<b>Project Site(s):</b> the Coal Mine named Sukhodiliska-Skhidna 5 Komsomolskaya street, 94440 Kasnodon, Ukraine
<b>Project Title:</b> Utilization of Coal Mine Methane at the Coal Mine Sukhodiliska-Skhidna	
<b>Applied Methodology / Version:</b> ACM0008 version 3	<b>Scope(s):</b> 8, 10
<b>First PDD Version:</b> Date of issuance: 2007-09-12 Version No.: 4.3 Starting Date of GSP 2007-11-01	<b>Final PDD version:</b> Date of issuance: 2007-10-22 Version No.: 4.9
<b>Estimated Annual Emission Reduction:</b> 61,626 tons CO <sub>2e</sub> (2008 – 2012)	
<b>Assessment Team Leader:</b> Thomas Kleiser	<b>Further Assessment Team Members:</b> Dr. Albert Geiger Olena Maslova Anna Peretykina
<b>Summary of the Determination Opinion:</b>	
<input checked="" type="checkbox"/> 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. Based on recent decisions, guidelines and rules, TÜV SÜD will recommend the project for registration by the JI Supervisory Committee (JI- SC) in case letters of approval of all Parties involved will be available.	
<input type="checkbox"/> 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 by the CDM Executive Board and will inform the project participants and the CDM Executive Board on this decision.	



## Abbreviations

<b>ACM</b>	Approved Consolidated Methodology
<b>AM</b>	Approved Methodology
<b>CAR</b>	Corrective Action Request
<b>CDM</b>	Clean Development Mechanism
<b>CER</b>	Certified Emission Reduction
<b>CR</b>	Clarification Request
<b>DNA</b>	Designated National Authority
<b>DOE</b>	Designated Operational Entity
<b>EB</b>	Executive Board
<b>EIA / EA</b>	Environmental Impact Assessment / Environmental Assessment
<b>ER</b>	Emission reduction
<b>GHG</b>	Greenhouse gas(es)
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>JI- SC</b>	Joint Implementation Supervisory Committee
<b>KP</b>	Kyoto Protocol
<b>MP</b>	Monitoring Plan
<b>NGO</b>	Non Governmental Organisation
<b>PDD</b>	Project Design Document
<b>PP</b>	Project Participant
<b>TÜV SÜD</b>	TÜV SÜD Industrie Service GmbH
<b>UNFCCC</b>	UN Framework Convention on Climate Change
<b>VVM</b>	Validation and Verification Manual

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## 1 INTRODUCTION

### 1.1 Objective

The determination objective is an independent assessment by a Third Party (Accredited Independent Entity/Applicant Independent Entity = AIE) of a proposed project activity against all defined criteria set for the registration under the Joint Implementation Mechanism (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 JI-SC. The ultimate decision on the registration of a proposed project activity rests at the JI Supervisory Committee and the Parties involved.

The project activity discussed by this determination report has been submitted under the project title: "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna".

### 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 § 6
- Decisions 3/CMP.3, Decision 2/CMP.2 and Decision 3/CMP.2, Decision 9/CMP.1 and 10/CMP.1
- Furthermore relevant aspects of Decision 12/CMP.1 and Decision 13/CMP.1
- Decisions by the JI-SC published under <http://ji.unfccc.int>
- Specific guidance by the JI published under <http://ji.unfccc.int>
- Guidelines for Completing the Project Design Document (JI-PDD), and the Proposed Baseline and Monitoring Methodology, also with reference to CDM - Proposed New Baseline and Monitoring Methodology (CDM-NM)
- 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-webpages for starting a 30 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised (under certain conditions the GSP will be repeated) and the final PDD will form the basis for the final evaluation as presented by this report. 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 cannot 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 initially 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. TÜV SÜD developed a “cook-book” for methodology-specific checklists and protocol based on the templates presented by the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team 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 results of the determination protocol – as summary table 2 - is enclosed in Annex 1 to this report.

<b>Determination Protocol Table 1: Conformity of Project Activity and PDD</b>				
<b>Checklist Topic / Question</b>	<b>Reference</b>	<b>Comments</b>	<b>PDD in GSP</b>	<b>Final PDD</b>
<i>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.</i>	<i>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.</i>	<i>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 <b>Request</b> has to be substantiated within this column</i>	<i>Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (☑), or a <b>Corrective Action Request (CAR)</b> due to non-compliance with the checklist question (See below). <b>Clarification Request (CR)</b> is used when the determination team has identified a need for further clarification.</i>	<i>Conclusions are presented in the same manner based on the assessment of the final PDD version.</i>



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

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

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

## 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
<b>Thomas Kleiser</b>	<b>ATL</b>	☑	☑	☑
Dr. Albert Geiger	A	☑	☑	☑
Olena Maslova	T	-	-	☑
Anna Peretykina	T	-	-	☑

**Thomas Kleiser** is head of division CDM and JI at TÜV Industrie Service GmbH and has a background in physics and meteorology. In this position he is responsible for determination, verification and certifications processes for GHG mitigation projects as well as trainings for internal auditors. He has already conducted more than 90 validations/determinations and verifications of CDM and JI projects.

**Dr. Albert Geiger** is an expert for CO<sub>2</sub>-emission reduction projects for the scopes 8,10 and 13 at the department "Environmental Service" of TÜV SÜD. He is an auditor according to ISO 14001.

**Olena Maslova** is chemical engineer and host country expert for projects in Ukraine and Commonwealth of Independent States at the department "TÜV SÜD Carbon Management Service" and is based in the TÜV SÜD Munich office. Being a trainee for qualifying as GHG-auditor she has already been involved in several JI activities.

**Anna Peretykina** is environmental engineer and host country expert for projects in Ukraine, Russia and Commonwealth of Independent States at the department "TÜV SÜD Carbon Management Service" and is based in the TÜV SÜD Munich office. Being a trainee for qualifying as GHG-auditor she has already been involved in several JI activities.

## 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 all documents and proofs reviewed is attached as annex 2 to this report.

## 2.3 Follow-up Interviews

In the period of October 10<sup>th</sup>- 11<sup>th</sup>, 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 below provides a list of all persons interviewed in the context of this on-site visit.

Name	Organisation
Alexander A. Angelovski	Technical Director, OJSC "KarsnodonUgol"
Alexander L. Kot	Machine operator in sector coal mining, "Metinvest Holding"
Pavel J. Moiseenko	Director of the Coal Mine "Sukhodil'ska-Skhidna"
Sergey A. Shevchenko	Chef engineer, Coal Mine "Sukhodil'ska-Skhidna"
Ljudmila M. Kotova	Head of the credit and financial department, "Metinvest Holding"
Valery Sade	Consultant, Global Carbon



## **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, table 2 in annex 1.

## **2.5 Internal Quality Control**

As final step of a determination the determination report and the protocol have to undergo an 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 re-requesting registration by the JI- SC or not.

### 3 SUMMARY OF FINDINGS

As informed above all findings are summarized in table 2 of the attached determination protocol.

#### History of the determination process

The audit team has been provided with a PDD in September 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 CARs and CRs indicated in the audit process. The final PDD version submitted in October 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:

The purpose of the project is the avoidance of methane emissions into the atmosphere at the Coal Mine "Sukhodilska-Skhidna". There are three sources of CMM at the Mine: from surface wells, through underground drainage system and from ventilation. Only surface CMM will be considered in this PDD. The Coal Mine Methane, produced by surface wells at Sukhodilska, will be used to replace heat currently produced by coal boilers. Two CMM fired boilers will supply heat to the mine. The existing on-site coal boilers will be shut down.

