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TÜV Rheinland (China) Ltd. (TÜV Rheinland)

VERIFICATION REPORT

Verification of the Joint Implementation Large-scale Project ROCK MASS PROCESSING OF THE WASTE HEAP WITH THE AIM OF DECREASING THE GREENHOUSE GASES EMISSIONS INTO THE ATMOSPHERE

Initial and first periodic verification:
01/02/2008 – 30/09/2012

Report No. 01 998 9105071638 –VR1
Revision No. 02

Customer: "REMSTROYPROEKT 2002" LLC

VERIFICATION REPORT

Date of first issue: 05.11.2012	Project No: 01 998 9105071638
Executor: TÜV Rheinland (China) Ltd. (TÜV Rheinland)	Organizational unit: TÜV Rheinland Ukraine Ltd. Technical Competence Center
Customer: "REMSTROYPROEKT 2002" LLC	Client ref.: Zhdanov Serhiy Petrovych

Summary:

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed the initial and first periodic verification of emission reductions generated by the JI project Rock mass processing of the waste heap with the aim of decreasing the greenhouse gases emissions into the atmosphere for the period from 01/02/2008 till 30/09/2012.

The purpose of verification is to assess the reductions in anthropogenic emissions by sources or enhancements of anthropogenic removals by sinks generated by a JI project and reported by the project participants through the monitoring report in accordance with paragraph 37 of the JI guidelines.

In our opinion, the emission reductions reported through the monitoring report, version 2.0 dated 15/11/2012 are fairly stated and are accurate and free of material errors, omissions, or misstatements.

During the monitoring period the project has been implemented in accordance with the project design document version 2.1 dated 26/09/2012.

The emission reductions were calculated correctly on the basis of the approved monitoring plan contained in the project design document version 2.1 dated 26/09/2012.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) is able to verify that the emission reductions generated by the JI project Rock mass processing of the waste heap with the aim of decreasing the greenhouse gases emissions into the atmosphere during the period from 01/02/2008 till 30/09/2012 amount to 1 539 606 tonnes of CO_2 equivalent.

Report No.: 01 998 9105071638 – VR1	Subject Group: JI
Project title: Rock mass processing of the waste heap with the aim of decreasing the greenhouse gases emissions into the atmosphere	
Work carried out by: Dr. Valery Yakubovsky – Team Leader, Technical Competence Center Director; Yuriy Kononov – Technical expert; Ganna Zadnipryana – Auditor; Dmytry Rakovich – Trainee	
Work verified by: Dr. Lixin Li – Technical Reviewer	
Verification Report approved by: Dr. Manfred Brinkmann – Accredited Independent Entity Operational Manager	

TÜV Rheinland (China) Ltd.
(TÜV Rheinland)

Date of this revision:	Revision No.:	Number of pages:
06/12/2012	02	**33**

Abbreviations

CO_2	Carbon Dioxide
AIE	Accredited Independent Entity
ANE	Authorized national entity
BE	Baseline Emission
CAR	Corrective Action Request
CL	Clarification Request
DR	Document Review
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	Greenhouse Gas
I	Interview
ITL	International Transaction Log
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
LoA	Letter of Approval
MoV	Means of Verification
MP	Monitoring Plan
OSV	On Site Visit
PDD	Project Design Document
PE	Project Emissions
t	tonne
SS	Stakeholders survey
UNFCCC	United Nations Framework Convention on Climate Change

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1 VERIFICATION OPINION

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed the initial and first periodic verification of the emission reductions generated by the JI project Rock mass processing of the waste heap with the aim of decreasing the greenhouse gases emissions into the atmosphere for the period from 01/02/2008 till 30/09/2012.

The project participants are responsible for the collection of data in accordance with the monitoring plan and the reporting of emission reductions generated by the project.

It is responsibility of TÜV Rheinland (China) Ltd. (TÜV Rheinland) to express an independent verification opinion - conclusion on the verified amount of emission reductions generated by the project and reported by the project participants through the monitoring report, version 2.0 dated 15/11/2012.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has assessed the monitoring report on the basis of the monitoring plan contained in the registered project design document version 2.1 dated 26/09/2012 and the monitoring report version 1.0 dated 11/10/2012.

