JI DETERMINATION REPORT FORM (F-JI-DRep) - Version 01

(By submitting this form, an accredited independent entity requests the publication of a determination pursuant to paragraph 33 of the JI guidelines in accordance with paragraph 34 of the JI guidelines.)

Name of accredited independent entity (AIE)	Det Norske Veritas Certification AS
Proposed JI Project	
Title and reference number of project	**CMM utilisation on the Coal Mine № 22 "Kommunarskaya" of the State Holding Joint-Stock Company "GOAO Shakhtoupravlenye Donbass" (UNFCCC Ref # 078)**
Host Party(ies)	Ukraine
Parties involved in the project	Netherlands
(Authorised) project participants	Shakhtoupravlenye Donbass GOAO Carbon-TF B.V.
Small-scale project (yes/no)	No

Brief description of project

The Donetsk basin (Donbass) is the largest industrial region of Ukraine with coal, metallurgic and chemical industries. Donbass is one of the most hazardous regions of Ukraine in terms of environmental pollution. The main contributor of methane emissions to the atmosphere is the coal industry. Methane reserves in carboniferous deposits are estimated from 12 to 25 trillion m3.

Degassing of Coal Mine Gas (CMM) is an unavoidable occurrence of hard coal mining. In addition to active coal mines there are also a lot of abandoned mines, which still emit CMM after mining. Even after shut down mining activities, the CMM escapes over many years through open shafts, cracks and existing degassing wells in the overburden directly or diffusely into the atmosphere. CMM mainly consists of the harmful greenhouse gas methane (GWP 21), so that using of CMM becomes more important particularly with regard to the world-wide consensus of reducing green-house-gas emissions.

In this project CMM from the suction system of the re-activated coal mine Coal Mine № 22 "Kommunarskaya, should be utilised for heat and power generation. Additionally flares for further methane destruction should be installed.

Actually there are four redundant existing coal fired boilers in operation, which supply the coal mine facilities with heat. In this project two new modified natural gas boilers should be installed and should be fired with CMM. The boilers are supposed to displace a part of the heat generated by the old coal boilers. In addition a new CMM fired ventilation air heating system should be installed, which should replace an old heat exchanger, which originally was supplied with heat from the coal boilers.

Further on two additional cogeneration units fired with CMM are planned.

The remaining CMM amount should be destroyed by flaring.

The hereby requested ERU's from the conversion of the methane into carbon dioxide are needed to finance the new gas boilers, the new ventilation air heater and the installation of the new cogeneration units and the flares.

The combustion of methane in the boiler and in the flare results in a significant emissions reduction. The conversion of the harmful greenhouse gas methane with a GWP of 21 into less harmful CO_2 with a GWP of 1 reduces the global warming potential of the emissions by 87%. The displacement of conventionally generated heat (coal) gains further CO_2 emissions reduction.

Determination report
General information on determination (Please describe: ➢ The scope of the determination process, including all documentation that has been reviewed and the names of persons interviewed during the determination process, as applicable; ➢ The AIE's determination team, including a list of all persons involved in the determination process and a description of the functions assumed.)

The determination scope is defined as an independent and objective review of the Project Design Document (PDD) and other relevant documents. The information contained in these documents is reviewed against the Kyoto Protocol requirements for Joint Implementation (JI) projects, the guidelines for the implementation of Article 6 of the Kyoto Protocol (Decision 16/CP.7) as agreed in the Marrakech Accords, in particular the verification procedures under the JI supervisory committee, and decisions adopted by the JI supervisory committee.

The following documents have been reviewed:

- CDM Executive Board, ACM0008 - 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"), Version 3, 22 December 2006
- Letter of approval by designated focal point of Ukraine, 26 March 2008
- Letter of approval by designated focal point of the Netherlands, 22 April 2008
- CDM Executive Board, Tool for demonstration and assessment of additionality, version 03
- Ukrainian Mining Authorities, Approval for the combustion units, 29 June 2008
- Letter of Endorsement № 11438/10/3-10 dated 2006-12-22 from Ukrainian Ministry of Environmental Protection
- Bank of Ukraine, http://www.bank.gov.ua. Interest values 2006
- EPA (United States), CMM in Ukraine - Opportunities for production and investment in the Donetsk coal basin, January 2001
- Emissions Trader ET Gmbh, PDD for the "CMM Utilisation on the Coal Mine No 22 "Kommunarskaya" of the State Holding Joing-Stock Company "GOAO Shaktoupravlenye Donbass" project, version 04 dated 13 September 2007 and version 06 dated 6 July 2009
- Emission reduction calculation – Excel Spreadsheet
- IRR Analysis-Excel Spreadsheet

The following persons were interviewed

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- Victor Orlov - Chief Engineer, Shakhtoupravlenye Donbass GOAO
- Alexander Riabalko - Deputy Chief Engineer, Shakhtoupravlenye Donbass GOAO
- Alexay Sisov - Chief Mechanic, Coal Mine № 22 "Kommunarskaya"
- Vladimir V Kasianov - director, Eco-Alliance, Kiev
- Adam, Hadulla – Emissions Trader

The determination team consisted of the following personnel:

- Mr Ole A. Flagstad DNV Norway Team leader/CDM-validator
- Ms Yulia Zhukova DNV Russia GHG auditor
- Mr David Creedy DNV China Sector expert
- Mr Kumaraswamy Chandrashekara DNV Norway Technical reviewer

Description of determination process

(Please refer to:

- The review of the JI PDD and additional documentation attached to it;
- The assessment against JI requirements, e.g. by using a determination protocol;
- The report of findings by the AIE, including the use of different types of findings (e.g. corrective action requests, clarifications or observations etc.).