According to the Mine Development business plan it is planned – in case financing can be realised with JI - to install:

- Stage 1: Two CMM fuelled boilers instead of existing three coal boilers to supply heat and hot water for the Mine.\*
- Stage 2: Three flaring systems;
- Stage 3: Five CHP units with 1 MW of capacity each.

#### The mine has only considered stage 1 in this project for the following reasons:

- Stage 2 & Stage 3 require a high concentration of methane in the gas mixture. The surface wells would be able to supply such gas, but not in sufficient quantities;
- The CMM from the underground degasification galleries do not supply currently gas with a sufficient concentration (>35%). Only after degasification will be improved, planned in 2008/2009, stage 2 & 3 can be considered;
- Furthermore the management would like to see whether developing a JI project will lead to the actual generation of revenues in order to investment in larger scale projects.

**Therefore only stage 1 is considered in this PDD.** The other stages will be considered after stage 1 is implemented, JI revenues have been received and underground degasification has been changed.

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\* The decision to implement JI project was made 07 /07/2005. Refer please to Supporting Document 03. Only Stage 1 is considered in this PDD Stage 2 and Stage 3 are only envisaged JI projects according to Mine's owner plans.



## Findings

In total the assessment team expressed 36 Clarification Requests and 33 Corrective Action Requests. Besides some minor corrections on the format and some inconsistencies between the documentation and the PDD the sensitivity analysis had to be extended to the financial information (CAR 5 ,6), all necessary parameters had to be listed and described (CAR 7- 23), the monitoring procedures had to be described more detailed including Q/A procedures, accuracy and calibration period, equipment description (CAR 24-32) and the basic information on environmental impact had to be added (CAR 33). Since all the open questions have been closed, the PDD is in compliance with the JI requirements.

## Baseline setting and calculation

It is plausibly demonstrated and could be confirmed by assessing the situation on-site that the only realistic option for the baseline scenario is just a continuation of venting the CMM from the surface wells into the atmosphere and generate heat with the existing coal-fired boilers. The existing boilers can still be operated over the next years according to their technical status and their remaining lifetime. There are no environmental regulations forcing the mine to flare or utilize the methane. Due to the poor economic situation at the mine an investment in methane utilisation (in boilers or CHPs) without JI revenues makes no sense currently as there are no consumers for heat and electricity nearby (thus cost-intensive installations in transport would be necessary). Also just flaring is no realistic option due to costs and as there is no regulation to do this. Data for calculating the baseline emissions from coal utilisation are based on figures of the last 5 years which is deemed to be an adequate approach.

The Project follows strictly the guidance of the methodology.

## Additionality

The additionality has been evidenced by investment analysis. The IRR calculation will be uploaded together with the PDD. All the figures have been checked and besides some inconsistencies in identification and argumentation of the benchmark analysis, that has been solved through provided additional evidence documentation and information, are plausible. In order to confirm the consideration of JI before construction additional documentation (minutes of the conducted meetings) has been submitted to the determination team. We would like to confirm that the evidence of prior consideration of the JI in the decision by the project participant to undertake the project activity has been determined by us. Hence, the project is additional.

## Monitoring

The project applies the approved monitoring methodology ACM0008 version 03 ““Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat and/or destruction by flaring””. The selected monitoring methodology is applicable for the project activity, except of the specific applicability criteria of the monitoring protocol related to flaring, which is not relevant as no methane is to be flared in the proposed JI activity.

#### 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:

<b>webpage:</b> <a href="http://ji.unfccc.int/JI_Projects/DB/ID411W03QXPISD5D905LRJAZRV96F/PublicPDD/QLNJ1YCG4S7FRB2YJ4VVRM XAQQ5KF/view.html">http://ji.unfccc.int/JI_Projects/DB/ID411W03QXPISD5D905LRJAZRV96F/PublicPDD/QLNJ1YCG4S7FRB2YJ4VVRM XAQQ5KF/view.html</a> <a href="http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=3911&amp;Ebene1_ID=26&amp;Ebene2_ID=1195&amp;mode=1">http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=3911&amp;Ebene1_ID=26&amp;Ebene2_ID=1195&amp;mode=1</a>	
<b>Starting date of the global stakeholder consultation process:</b> 2007-11-01	
<b>Comment submitted by:</b> None.	<b>Issues raised:</b> None.
<b>Response by TÜV SÜD:</b> n/a	

## 5 DETERMINATION OPINION

TÜV SÜD has performed a determination of the following proposed JI project activity:

Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna.

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. TÜV SÜD will recommend the project for registration by the JI Supervisory Committee (JI- SC) in case letters of approval of all Parties involved will be available.

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.

Munich, 2007-11-07



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Certification Body "climate and energy"  
TÜV SÜD Industrie Service GmbH

Munich, 2007-11-07



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Assessment Team Leader

Determination of the JI Project:  
Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-  
Skhidna



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## **Annex 1: Determination Protocol - Table 2**

## The Determination Protocol

Project Title: "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna"

Date of Completion: November 07<sup>th</sup>, 2008

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### Table 2 Resolution of Corrective Action and Clarification

Requests – CARs and CRs from Protocol Table 1 have to be filled in this section

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
<p><b><u>Clarification Request No.1</u></b>                      It should be explained transparently (project history) why the PDD with version 4.3 was the first version submitted to the determinator and published in the GSP (Global Stakeholder Consultation Process).                      Furthermore: The starting data of the project is given with October 1<sup>st</sup>, 2006 in chapter C.1, but on page 10 it is mentioned that the project started January 1<sup>st</sup>, 2006 and that first active measures have already been carried out in June 2006. Please clarify these inconsistencies.</p>		<p>The name of version 4.3 was working name correspondent to modifications and improvements of PDD developer. Low versions were used internally.                      Beginning of construction and installation works of new boilers was January 2006. These works as well as commissioning works were carried out until 3-d quarter of year 2006. Before starting of heating season new boiler N1 was used to produce hot water for the Mine needs. During autumn 2006 till Winter 2008 some installation and commissioning works are carried for new boiler No.2.                      So the starting date of project is taken as the date of first consumption of CMM at boiler No.1.</p> <p><b><u>Answer of the determinator:</u></b></p> <p>The answer is deemed sufficient, transparent and plausible. As there is no clear and final guidance how the "starting date of the project activity" has to be defined the company's approach to link the starting date with the day of first consumption of CMM is acceptable although an approach to link this date to the date of the decision to go for the project or the day the first installations would be more convenient. The project</p>	<p>The explanation is deemed sufficient, transparent and plausible. The current internal definition and date can be accepted</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

Table 1 is applicable to ACM0008, vers 03.

Annotation: The questions follow the structure of the CDM-PDD form thus the numbering is not directly linked to the JI-PDD form.