The verification included the assessment of:

- project implementation in accordance with the project design document (PDD);
- compliance with the monitoring plan;
- calculation of emission reductions and expression of a conclusion with a reasonable level of assurance about whether the reported emission reductions data are accurate and free of material errors, omissions, or misstatements;
- quality and management of data and verification that reported emission reductions data is sufficiently supported by evidence.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) verification approach draws on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. TÜV Rheinland (China) Ltd. (TÜV Rheinland) planned and performed the verification by obtaining evidence information and explanations that TÜV Rheinland (China) Ltd. (TÜV Rheinland) considers necessary to give reasonable assurance that reported emission reductions are fairly stated, accurate and free of material errors, omissions, or misstatements.

In TÜV Rheinland's/TÜV Rheinland's Ukraine opinion the emission reductions generated by the JI project Rock mass processing of the waste heap with the aim of decreasing the greenhouse gases emissions into the atmosphere for the period from 01/02/2008 till 30/09/2012 are

fairly stated, accurate and free of material errors, omissions, or misstatements in the monitoring report, version 2.0 dated 15/11/2012.

The GHG emission reductions were calculated correctly on the basis of the registered project design document version 2.1 dated 26/09/2012.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) is able to verify that the emission reductions generated by the JI project "Rock mass processing of the waste heap with the aim of decreasing the greenhouse gases emissions into the atmosphere" for the period from 01/02/2008 till 30/09/2012 amount 1 539 606 tonnes of CO_2 equivalent.

2 INTRODUCTION

Company "REMSTROYPROEKT 2002" LLC has commissioned TÜV Rheinland (China) Ltd. (TÜV Rheinland) to carry out the verification of the JI project Rock mass processing of the waste heap with the aim of decreasing the greenhouse gases emissions into the atmosphere (hereinafter "project") for the period from 01/02/2008 till 30/09/2012. This report contains the findings from the verification and conclusion on the verified amount of emission reductions.

2.1 Objective

The verification is the periodic independent review and ex post verification by an Accreditation Independent Entity (AIE) of the monitored reductions in GHG emissions that have occurred as a result of a Joint Implementation (JI) project activity during a defined verification period.

The purpose of the verification is to assess the reductions in anthropogenic emissions by sources or enhancements of anthropogenic removals by sinks generated by a JI project and reported by the project participants through the monitoring report in accordance with paragraph 37 of the JI guidelines.

The objective of this verification was to verify emission reductions generated by the JI project Rock mass processing of the waste heap with the aim of decreasing the greenhouse gases emissions into the atmosphere for the period from 01/02/2008 till 30/09/2012.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) is an Accredited Independent Entity by the Joint Implementation Supervisory Committee.

2.2 Scope

The scope of this verification is the assessment of:

- project implementation in accordance with the project design document (PDD);
- compliance with the monitoring plan, including the revision of the monitoring plan;
- calculation of emission reductions and expression of a conclusion with a reasonable level of assurance about whether the reported emission reduction data are accurate and free of material errors, omissions, or misstatements;
- quality and management of data and verification that reported emission reduction data is sufficiently supported by evidence.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions, forward action requests may provide input for corrective actions in order to provide for more accurate future monitoring and reporting.

2.3 JI Project Description

The brief information regarding the project activity is provided in table 1.

Table 1 – JI project brief information

Project Parties involved:	1. Ukraine (Host party). 2. Estonia
Title of the project:	Rock Mass Processing of the Waste Heap with the Aim of Decreasing the Greenhouse Gases Emissions into the Atmosphere
Type of JI activity:	Large-scale
Baseline and monitoring methodology:	JI specific approach
Project entity participant:	"REMSTROYPROEKT 2002" LLC
Other project participants:	ProEffect OÜ
Location of the project:	Urban type settlement Kalininskiy, Sverdlovsk district, Lugansk region, Ukraine
Crediting period of the project:	01/02/2008 – 31/12/2015
Period verified in this report:	01/02/2008 – 30/09/2012
Period verified in previous verification report:	Not applicable

This project involves the introduction of dry beneficiation method of rock mass of the waste heap to reduce greenhouse gas emissions resulting from spontaneous combustion of its flammable components. Prevention of spontaneous combustion of the waste heap will reduce the negative impact on the environment.