Statements or assessments should be included in section "Conclusions, final comments and determination opinion" below.)

The determination of the project commenced in 2007. The determination consisted of the following three phases:

i) a desk review of the project design documents

ii) follow-up interviews with project stakeholders,

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

The determination has been carried out in line with the verification procedure under the Article 6 supervisory committee, as well as, in line with determination process outlined in the Validation and Verification Manual.

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

For further details please refer to section 2 of the Determination Report.

Comments received from Parties, stakeholders and UNFCCC accredited observers

(Please:

- Summarise the comments received pursuant to paragraph 32 of the JI guidelines; and
- Provide a report of how due account was taken of these.)

The PDD of 13 September 2007 (version 04) was made publicly available on JI's climate change website (http://ji.unfccc.int/JI_Projects/Verification/PDD/index.html) and Parties, stakeholders and observers were through the JI website invited to provide comments during a 30 days period from 19 September 2007 to 18 October 2007.
No comments were received.

Conclusions, final comments and determination opinion

(The requirements of Article 6 of the Kyoto Protocol and the JI guidelines and further relevant requirements defined by the COP/MOP or the JISC with regard to determinations pursuant to paragraph 33 of the JI guidelines have to be met.

Please provide:

- Conclusions on each of these requirements, describing how these requirements, in particular those referred to in paragraph 33 of the JI guidelines, have been met, including assessments and findings (e.g. corrective action requests, clarifications or observations) related to each requirement and statements on whether all issues raised have been addressed to the AIE's satisfaction;
- Final comments and a determination opinion.)

Det Norske Veritas Certification AS (DNV) has performed a determination of the "CMM utilisation on the Coal Mine No22 "Kommunarskaya" of the State Holding Joint-Stock Company "GOAO Shaktoupravlenye Donbass"" project in Ukraine. The determination was performed on the basis of UNFCCC criteria for Joint Implementation and host Party criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

The host Party is Ukraine and the other participating Annex I Party is The Netherlands. Both Parties fulfil the participation criteria and have approved the project and authorized the project participants.

By burning and utilising coal mine methane instead of passively venting it, the project results in reductions of CH_4/CO_2 emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project 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.

The project applies the approved CDM baseline methodology ACM0008 "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", version 03. However, the PDD does not apply the "Tool to determine project emissions from flaring gases containing methane" as required by ACM0008, version 03, and instead argues that a high combustion efficiency of 99.5% should apply for the flares. The flare is designed to comply with German regulation for landfills which requires a combustion efficiency of 99.9% with a combustion temperature between 850-1200 °C. Given that a flare meeting these requirements is installed and given the continuous measurement of the combustion temperature, the deviation of the flaring tool is found acceptable by DNV.

The total emission reductions from the project are estimated to be on the average 119 155 tCO_2e per year during 2008 - 2012. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

Adequate training and monitoring procedures have been implemented.

In summary, it is DNV's opinion that the "CMM utilisation on the Coal Mine No22 "Kommunarskaya" of the State Holding Joint-Stock Company "GOAO Shaktoupravlenye Donbass"" project in Ukraine, as described in the PDD of 6 July 2009, meets all relevant UNFCCC requirements for the JI.

All requirements of Article 6 of the Kyoto Protocol and the JI guidelines and further relevant requirements defined by the COP/MOP or the JISC with regard to determinations pursuant to paragraph 33 of the JI guidelines are met:

☑ **Yes**

☐ **No**

List of documents attached to the determination report

(Please attach:

- ✓ The JI PDD of the project;
- ✓ Written approvals by all Parties involved in an alphabetical order; and
- ✓ Other relevant documents, e.g. any determination protocol used in the determination process, a list of persons interviewed by the AIE's determination team during the determination process; and

check mark below accordingly.)

☑ **JI PDD of the project**

☑ **Written approvals by the Parties involved**

☑ **Other documents:**

- ☑ **Determination report and protocol**
- ☐ **List of persons interviewed**
- ☐ **Any other documents** (please list):

  - Revised estimation of emission reductions for the years 2008-2009
  - Emission reduction calculation – Excel Spreadsheet
  - IRR Analysis-Excel Spreadsheet

The AIE herewith declares that undertaking the determination for the proposed JI project referred to above does not constitute a conflict of interest which is incompatible with the role of an AIE under JI.	
Name of authorized officer signing for the AIE	Michael Lehmann
Date and signature	7/8- 2009 Michael Lehmann