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		<p>participants should re-consider this point – nevertheless the current internal definition and date can be accepted.</p>	
<p><b><u>Clarification Request No.2</u></b>          The project description should be elaborated more detailed and adjusted, and additional information about the project planning, acceptance and realization should be provided. Information about licenses etc. (see above) should be submitted to the determinator to reflect the status-quo.</p>		<p>Done. The decision to implement JI project was made 07/07/2005. Refer please to Supporting Document SD_02.</p> <p>The additional information about decision of JI project, commissioning of equipment and licenses will be submitted to determinator as separate documents. Refer please to SD_05,SD_07, SD_15</p> <p><b><u>Answer of the determinator:</u></b></p> <p>The answer still is not deemed sufficient and needs to be elaborated more detailed.</p> <p>The document SD_2 just shows that in this meeting the company for the first time was informed about the JI mechanism (July 07<sup>th</sup>, 2005). This is acceptable and fine. But nevertheless it is still not clear in which additional activities this initial information resulted (for example: consideration of assessment of investment opportunities with and without JI; discussion how JI can help to overcome barriers; PDD development etc.). The designing started (see page 12) directly after this meeting – thus more information should be provided that the decision really was linked to the need of JI revenues (to overcome hurdles). Already in January 2006 (see above) first construction and installation measurements were carried out.</p> <p>Thus in the meantime – and this is a very short period –</p>	<p>Additional documentation (minutes of the conducted meetings) has been provided to the determination team and seems to be sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

Table 1 is applicable to ACM0008, vers 03.

Annotation: The questions follow the structure of the CDM-PDD form thus the numbering is not directly linked to the JI-PDD form.

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		<p>the official decision to go for the project as well as internal discussion why to do this and how JI helps to overcome hurdles, barriers, financing problems needed to be carried out – thus additional meetings probably have taken place. A clear and re-traceable and robust storyline what led to the JI decision and that the project without JI would not have happened needs to be presented to the determinator. This can also be done in a separate document and needs not necessarily to be included in the full length in the PDD.</p> <p><b>Reply of the Project Participant</b> Done. New protocols were added to SD_2, which is attached to this letter.</p>	
<p><b><u>Clarification Request No.3</u></b> Additional information should be provided about the time schedule of the project (planning versus reality) and planned further measures at the site. It is currently not clear why the so called stages 2 and 3 (page 9) of the project are integrated in this project. Are they part of envisaged future JI projects? Please clarify!</p>		<p>Done. Refer please to footnote 6. Page 10 and the text in section B.1.</p> <p><b><u>Answer of the determinator:</u></b></p> <p>The answer and the inclusion of additional information in the PDD is deemed sufficient and solved under the pre-condition that the clarification request No. 2 is re-traceably solved.</p>	<p>Additional information has been included in revised PDD and is deemed sufficient. Related clarification request No. 2 has been re- traceably solved (see above). <input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.4</u></b> Financial information should be integrated in the PDD. Please provide more information about the investment and the costs. (investment arrangement/information)</p>		<p>Lump sum of investment cost is provided. The price indicators are considered confidential and are reflected in the cash flows calculation submitted to the Determinator.</p>	<p>The answer is deemed sufficient as the calculated IRR (without JI revenues) is clearly under the IRR without risk factor (9.4 %) and under the benchmark IRR of 16.4 % (including risk factor). Even in</p>

Table 1 is applicable to ACM0008, vers 03.

Annotation: The questions follow the structure of the CDM-PDD form thus the numbering is not directly linked to the JI-PDD form.

Page A-3

# The Determination Protocol

Project Title: "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna"

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	<p><b><u>Answer of the determinator:</u></b></p> <p>The information included in the PDD is still very limited and not understandable and retraceable. Also the information – IRR with project – is not given in the PDD and should be attached. Also the information on the age of the existing boilers as well as maintenance costs for these boilers should be included. Confidential information normally is excluded under CDM and JI as long as it is necessary for a basic understanding of the argumentation. In the current form of presentation the PDD does not fully allow to understand the investment decision as only rudimental information is included in the PDD. Please elaborate this section more detailed. Additional background information then can be submitted on a confidential basis.</p> <p>It is also not clear whether further options (flaring of methane; electricity generation) have been considered for this project and why they have been excluded – delayed to a further stage after 2012 probably. To which result would such an assessment lead (benchmark discussion) considering JI revenues – or was this option already excluded at the beginning of the internal discussions (even under consideration of the JI aspect).</p> <p><b>Reply of the Project Participant</b></p> <p>The table on investment cost split is inserted in PDD as well as the explanatory data from the cash flows.</p> <p>CDM Additionality Tool version 4 does not require the calculation of NPV both for the project with JI revenues</p>	<p>case of significant variation of input parameters.</p> <p>The calculations have been assessed and are carried out correctly.</p> <p>It is plausible, re-traceable and transparently demonstrated that the project is financially not attractive.</p> <p>Thus there is no need to indicate the IRR with JI revenues.</p>
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		<p>or without them. The only thing that should be calculated is IRR benchmark. The formula for IRR calculation requires to use the first approximation of the discount rate then iteration process is used. So IRR with project is not required to be made.</p> <p>Cash flow covers does not consider maintenance cost and the enterprise expects that maintenance cost for all old boilers is more or less equal to the cost of two new boilers or even the latter indicator will be higher that means that current cash flow will demonstrate worse financial performance and for sure will be under IRR threshold.</p> <p><i>The existent boilers were commissioned in 1980 together with Mine Site.</i></p> <p><i>Electricity generation and methane flaring was not considered at official level because of lack of funds, absence of urgent necessity and changes of ownership of Krasnodonugol.</i></p>	
<p><b><u>Clarification Request No.5</u></b> The question whether a US address can be used in Annex 1 without indication there that IFC acts on behalf of The Netherlands has to be clarified.</p>		<p>The Project Participant has been changed to ING bank, Netherlands</p> <p><b><u>Answer of the determinator:</u></b> Ok, accepted.</p>	<p>The necessary changes have been conducted.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.6</u></b> Additional information should be provided concerning the relationship and role between</p>		<p>Done. See additional text in section A.3. Furthermore a confidential SD_14 has been submitted tot the Determinator giving more detailed information on the</p>	<p>The required information was provided to the determination team on confidential basis. The necessary information</p>

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<p>different companies involved - currently and in the past - in this project.</p> <p>Furthermore – on a confidential basis – information concerning the contractual relationship between the listed project participants should be handed over to the determinator.</p> <p>Who keeps the rights on the emission reductions? Which company will be contact point (described in the Modalities of Communication (MoC) in this project</p>		<p>role of all parties.</p> <p>A separate MoC, signed by both Project Participants, will be submitted.</p> <p><b><u>Answer of the determinator:</u></b> Ok, accepted. The MoC has to be submitted before the project finally can be uploaded for approval/registration at JI-SC.</p>	<p>has been included in revised PDD and is deemed sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.7</u></b></p> <p>Additional information such as street name and number or cadastral information as well as geographical information (GPS-coordinates) should be included in the PDD. If possible all information in the maps (see figure 2) should be given in English.</p>		<p>Done. GPS-coordinates are:48<sup>0</sup>21'9"N 39<sup>0</sup>47'9"E</p> <p>Refer please to Figure 2. Place-name in English has been added.</p> <p><b><u>Answer of the determinator:</u></b> Ok, accepted.</p>	<p>Required information has been added in revised PDD and seems to be sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.8</u></b></p> <p>The project developer shall submit a copy of all documents (ownership, licenses, permits, act of conducted works) demonstrating that the project proponents have the right and are able to implement the project and operate the project during the project lifetime. Information when the requests for a building license and a operation license were started should be submitted to the determinator.</p>		<p>Requested documents will be submitted as separate attachment. Refer please to SD_05-SD_07, SD_15.</p> <p><b><u>Answer of the determinator:</u></b> Ok, the information is sufficient and complete.</p>	<p>The required information was provided to the determination team and is sufficient and complete.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