Baseline scenario assumes that the problem of waste heaps combustion will not be effectively resolved, rock mass of waste heaps will undergo self-ignition until all volume of coal contained in it does not burn. Continuation of existing situation will lead to large emissions of greenhouse gases in the atmosphere and to the general pollution of the ecosystem of the region.

Project "Rock Mass Processing of the Waste Heap with the Aim of Decreasing the Greenhouse Gases Emissions into the Atmosphere" provides implementation of a number of technical solutions on dismantling and further processing of rock mass of the waste heap, located in the urban type settlement Kalininskiy, Sverdlovsk district, Lugansk region, Ukraine. This heap was shaped by the former mine CCM "Mayak" and was closed in 1967.

Decision on implementation of the project, which provides recultivation of the waste heap of the former mine of CCM "Mayak" with the aim of reducing GHG emissions, was made in early 2007. During 2007 agreement with contractors, who will provide transportation services, was signed, and lease agreement was concluded for complex of rock mass processing. Starting date of the project is February 2, 2008, when operation of beneficiation installation began.

The project has been registered under national procedure as Track 1 JI project with the PDD version 2.1 dated 26/09/2012. The documentation on the project including the PDD, approval by the host Party, Determination report is available at:

http://ji.unfccc.int/JIITLProject/DB/75DO5BSWUJIY2GHD8D4XEX5PAIKOUT/details

3 METHODOLOGY

The verification process has been carried out using internal procedures of TÜV Rheinland (China) Ltd. (TÜV Rheinland). In order to ensure transparency, a Verification protocol (Annex A to Verification report) was customized for the project, according to the Annex to "Joint Implementation Determination and Verification Manual", version 01. The Verification protocol shows, in a transparent manner, criteria (requirements) and results of verification.

The verification consists of the following three phases:

I) a desk review of the monitoring report including analysis of the compliance of the monitoring plan with the monitoring methodology;

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

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

The following subsections outline each step in more detail.

3.1 Desk review

Project participants provided TÜV Rheinland (China) Ltd. (TÜV Rheinland) all the necessary documents for document review. The monitoring report version 1.0 dated 11/10/2012 was assessed as part of the verification. In addition, the project's Project Design Document version 2.1 dated 26/09/2012 and project's Determination Report No. 01 998 9105071638 – DR dated 27/09/2012 were also reviewed. Supporting documents, such as, acceptance certificates of coal products, electricity, work completion certificate, environmental impact assessments and expert opinions, etc. were available during on site visit.

The information and formulae provided in the monitoring report was compared with PDD and stated data sources.

To address TÜV Rheinland (China) Ltd. (TÜV Rheinland) corrective action and clarification requests, project participants revised the monitoring report and resubmitted it as version 2.0 dated 15/11/2012.

The verification findings presented in this report relate to the monitoring report version 2.0 dated 15/11/2012and project as described in the PDD version 2.1 dated 26/09/2012.

The following tables outline the documentation reviewed during the verification. Documents provided by "REMSTROYPROEKT 2002" LLC that relate directly to the components of the project are indicated in table 2. Background documents related to the monitoring and/or methodologies employed in the monitoring or other reference documents are provided in table 3.

Table 2 – Category 1 Documents

No.	Title of the document
/1/	PDD. Project Development Document "Rock Mass Processing of the Waste Heap with the Aim of Decreasing the Greenhouse Gases Emissions into the Atmosphere", version 2.1 dated 26/09/2012 in Ukrainian.
/2/	Monitoring Report, version 1.0 dated 11/10/2012.
/3/	Monitoring Report, version 2.0 dated 15/11/2012.
/4/	GHG emission reduction calculation spreadsheet in Excel.
/5/	"Joint implementation determination and verification manual", version 01, JISC.
/6/	"Guidance on criteria for baseline setting and monitoring", version 03, JISC.
/7/	Letter of Approval for JI project "Rock Mass Processing of the Waste Heap with the Aim of Decreasing the Greenhouse Gases Emissions into the Atmosphere" #3406/23/7 dated 13/11/2012.
/8/	Written project approval by a Party involved (Estonia) #12-1/8543 dated 12/10/2012