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<p><b><u>Clarification Request No.9</u></b> The advantages of the selected boilers/technology on the same industry line should be described in the PDD – why have these boilers been chosen/what are the benefits etc., who is the equipment provider etc? Tenyakova</p>		<p>There are no specific advantages of selected boilers just an existed technology easily to change kind of fuel. The equipment manufacturer is Biysk, Russia. <a href="http://www.sibpromenergo.ru/boiler/ke25-4-65-10-25.html">http://www.sibpromenergo.ru/boiler/ke25-4-65-10-25.html</a>. Beside these boilers are the cheapest to satisfy Mine's necessity in heat and hot water.</p> <p><b><u>Answer of the determinator:</u></b> The information is deemed sufficient.</p>	<p>The information given seems to be sufficient. <input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.10</u></b> Additional technical information of the boilers as well as the methane extraction/capture equipment should be added to chapter A.4.3 (combined with A.2) of the PDD. As the project is already implemented this additional information must be available to reflect the current status.</p>		<p>Information about methane extraction/capture equipment at the Mine is already submitted. Refer please SD_08 Also refer please to chapter A 4.3.</p> <p><b><u>Answer of the determinator:</u></b> The information is deemed sufficient.</p>	<p>The information given seems to be sufficient. <input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.11</u></b> Please use for the table with emission reductions under chapter E.6 (page 40) the same form as it is used under A.4.4.</p>		<p>Done.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>Necessary changes have been conducted. <input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.12</u></b></p>		<p>This is not a relevant requirement for JI projects (CDM</p>	<p>The required information has</p>

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<p>Please include information in the PDD that there is no public funding for this project and no assistance by a state program.</p>		<p>only).</p> <p><b><u>Answer of the determinator:</u></b></p> <p>This is not included as chapter/point in the current JI PDD form nevertheless it is not in the interest of all involved parties to provide with JI revenues a double financing of projects (contradiction to the requirements of the Kyoto protocol at least as long as such a funding would contribute to a major amount to the funding of such a project)</p> <p>Thus – if additional revenues/funding for example from EU programs/Ukrainian state programs/other international assistance and development programs would be part of the financing of this project this needs to be mentioned in the PDD and also included in the financial calculations of the projects (there nothing appears). According to the information received on-site there is no such funding.</p> <p><b>Reply of the Project Participant</b></p> <p><i>Done.</i></p> <p><i>Information "There is no public funding for this project and no assistance by a state program" were included in PDD.</i></p>	<p>been included in revised PDD.</p> <p><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.13</u></b></p> <p>The issue "additional electricity consumption" as result of project implementation should be addressed and elaborated more detailed in the PDD.</p>		<p>Two new methane fuelled boilers will be installed instead of for boilers DKVR 20. The capacity of electrical equipment for two new boilers KE significantly less then for the previous three boilers. Refer please to SD_09 Electrical Capacity of equipment.</p>	<p>The given information is re-traceable and plausible and can be accepted</p> <p><input checked="" type="checkbox"/></p>

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		<p><b><u>Answer of the determinator:</u></b> OK. The given information is re-traceable and plausible and can be accepted.</p>	
<p><b><u>Clarification Request No.14</u></b> Please add the links to the applied methodology versions (on UNFCCC's website) to demonstrate that the correct methodology/tool versions have been applied in the PDD.</p>		<p>Done. Refer please to footnote 11. Section B.1.</p> <p><b><u>Answer of the determinator:</u></b> OK</p>	<p>The required information has been included in revised PDD.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.15</u></b> The process of methane extraction should be explained in detail in the PDD and the wording/term pre-mining CMM should be explained and justified to get a better understanding of the processes in this project.</p>		<p>Done. In SD_11 the connection of the surface (current and future) is graphically given and directly relates to the mining activities. The word pre-mining has been taken as the wells are drilled before mining takes place and gas is released due to the mining activities.</p> <p><b><u>Answer of the determinator:</u></b> In principle the information is fine and sufficient. But nevertheless the difference between the wording CBM as used in the methodology and the used term pre-mining CMM – extracted from the surface – has to be worked out more transparently. Therefore this deviation from the methodology has to be mentioned and also why – although the methane is taken out from the surface – this can be considered as pre-mining CMM and needs not to be considered as CBM. Therefore a general explanation how the mines in Ukraine work (independent from JI) in extracting methane needs to be included.</p>	<p>The required explanations have been included in revised PDD and are sufficient.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>

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		<p><b>Reply of the Project Participant</b></p> <p>Done. Refer please to PDD, paragraphs in step 1a where the following text was added:</p> <p><i>In other words, the permeability of the Donbass coal seams is so low that it is only possible to extract (recover) gas of coals seams applying special techniques. If such techniques are not applied then no gas can be recovered is no mining takes places. Hence, the extracted gas at the mine is related to CMM only and cannot be CBM. Due to the low permeability of the coal seams, extraction of CMM can only take place just before and during the mining of the coal. For the purpose of using the correct classifications of ACM0008, this CMM will be referred to as pre mining CMM.</i></p> <p><i>Due to this low permeability of the coal seams, extraction of CMM can only take place just before and during the mining of the coal. For the purpose of using the correct classifications of ACM0008, this CMM will be referred to as pre mining CMM.</i></p>	
<p><b><u>Clarification Request No.16</u></b> Please add verbally information about the treatment of captured methane in the past – prior to the project – and describe the degasification process at that time.</p>		<p>The degasification system is the same before and after the project, rather that different surface wells are used. Degasification activities are independently done from utilization activities.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>The information given is sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

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<p><b><u>Clarification Request No.17</u></b> The question – what happens to the extracted methane in times of maintenance or in times of low heat demand - should be discussed in the PDD, also why flaring is not considered as a further option to destroy methane (and also positive for the emission reductions).</p>		<p>Unused methane is vented into the air which takes place before the meter measuring consumed CMM.</p> <p><b><u>Answer of the determinator:</u></b> OK. The answer is deemed sufficient and is the same as received during the on-site visit.</p>	<p>The answer is deemed sufficient and is the same as received during the on-site visit.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.18</u></b> Explain clearly in the PDD how it is ensured that the features mentioned aside are not included in the PDD.</p>		<p>See footnote in the PDD (section B.1) about two well that are located above seams that have been mined before 2000. All other surface wells are above seams that will be mined. A SD_11 gives the graphical overview of current surface wells and future surface wells in connection with the mining activities.</p> <p><b><u>Answer of the determinator:</u></b> OK. The given information in this document is considered plausible and retraceable thus this issue can be closed.</p>	<p>The given information in this document is considered plausible and retraceable thus this issue can be closed.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.19</u></b> It should be explained and highlighted in the PDD that there was no methane destruction or utilisation (for example as fuel) prior to project implementation.</p>		<p>Done</p> <p><b><u>Answer of the determinator:</u></b> OK. The answer is deemed sufficient and is the same as received during the on-site visit.</p>	<p>The answer is deemed sufficient and is the same as received during the on-site visit.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.20</u></b> More detailed information on technical feasible options to capture and use the</p>		<p>Done.</p>	<p>The added additional information in the PDD supported by delivered</p>