Table 3 – Category 2 Documents

No.	Title of the document
/1/	Acceptance certificates of carbonaceous rock mass for June - August 2008.
/2/	Acceptance certificates of carbonaceous rock mass for September - November 2009.
/3/	Acceptance certificates of carbonaceous rock mass for January - March 2010.
/4/	Acceptance certificates of carbonaceous rock mass for May - July 2011.
/5/	Acceptance certificates of carbonaceous rock mass for March - April 2012.
/6/	Acceptance certificates of coal production for May - August 2008.
/7/	Acceptance certificates of coal production for August - October 2009.
/8/	Acceptance certificates of coal production for October - December 2010.
/9/	Acceptance certificates of coal production for January - March 2011.
/10/	Acceptance certificates of coal production for July - September 2012.

No.	Title of the document
/11/	Acceptance certificates of consumed electricity for 2009
/12/	Acceptance certificates of consumed electricity for 2012
/13/	Order of Director of "REMSTROYPROEKT 2002" LLC No. 14 dated 02/02/2007 on considering the possibility of implementation of the proposed project with the assistance of the Kyoto Protocol
/14/	Acceptance certificates for work performed on the amount of consumed diesel fuel for February - June 2008.
/15/	Acceptance certificates for work performed on the amount of consumed diesel fuel for November - December 2009.
/16/	Acceptance certificates for work performed on the amount of consumed diesel fuel for August - October 2010.
/17/	Acceptance certificates for work performed on the amount of consumed diesel fuel for March - May 2011.
/18/	Acceptance certificates for work performed on the amount of consumed diesel fuel for September - November 2012.
/19/	Decision of Kalininska Village Council on the transfer of the waste heap to CJSC "Promynvest-ecolohia"
/20/	Agreement No. 10/07-123 dated January 25, 2008 on the transfer by Melnyk A.V. of the waste heap of the former mine CCM "Mayak" to "REMSTROYPROEKT 2002" LLC with the aim of its recultivation
/21/	Passport of the waste heap in the urban type settlement Kalininskiy
/22/	Lease agreement of the complex for processing the waste heap "REMSTROYPROEKT 2002" LLC
/23/	Agreement between "REMSTROYPROEKT 2002" LLC and "BC "DOM-STOY" LLC on provision of transportation services
/24/	Working construction project of the complex for processing the waste heap of the former mine CCM "Mayak"
/25/	Comprehensive environmental impact assessment. EIA. 2007 PE PB "Ekoservice"
/26/	Passport of electricity meter Actaris SL7000
/27/	Technical passport of automobile scales of type "VTA-60"
/28/	Order No. 46 on information storage
/29/	Report on the fire risk of Lugansk Region's waste heaps, Scientific Research Institute "Respirator", Donetsk, 2012
/30/	Monitoring instruction, acting at "REMSTROYPROEKT 2002" LLC
/31/	Agreement with the laboratory "Continent" No. 246/7-08 dated

No.	Title of the document
	January 26, 2008.
/32/	Agreement with the laboratory "Continent" No. 180/3-12 dated June 6, 2012.
/33/	Agreement with the laboratory "Continent" No. 221/7-09 dated June 6, 2009.
/34/	Certificate of attestation of laboratory №РЬ064/2006
/35/	Certificate of attestation of laboratory №РЬ071/2009
/36/	Certificate of attestation of laboratory №РЬ073/2012
/37/	Order of Director of "REMSTROYPROEKT 2002" LLC No.84 on the beginning of concentrating complex operation
/38/	The analysis of coal products of "REMSTROYPROEKT 2002" LLC for August 2008.
/39/	The analysis of coal products of "REMSTROYPROEKT 2002" LLC for May 2009.
/40/	The analysis of coal products of "REMSTROYPROEKT 2002" LLC for January 2010.
/41/	The analysis of coal products of "REMSTROYPROEKT 2002" LLC for October 2010.
/42/	The analysis of coal products of "REMSTROYPROEKT 2002" LLC for June 2010.

3.2 Interviews with project stakeholders

TÜV Rheinland (China) Ltd. (TÜV Rheinland) performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Interviewed representatives of "REMSTROYPROEKT 2002" LLC are summarized in Table 4. The main topics of the interviews are summarized in Table 5.

Table 4 – Persons interviewed

No.	Name	Organization	Position
/1/	Zhdanov Serhiy Petrovych	"REMSTROYPROEKT 2002" LLC	Director
/2/	Alyokhina Liliya Serhiyivna	"REMSTROYPROEKT 2002" LLC	Chief Economist
/3/	Mykhailov Pavlo Ivanovych	"REMSTROYPROEKT 2002" LLC	Chief Energetic
/4/	Tretyak Fedir Mykhailovych	"REMSTROYPROEKT 2002" LLC	Chief Technologist

Table 5 – Interview topics

No.	Date	Interviewed organization	Interview topics
/1/	29/10/2012	"REMSTROYPROEKT 2002" LLC	➢ QA/QC of the project, Project management ➢ Reporting and calculation of emission reductions, data sources ➢ Project management, site visit ➢ QA/QC of the project, Project management, Project implementation, ➢ Operational reporting, logs, plant visit, monitoring equipment ➢ Environmental licenses, project implementation ➢ Data processing, reporting ➢ Monitoring equipment ➢ Operational reporting ➢ Monitoring activity, Personnel training

3.3 Resolution of Clarification, Corrective and Forward Action Requests

Where TÜV Rheinland (China) Ltd. (TÜV Rheinland), in assessing the monitoring report and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

- Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;
- Clarification request (CL), requesting the project participants to provide additional information for the AIE to assess compliance with the monitoring plan;
- Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

The verification of the project resulted in 14 Corrective action requests and 2 Clarification requests.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) made an objective assessment as to whether the actions taken by the project participants and presented in the Table 1 (Annex A to Verification report) satisfactorily resolve the raised issues and concluded its findings of the verification.

3.4 Internal Technical Review

The verification report including the verification findings underwent a technical review before requesting the publication according to paragraph 37 of the JI guidelines. The technical review was performed by an internal technical reviewer qualified in accordance with TÜV Rheinland (China) Ltd. (TÜV Rheinland) qualification scheme for JI project determination and verification.

3.5 Verification team

The verification team consists of the following personnel indicated in Table 6 below.

Table 6 – Verification team

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

4 VERIFICATION FINDINGS

This section summarizes the findings from the verification of the emission reductions generated by the JI project "Rock Mass Processing of the Waste Heap with the Aim of Decreasing the Greenhouse Gases Emissions into the Atmosphere" for the period from 01/02/2008 till 30/09/2012.

4.1 Project approval by Parties involved

In accordance with paragraphs 90 - 91 of the DVM the assessment of this area focuses on whether at least one written project approval by a Party involved in the JI project, other than the host Party(ies), has been issued by the DFP of that Party. It also should be assessed whether the written project approvals are unconditional.

A written project approval by Ukraine (host Party) is available:
Letter of Approval #3406/23/7 dated 13/11/2012.

Written project approval by a Party involved in JI SSC project, other than the host Party was obtained: *Estonia #12-1/8543 dated 12/10/2012*.

Written project approvals are available at:

http://ji.unfccc.int/JIITLProject/DB/75DO5BSWUJIY2GHD8D4XEX5PAIKOUT/details

The written project approvals mentioned above are unconditional.

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

4.2 Project implementation

In accordance with paragraphs 92 - 93 of the DVM the assessment of this area focuses on whether the project has been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website. The status of operation of the project during the monitoring period also should be assessed.

The project has been implemented in accordance with the PDD version 2.1 dated 26/09/2012 regarding which the determination has been deemed final. This JI project is registered as Track 1 project. The description of this project is available in section 2.3. of this Verification report.

The emission reductions generated by the JI SSC project reported for the period from 01/02/2008 till 30/09/2012 amount to 1 539 606 tCO_2e.

The verification team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) can confirm, through the on-site visit that all physical features of the proposed JI project activity including data collecting and storage systems have been implemented, the project is completely operational and has been implemented as described in the registered PDD version 2.1 dated 26/09/2012.