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<p>methane in this project should be given. It also should be explained why the option flaring is not applied for excess captured gas.</p>		<p><b><u>Answer of the determinator:</u></b> OK. The added additional information in the PDD supported by delivered additional documents are deemed sufficient, plausible, transparent and retraceable. The issue can be closed.</p>	<p>additional documents is deemed sufficient, plausible, transparent and retraceable. <input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.21</u></b> More detailed information/discussion on all possible options and the compliance with national legislation/regulations and requirements should be included in the PDD.</p>		<p>Done. <b><u>Answer of the determinator:</u></b> OK. The added additional information in the PDD supported by delivered additional documents is deemed sufficient, plausible, transparent and retraceable. The issue can be closed.</p>	<p>The added additional information in the PDD supported by delivered additional documents is deemed sufficient, plausible, transparent and retraceable. <input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.22</u></b> More detailed information/discussion and clear statements and argumentations on the identified baseline options (for extraction, treatment and electricity generation) is required. The discussion in the current version is considered as not fully complete. And please do not change headers of the steps and do not combine steps – follow strictly the methodology (CBM can be excluded verbally).</p>		<p>Done. <b><u>Answer of the determinator:</u></b> OK. The added additional information in the PDD supported by delivered additional documents is deemed sufficient, plausible, transparent and retraceable. The issue can be closed.</p>	<p>The added additional information in the PDD supported by delivered additional documents is deemed sufficient, plausible, transparent and retraceable. <input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.23</u></b> The information on barriers has to be worked out more detailed and based on logical arguments. For transparency reasons a table</p>		<p>Done. <b><u>Answer of the determinator:</u></b></p>	<p>The added additional information in the PDD supported by delivered additional documents is</p>

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<p>should be added under step 4 within the PDD giving an overview about all barriers to prevent alternatives to occur.</p>		<p>OK. The added additional information in the PDD supported by delivered additional documents are deemed sufficient, plausible, transparent and retraceable. The issue can be closed.</p>	<p>deemed sufficient, plausible, transparent and retraceable. <input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.24</u></b> The identification, argumentation and justification of the benchmark analysis is unclear and has to be adjusted</p>		<p>The IRR benchmark is justified in the text now. It is based on accumulative method summing up without risk factor and risk factor. Both indicators are justified by references available to Determinator (see SD_ 04 giving the reference document and SD_ 03 providing bond rates for Ukraine)</p> <p><b><u>Answer of the determinator:</u></b> OK. The added additional information in the PDD supported by delivered additional documents are deemed sufficient, plausible, transparent and retraceable. But it should be discussed or at least verbally argued whether other options - also included under this project type/methodology (flaring, electricity generation use as fuel ) have been considered in the initial stage (going for a JI project) and why they are not feasible or have been excluded from the beginning, delayed (later phase of the project after 2012). Flaring at least probably also would meet the internal benchmark considering JI revenues.</p> <p><b><u>Reply of the Project Participant</u></b> In section B.1 the different available alternatives to the mine have been discussed and explained why some alternatives are not considered in absence of JI. This is in accordance with the methodology. In section B.2 it is</p>	<p>The added additional information in the PDD supported by delivered additional documents is deemed sufficient, plausible, transparent and retraceable. <input checked="" type="checkbox"/></p>

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		shown that the proposed project activity is not the baseline. It is not required in the CDM tool, when using the benchmark analysis, to compare the project with other alternatives.	
<p><b><u>Clarification Request No.25</u></b> It should be worked out more clearly and transparent whether and how the different barriers prevent different alternatives to occur? Furthermore – by demonstrating consideration of ERU revenues since the beginning of the project planning (board meetings and decisions) – it should be highlighted that the project would not have happened without JI. Please provide this information to the determinator.</p>		<p>Done. Refer please to footnote 8 and SD 03.</p> <p><b><u>Answer of the determinator:</u></b> OK – but see open clarification requests above (concerning demonstration of financial figures with JI and verbal argumentation. If these issues are solved this point can be considered as closed..</p>	<p>The added additional information in the PDD supported by delivered additional documents is deemed sufficient, plausible, transparent and retraceable.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.26</u></b> More information and a deepened discussion on similar project activities - running all under JI - should be provided in the PDD.</p>		<p>Done. Refer please Section B 2 Step 4 PDD</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>The added additional information in the PDD is deemed sufficient, plausible, transparent and retraceable.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.27</u></b> A test report/statistical representative analysis of extracted gas for gas from the surface boreholes including the NMHC concentration should be provided to justify the "less than 1 %" approach. Furthermore this parameter has to be monitored and considered in the calculations in case the 1% limit is injured.</p>		<p>Analyses of CMM that will be submitted to the Determinator will show that NMHC concentration is less than 1%. See SD_10.</p> <p><b><u>Answer of the determinator:</u></b> OK. The parameter is included now and the requested additional information has been provided.</p>	<p>The parameter is included now and the requested additional information has been provided.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>

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<p><b><u>Clarification Request No.28</u></b> A clear, retraceable reference (where this value is listed in IPCC 2006) to the source for the chosen efficiency should be given in the PDD.</p>		<p>Done. Refer please section D. Table 14. P10.</p> <p><b><u>Answer of the determinator:</u></b> OK</p>	<p>Required reference has been included in revised PDD.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.29</u></b> Additional information and clarification on the parameter; Efficiency of methane destruction/oxidation in heat plant should be provided in the PDD. Please follow strictly the methodology and use the correct term.</p>		<p>Done. Efficiency of methane destruction is taken from IPCC guidelines.</p> <p><b><u>Answer of the determinator:</u></b> OK. The requested clarification has been done.</p>	<p>The added additional information in the PDD is deemed sufficient.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.30</u></b> Please include this parameter <math>CEF_{CH_4}</math> in the parameter list.</p>		<p>The parameters have been included in the table.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>The required parameters have been included</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.31</u></b> Please include this parameter <math>d_k^{max}</math> in the parameter list and discuss the relevance of this parameter in this project.</p>		<p>Formula with parameter <math>d_k^{max}</math> is not applicable in case for Sukhodilska Mine as no thermal heat (fuelled by CMM) is generated under the baseline.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>The clarification given is sufficient.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Clarification Request No.32</u></b> All the procedures identified for the monitoring plan, including training of monitoring personnel, emergency preparedness, calibration of monitoring equipment, maintenance of monitoring</p>		<p>Monitoring Manual will be submitted to the Verifier during first annual verification.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>Monitoring Manual will be submitted to the Verifier during first annual verification. This is acceptable.</p>

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equipment, monitoring, measurements and reporting, day-to-day records handling, should be described in the CDM Manual.			<input checked="" type="checkbox"/>
<b>Clarification Request No.33</b> For the project's starting date and operational lifetime, please show additional evidence documents.		Documents will be submitted to the Verifier as separate document. See SD_15  <b>Answer of the determinator:</b> OK. The answer is sufficient under the pre-condition that the issues which are still open and mentioned above are solved.	The answer is sufficient. <input checked="" type="checkbox"/>
<b>Clarification Request No.34</b> The EIA report and the approval of EIA have to be presented to the DOE.		Documents will be submitted to the Verifier as separate document. See SD_07  <b>Answer of the determinator:</b> OK.	The answer is sufficient. <input checked="" type="checkbox"/>
<b>Clarification Request No.35</b> Please update and extend the information in chapter G.		Stake holder's consultation is not required for this project and not necessary under JI.  <b>Answer of the determinator:</b> This information is too limited. The statement is correct nevertheless some additional information on requirements for local stakeholder consultation in Ukraine and why in this case no such process is required should be added. The information that a stakeholder consultation process is not required under JI is not correct in this limited form. JI requires that national regulations and procedures need to be considered and that based on these requirements the	The clarifications given are acceptable. <input checked="" type="checkbox"/>