Identified problem areas for project implementation, project participants' answers and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Verification Report.

4.3 Compliance with monitoring plan

In accordance with paragraphs 94 - 98 of the DVM the assessment of this area focuses on whether the monitoring occurred in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website.

The monitoring of the JI project occurred in accordance with the monitoring plan contained in the registered PDD 2.1 dated 26/09/2012.
For calculating the emission reductions key factors influencing the baseline emissions as well as risks associated with the project were taken into account, as appropriate. For more detailed information, please, refer to the determined and registered PDD, version 2.1 dated 26/09/2012.

All data sources used for calculating emission reductions are indicated in table B.2.1 and B.2.3 of the Monitoring Report, version 2.0 dated 15/11/2012.

The emission factor used to calculate emission reductions are selected in accordance with the registered PDD version 2.1 dated 26/09/2012. The choice of this emission factor is appropriately justified in the PDD version 2.1 dated 26/09/2012 and in general accuracy and reasonableness are carefully balanced.

The calculation of emission reductions is done based on conservative assumptions and the most plausible scenarios in a transparent manner. The calculation of the baseline emissions is based on the JI specific approach in accordance with the registered PDD version 2.1 dated 26/09/2012.

The calculation of emission reductions is done by subtracting the project emissions from the baseline emissions.
The detailed calculation of GHG emission reductions for chosen monitoring period (01/02/2008 – 30/09/2012) is provided in supporting documentation.

Identified problem areas for compliance with monitoring plan, project participants' answers and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Verification Report.

4.4 Revision of monitoring plan

If the project participants submitted to the AIE a revised monitoring plan, in accordance with paragraphs 99 - 100 of the DVM the assessment of this area focuses on whether the correct and complete justification for the proposed revision is provided, and whether the proposed revision improves the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans.

There was no revision to the monitoring plan. The monitoring of the JI project occurred in accordance with the monitoring plan contained in the registered PDD, version 2.1 dated 26/09/2012.

Identified problem areas for compliance with monitoring plan, project participants' answers and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Verification Report.

4.5 Data Management

In accordance with paragraph 101 of the DVM the assessment of this area focuses on the quality of the information using standard auditing techniques provided in the monitoring report by assessing whether the data and their sources are clearly identified, reliable and transparent.

Data collection procedure is carried out in accordance with the monitoring plan, including the quality control and quality assurance procedures and has been checked by the verification team on site visit. The monitoring plan is presented in section D of the registered PDD version 2.1 dated 26/09/2012. The data and their sources, provided in monitoring report, are clearly identified, reliable and transparent.

The evidence and records used for the monitoring are maintained in a traceable manner. Verification team got an access to all necessary data on monitoring system and emission reductions and received necessary evidence on site visit.

The data collection and management system for the project is in accordance with the monitoring plan as described in the registered PDD 2.1 dated 26/09/2012.

Identified problem areas for data management, project participants' answers and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Verification Report.

4.6 Assessment of data and calculation of greenhouse gas emission reductions

The verification team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) verified that all parameters are used correctly in the calculations, all results are verifiable and transparent, all assumptions are described and based on verifiable evidence and calculations are done in accordance with the pre-defined formulae from registered PDD version 2.1 dated 26/09/2012.

According to the Monitoring Report, version 2.0 dated 15/11/2012 and GHG emission reductions calculation spreadsheet in Excel format the emissions for the project scenario, emissions for the baseline scenario and emission reductions for chosen monitoring period (01/02/2008 – 30.09.2012) are provided in table 7 below.

Table 7 – Results for Emission Reductions for Monitoring Period

Monitoring Period:	**01/02/2008 – 30/09/2012**
Emissions for the project scenario:	11 359 tCO_2e
Emissions for the baseline scenario:	1 189 759 tCO_2e
Leakage:	-361 206 tCO_2e
Emission reductions:	1 539 606 tCO_2e

4.7 Remaining issues, CARs from previous determination/verification

There was one pending issue remained from determination of the project:

***FAR 01**. The Project hasn`t obtained Letters of Approval from the parties involved.*

During verification project participant has provided to AIE Letter of Approval from Host country (Ukraine) *Approval #3406/23/7 dated 13/11/2012* and from the foreign country (Estonia) *#12-1/8543 dated 12/10/2012*.