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		<p>decision has to be made whether, why and how a local/regional GSP has to be conducted.</p> <p><b>Reply of the Project Participant</b></p> <p>There have been a few publications in local media about the mine such as Luganskaya Pravda from November 2007 and <a href="http://www.geonews.com.ua/">http://www.geonews.com.ua/</a> about CMM project at Sukhodilska-Skhidna.</p> <p>Some information about the project was also placed at <a href="http://www.ua-tenders.com">http://www.ua-tenders.com</a> to supply equipment according to Ukrainian tender procedures legislation</p> <p>Further stakeholder consultation is not required, nor under Ukrainian legislation nor under UNFCCC rules for JI projects.</p> <p>In accordance with Ukrainian legislation, KRASNODONUGOL has consulted the regional authority to obtain the necessary approvals for construction of methane fueled Boilers. No stakeholder consultation is required by Host Party for JI project. Stakeholder comments have been gathered during one month after publication of this PDD at UNFCCC website in the frame of determination process.</p>	
<p><b><u>Clarification Request No.36</u></b> Please update and extend the information in annex 3.</p>		<p>More detailed information is included in section D.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>More detailed information has been included in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

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<p><b><u>Corrective Action Request No.1</u></b> To have a clear impression, understanding and overview about the coal mine operation and the on-site activities directly linked to the project much more detailed (according to the requests above) has to be provided – this means technical data, proof of values on basis of historic data etc...Some values/numbers do not reflect the real situation assessed during the on-site visit and need to be adjusted and corrected. Background information has to be provided so that the figures can be verified.</p>		<p>Done. Refer pleas to SD_08</p> <p><b><u>Answer of the determinator:</u></b> OK. The submitted additional information is deemed sufficient. But at least an excerpt in English should be included in the PDD.</p> <p><b>Reply of the Project Participant</b> Excerpts from SD_08 were translated and included in PDD.</p>	<p>The submitted additional information is deemed sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.2</u></b> Not only the applied methodology and the methodology version number, but also the scopes, under which the project falls, should be indicated in the PDD. Please include this information</p>		<p>Done. Refer please section B1.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>More detailed information has been included in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.3</u></b> The project requires (at least at the beginning) intensive training regarding operation and maintenance of the equipment used. For that reason the project owner is requested to make more detailed provisions how the training and maintenance needs are met and which trainings have been conducted in the first phase (2006) of implementation of the project. Written documentation of conducted trainings and</p>		<p>Documents will be submitted to the verifier as a separate document. See SD_16_Staff_training.</p> <p><b><u>Answer of the determinator:</u></b> The submitted document is blank and no information on participants, content of training etc. is included. Please submit the correct document.</p> <p><b>Reply of the Project Participant</b> According to Ukrainian legislation the staff of boiler</p>	<p>The clarification given supported by delivered additional documents is deemed sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

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<p>responsibilities in carrying out the trainings should be submitted to the determinator? And please add information In which way was the equipment provider involved in the trainings?</p>		<p>house has to have standard every year training and after this to pass exams for permission to work with boilers and boiler's equipment.</p> <p>This training usually includes:</p> <ul style="list-style-type: none"> <li>• General conception and definitions; general requirements of boiler inspection</li> <li>• Protection of labor</li> <li>• Boilers. Main and subsidiary equipment</li> <li>• Gas Fuel and gas fuel equipment</li> <li>• Monitoring and automatic equipment</li> <li>• Safe application and maintenance of gas equipment</li> <li>• Practical trainings</li> <li>• Consultations</li> <li>• Practice</li> <li>• Exams.</li> </ul> <p>The supporting document with the results of training Exams SD_16_Staff_ training will be submitted again</p>	
<p><b><u>Corrective Action Request No.4</u></b> Clarify and justify whether the source CO<sub>2</sub>-emissions from NMHC need to be included or can be excluded!</p>		<p>Analyses data to justify will be submitted to Verifier as separate document.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>Analysis data has been submitted to verifier.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.5</u></b> The choice/identification of financial indicators is not transparent and retraceable</p>		<p>Section B.2 has been completely updated giving clear information on the identification of the financial indicators.</p>	<p>Additional explanations given are deemed to be sufficient.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>

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<p>in the PDD. This should be corrected and changed and additional information/argumentation should be provided.</p>		<p><b><u>Answer of the determinator:</u></b> To a large intent solved, but still not finally solved – see still open issues above.</p> <p><b>Reply of the Project Participant</b> See reply under CR5 and the additional text inserted in section B.2 of the PDD</p>	
<p><b><u>Corrective Action Request No.6</u></b> The calculation of financial figures for this indicator is not correctly done for all alternatives and the project activity. Furthermore only figure is used. This has to be corrected. See also CAR 5 of B.5.5.</p>		<p>When using a benchmark analysis only the scenario that is remaining (=project scenario) should be calculated.</p> <p><b><u>Answer of the determinator:</u></b> Ok, but the open issues mentioned above should be solved to close this CAR finally.</p>	<p>The open issues mentioned above are solved, this CAR can be closed.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.7</u></b> Please include the parameter mean annual demand (Thy) – with the correct name - for each year of the crediting period in the PDD and include information on which basis (historical data – 5 years – or new data?) this parameter was calculated.</p>		<p>Done. See annex 2 for the values.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>Required parameter and explanations have been included in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.8</u></b> In chapter D of the PDD, more parameters should be listed in additional tables. e.g. COEF, NCV, CEF<sub>ELEC-PJ</sub> and so on.</p>		<p>The parameters have been listed in the tables.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>Required parameters have been included in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

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<p><b><u>Corrective Action Request No.9</u></b> There is no information available about this parameter (<math>PE_{ME}</math>). The parameter at least should be discussed in the PDD: Evidence that this parameter can be excluded should be given.</p>		<p>Done. Refer please section "Electrical Capacity" in CO2 calculation sheet</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>The necessary information has been added in revised PDD and seems to be sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.10</u></b> There is no information available about this parameter (<math>CONS_{ELEC-PJ}</math>): Additional electricity consumption by project. The parameter at least should be discussed in the PDD. Evidence that this parameter can be excluded should be given.</p>		<p>There is no additional electricity consumption.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>The explanation seems to be sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.11</u></b> There is no information available about this parameter (<math>CONS_{HEAT-PJ}</math>): additional heat consumption. The parameter at least should be discussed in the PDD. Evidence that this parameter can be excluded should be given.</p>		<p>The boiler house does not consumed own heat. Hence <math>CONS_{HEAT-PJ}=0</math> and is excluded.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>The explanation seems to be sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.12</u></b> There is no information available about this parameter (<math>CONS_{FF-PJ}</math>): additional fossil fuel consumption. The parameter at least should be discussed in the PDD. Evidence that this parameter can be excluded should be given.</p>		<p>The boiler house does not consumed additional fossil fuel. Hence <math>CONS_{FF-PJ}=0</math> and is excluded.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>The explanation seems to be sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.13</u></b></p>		<p>Done.</p>	<p>The necessary corrections</p>

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<p>The information about this parameter (<math>MD_{HEAT}</math>) given in the PDD is not in line with the requirements of the methodology. Please correct and follow strictly the methodology.</p>		<p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>have been conducted. <input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.14</u></b> The information about this parameter (<math>MM_{HEAT}</math>): "Methane sent to boiler" should be adjusted and corrected. Follow strictly the methodology. Additional information concerning measurement/metering system (which already exists) should be provided in the PDD.</p>		<p>Done. <b><u>Answer of the determinator:</u></b> OK.</p>	<p>The necessary corrections have been conducted. Additional information has been provided in revised PDD. <input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.15</u></b> The information on the parameter (<math>PC_{CH4}</math>): "Concentration of methane in extracted gas measured on a wet basis" is missing. This information and the parameter and the monitoring procedure should be included.</p>		<p>Concentration of methane measured directly in Boiler house and after VPS <b><u>Answer of the determinator:</u></b> OK.</p>	<p>The explanation seems to be sufficient. <input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.16</u></b> Work instructions for the measurement of the parameter: "NMHC concentration in coal mine gas" should be provided.</p>		<p>NMHC will be measured on an annual basis as required by ACM0008. <b><u>Answer of the determinator:</u></b> OK.</p>	<p>The explanation seems to be sufficient. <input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.17</u></b> Information on the parameter: "Relative proportion of NMHC compared to methane" should be included in the PDD.</p>		<p>Done. NMHC is &lt;1%. See SD_10_NMHC_in_CMM. <b><u>Answer of the determinator:</u></b> OK.</p>	<p>The information added supported by delivered additional documents is deemed sufficient. <input checked="" type="checkbox"/></p>

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<p><b><u>Corrective Action Request No.18</u></b> Information on the parameter: "MM<sub>i</sub>, Methane measured to sent to use i should be included in the PDD.</p>		<p>Done</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>Additional information has been provided in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.19</u></b> Please add information on the parameter: "Eff<sub>i</sub>" to the PDD.</p>		<p>Done</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>Additional information has been provided in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.20</u></b> Please add concrete and retraceable, transparent information how the parameter tadd information on the parameter CMM<sub>BL,i</sub>is measured.</p>		<p>As thermal demand is steady-state value, scenario of section 7.2 of the methodology is not applicable.</p> <p><b><u>Answer of the determinator:</u></b> The argument why thermal demand is a steady-state value has to be underlined with figures from the past. The statement here is to simple.</p> <p><b>Reply of the Project Participant</b> There is no other user at the site. Previously heat generated with coal boilers at the site, was consumed for hot water, heating of Mine administrative building and Mine grooves. No supply to grid, no cooking, no privet or other than mine users. Temperature of grooves should be +5C. Heating and hot water temperature has to be the same both in project and Baseline scenario. Usage of hot water is only for mine staff twelve months</p>	<p>The explanation is acceptable and deemed to be sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

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		in a year.	
<p><b><u>Corrective Action Request No.21</u></b> The parameter <math>TH_{BL,y,p}</math> projected annual baseline CMM / CBM demand for thermal energy uses has to be included.</p>		<p>As thermal demand is steady-state value, scenario of section 7.2 of the methodology is not applicable.</p> <p><b><u>Answer of the determinator:</u></b> See above.</p> <p><b>Reply of the Project Participant</b> Scenario of section 7.2 of the methodology is not applicable. See above.</p>	<p>The explanation is acceptable and deemed to be sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.22</u></b> In sections D.1.1 and D.1.3 more parameters should be listed in additional table, that are necessary for monitoring.</p>		<p>Done.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>Additional information has been provided in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.23</u></b> The parameter <math>CONS_{ELEC-PJ}</math>, additional electricity consumption by project should be discussed and, in case there is a need, included in the monitoring plan. In this case QA/QC procedures should be described in the PDD in details including meters failure.</p>		<p>Done. Refer please section "Electrical Capacity" in calculation sheet.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>Additional information has been provided in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.24</u></b> Monitoring procedures (measurement, meters, type of the meters) and QA/QC procedures should be described in the PDD in details including meters failure for <math>MM_{HEAT}</math>,</p>		<p>These parameters will be included in separate document "Monitoring plan"</p> <p><b><u>Answer of the determinator:</u></b></p>	<p>Additional information has been provided in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

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Methane sent to boiler .		<p>OK. But is this document already available?</p> <p><b>Reply of the Project Participant</b> Misprint. Refer please to section D PDD. Monitoring Plan</p>	
<p><b>Corrective Action Request No.25</b> Monitoring procedures (measurement, responsible company) and QA/QC procedures should be described in the PDD in details for PC<sub>CH<sub>4</sub></sub>, Concentration of methane in extracted gas measured on a wet basis.</p>		<p>Concentration of methane measured directly in Boiler house and after VPS.</p> <p><b>Answer of the determinator:</b> OK</p>	<p>Additional information has been provided in revised PDD.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b>Corrective Action Request No.26</b> Monitoring procedures (measurement, responsible company) and QA/QC procedures should be described in the PDD in details for PC<sub>NMHC</sub> NMHC concentration in coal mine gas.</p>		<p>Done. Also refer to SD_10_NMHC_in_CMM</p> <p><b>Answer of the determinator:</b> OK</p>	<p>Additional information and documentation has been provided and is sufficient.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>
<p><b>Corrective Action Request No.27</b> Monitoring procedures (measurement, responsible company) and QA/QC procedures should be described in the PDD in details for MM<sub>i</sub>, Methane measured to sent to use i</p>		<p>Refer please to a separate document "Monitoring plan" (manual) that will be developed before the first monitoring.</p> <p><b>Answer of the determinator:</b> The document – art least without filled in values – already should be available and should be submitted to the determinator.</p> <p><b>Reply of the Project Participant</b> Monitoring report will be submitted during first</p>	<p>This can be accepted, the CAR is deemed to be solved.</p> <p style="text-align: right;"><input checked="" type="checkbox"/></p>

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		verification	
<p><b><u>Corrective Action Request No.28</u></b> Monitoring procedures (measurement, responsible company) and QA/QC procedures should be described in the PDD in details for the parameter <math>CMM_{PJ,i,y}</math>, pre-mining CMM captured, sent to and destroyed by use <math>i</math> in the project activity in year <math>y</math>.</p>		<p>These parameters will be included in a separate document "Monitoring plan" (manual).</p> <p><b><u>Answer of the determinator:</u></b> See above.</p> <p><b>Reply of the Project Participant</b> Monitoring plan is a part of PDD. Monitoring report will be submitted during first verification</p>	<p>This can be accepted, the CAR is deemed to be solved.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.29</u></b> Monitoring procedures (measurement, responsible company) and QA/QC procedures should be described in the PDD in details for the parameter <math>HEAT_y</math>, heat generation by project.</p>		<p>These parameters will be included in a separate document "Monitoring plan" (manual).</p> <p><b><u>Answer of the determinator:</u></b> See above.</p> <p><b>Reply of the Project Participant</b> Monitoring plan is a part of PDD. Monitoring report will be submitted during first verification</p>	<p>This can be accepted, the CAR is deemed to be solved.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.30</u></b> Monitoring procedures (measurement, responsible company) and QA/QC procedures should be described in the PDD in details for the parameter <math>EFF_{heat}</math>, Energy efficiency of heat plant.</p>		<p>These parameters will be included in a separate document "Monitoring plan" (manual).</p> <p><b><u>Answer of the determinator:</u></b> See above.</p> <p><b>Reply of the Project Participant</b> Monitoring plan is a part of PDD. Monitoring report will</p>	<p>This can be accepted, the CAR is deemed to be solved.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>

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		be submitted during first verification	
<p><b><u>Corrective Action Request No.31</u></b> A list of all the information of the meters including backup meters installed, the accuracy, the measuring range, calibration information is necessary. All those meters should be shown in Figure 5 of B.7.2 of the PDD.</p>		<p>New figure with meters will be added to the Monitoring plan.</p> <p><b><u>Answer of the determinator:</u></b> See above.</p> <p><b>Reply of the Project Participant</b> New figure with meters will be added to the Monitoring report. Monitoring report will be submitted during first verification</p>	<p>This can be accepted, the CAR is deemed to be solved.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.32</u></b> The thermal meter TE can not be found, please clarify.</p>		<p>Orifice flow meter is installed at boiler.</p> <p><b><u>Answer of the determinator:</u></b> OK.</p>	<p>The clarification given is sufficient.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>
<p><b><u>Corrective Action Request No.33</u></b> The description of the environmental can impact such as air quality, water quality, noise, solid waste and zoology of the project activity should be provided within the PDD. Please highlight the basic information on Environmental impact in chapter F.1.</p>		<p>Done. Refer please to section F.1.</p> <p><b><u>Answer of the determinator:</u></b> See above.</p>	<p>Additional information has been provided in revised PDD.</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>

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**Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)**

Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-

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Determination of the JI Project:  
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## **Annex 2: Information Reference List**

<b>Annex 2</b> Information Reference List November 7 <sup>th</sup> , 2008	Determination of JI Project “Utilization of Coal Mine Methane at the Coal Mine Sukhodiliska-Skhidna” Information Reference List	Page 1 of 1	
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Reference No.	Document or Type of Information																		
1.	UNFCCC homepage <a href="http://www.unfccc.int">http://www.unfccc.int</a> including the Joint Implementation section <a href="http://ji.unfccc.int">ji.unfccc.int</a>																		
2.	IPCC 2006. Revised guidelines for national greenhouse gas inventories																		
3.	The approved consolidated methodology ACM0008 / Version 03 “Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat and/or destruction by flaring”																		
4.	Tool for the demonstration and assessment of additionality / Version 03																		
5.	PDD in GSP: “Utilization of Coal Mine Methane at the Coal Mine Sukhodiliska-Skhidna”, PDD version 4.3, dated 12 September 2007 - JI-Ref. No 0092																		
6.	<p>On-site interview with the project owner conducted on October 10<sup>th</sup>, 2007 at Sukhodiliska-Shidna Coal Mine, Krasnodon, Ukraine by auditing team of TÜV SÜD</p> <p>Determination team on-site:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Thomas Kleiser</td> <td style="width: 50%;">TÜV Industrie Service GmbH TÜV SÜD Group</td> </tr> <tr> <td>Dr. Albert Geiger</td> <td>TÜV Industrie Service GmbH TÜV SÜD Group</td> </tr> <tr> <td>Anna Peretykina</td> <td>TÜV Industrie Service GmbH TÜV SÜD Group</td> </tr> </table> <p>Interviewed persons:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Alexander A. Angelovskiy</td> <td style="width: 50%;">Technical Director, OJSC “KrasnodonUgol”</td> </tr> <tr> <td>Alexander L. Kot</td> <td>Machine operator in sector coal mining, “Metinvest Holding”</td> </tr> <tr> <td>Pavel J. Moiseenko</td> <td>Director of the Coal Mine “Sukhodiliska- Shidna”</td> </tr> <tr> <td>Sergey A. Shevchenko</td> <td>Chef engineer, Coal Mine “Sukhodiliska- Shidna</td> </tr> <tr> <td>Ljudmila M. Kotova</td> <td>Head of the credit and financial department, “Metinvest Holding”</td> </tr> <tr> <td>Valery Sade</td> <td>Consultant, Global Carbon</td> </tr> </table>	Thomas Kleiser	TÜV Industrie Service GmbH TÜV SÜD Group	Dr. Albert Geiger	TÜV Industrie Service GmbH TÜV SÜD Group	Anna Peretykina	TÜV Industrie Service GmbH TÜV SÜD Group	Alexander A. Angelovskiy	Technical Director, OJSC “KrasnodonUgol”	Alexander L. Kot	Machine operator in sector coal mining, “Metinvest Holding”	Pavel J. Moiseenko	Director of the Coal Mine “Sukhodiliska- Shidna”	Sergey A. Shevchenko	Chef engineer, Coal Mine “Sukhodiliska- Shidna	Ljudmila M. Kotova	Head of the credit and financial department, “Metinvest Holding”	Valery Sade	Consultant, Global Carbon
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7.	Protocols of the staff trainings, dated 21.02.2006 and 11.10.2007																		
8.	The Act of equipment commissioning, dated 7.08.2007																		
9.	Historical data for heat production and consumption for the period of 2003-2006, submitted on 08.01.2008																		
10.	Goaf layout, submitted on 08.01.2008																		
11.	Contract between research institute “Respirator” and OJSC “Krasnodonugol” for determination of coal temperature, dated 21.12.2007																		
12.	Data for precombustion gas composition, dated 16.12.2007																		
13.	Technical description of the boilers and of the new equipment installed.																		
14.	Ecology license of the coal mine Sukhodiliska- Shidna, issued by state administration of environmental protection of Luhansk city on 30.11.2007																		
15.	Technical description of the metering equipment for boiler reconstruction, issued by coal mine Sukhodiliska																		
16.	Boiler license, issued by expert and technical center of Luhansk city on 16.12.2005																		
17.	Scientific Papers of DonNTU. Economics series. Issue 76: Methodological approach to efficiency evaluation of coal industry innovation projects in risk situations																		
18.	Newspaper articles with information to financing in the Coal Mine sector																		
19.	Responsibilities of the project participants, dated 9.01.2008																		
20.	JI consideration: Minutes of the meeting at the Coal Mine Sukhodiliska on June 18 <sup>th</sup> 2005																		
21.	JI consideration: Minutes of the meeting at the Coal Mine Sukhodiliska on July 7 <sup>th</sup> 2005																		
22.	JI consideration: Minutes of the meeting at the Coal Mine Sukhodiliska on August 17 <sup>th</sup> 2005																		
23.	JI consideration: Metinvest statement to TUEV SÜED, dated 19.10.2007																		
24.	JI consideration: Travel report for the visit to Ukraine of Global Carbon consultants with ING, dated 17-20 May 2005																		
25.	Project implementation plan, dated 5.08.2007																		
26.	Data for methane consumption for the Coal Mine Sukhodiliska- Vostochnaja for 2006, submitted on 12.10.2007																		
27.																			
28.	Final PDD: “Utilization of Coal Mine Methane at the Coal Mine Sukhodiliska-Skhidna”, PDD version 4.9, dated 22 <sup>nd</sup> , October 2008																		
29.	Excel sheets with CO <sub>2</sub> calculations, final version 4_2, submitted on 30.06.2008																		
30.	Excel sheets with calculations of Cash flow, final version 2, submitted 30.06.2008																		
31.	Financial data for boiler house building and supporting works for the years 2005- 2007, submitted on 08.01.2008																		