The Forward Action Request (**FAR 01**) from determination has been closed.

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ANNEX A – VERIFICATION PROTOCOL

Table 1 – Requirements Checklist

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
1. Project approvals by Parties Involved				
1. 1. Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	90	Yes, both written approvals are presented in the Monitoring Report	OK	OK
1. 2. Are all the written project approvals by Parties involved unconditional?	91	Yes, all the written project approvals by Parties involved are unconditional.	OK	OK
2. Project implementation				
2.1. Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	92	Yes, the project has been implemented in accordance with the determined PDD. **CL 01.** Please state if there was any replacement of manufacturing equipment during the monitoring period.	**CL 01.**	OK
2.2. What is the status of operation of the project during the monitoring period?	93	The project received a positive opinion by AIE and passed the final determination. Currently this project is at the stage of verification. **CAR 01.** Please specify appropriate document confirming starting date of the project investment phase.	**CAR 01.** **CAR 02.** **CAR 03.**	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
		CAR 02. Please provide appropriate document indicating the completion of the project investment phase. **CAR 03.** Please state the date of decision to implement the project "Rock Mass Processing of the Waste Heap with the Aim of Decreasing the Greenhouse Gases Emissions into the Atmosphere" under the Kyoto protocol with involving JI mechanism.		
3. Compliance with monitoring plan				
3.1. Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final?	94	Yes, the monitoring occurred in accordance with the monitoring plan included in the determined PDD.	OK	OK
3.2. For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) of DVM, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	95 (a)	Yes, all the key factors were taken into account for calculating the emission reductions or enhancements of net removals. **CAR 04.** Please provide appropriate justification that coal concentrate, which is stored in the warehouse of finished goods, does not lead	**CAR 04.**	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
		to GHG emissions into the atmosphere.		
3.3. Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	95 (b)	Yes, all the data sources used for calculating emission reductions or enhancements of net removals are clearly identified, reliable and transparent **CAR 05.** Please, provide link to data source for emission factor for electricity consumption in section B.2.1. of MR. **CAR 06.** Please provide more precise reference to the average electricity consumption per ton of extracted coal in Ukraine.	**CAR 05.** **CAR 06.**	OK
3.4. Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	95 (c)	Emission factors, including default emission factors, used for calculating the emission reductions or enhancements of net removals, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice	OK	OK
3.5. Is the calculation of emission reductions or enhancements of net removals calculated based on	95 (d)	The calculation of emission reductions or enhancements	**CL 02.**	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
conservative assumptions and the most plausible scenarios in a transparent manner?		of net removals are calculated based on conservative assumptions and the most plausible scenarios in a transparent manner. **CL 02**. Please provide an explanation on how on the use of fugitive methane emission factor during extraction of coal from mines from National Inventory Report for 1999-2009.		
4. Applicable to JI SSC projects only				
4.1. Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis? If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?	96	Not applicable	OK	OK
5. Revision of monitoring plan ***Applicable only if monitoring plan is revised by project participants***				
5.1. Did the project participants provide an appropriate justification for the proposed revision?	99 (a)	Not applicable	OK	OK
5.2. Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring	99 (b)	Not applicable	OK	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
plans?				
6. Data management				
6.1. Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	101 (a)	The implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures. **CAR 07**. According to determined PDD version 2.1 dated September 26, 2012 (Section D.1.1.1) parameter – using of diesel fuel is registered in tons (t).		
6.2. Is the function of the monitoring equipment, including its calibration status, is in order?	101 (b)	The monitoring equipment functions properly, including its calibration. **CAR 08**. Please provide appropriate chronology of calibration of automobile weights "VTA-60" starting from 2007. **CAR 09.** Please add information on the enterprise that performed the installation and connection of electric meters.	**CAR 08.** **CAR 09.**	OK
6.3. Are the evidence and records used for the monitoring maintained in a traceable manner?	101 (c)	the evidence and records used for the monitoring are		OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
		maintained in a traceable manner. **CAR 10.** Please, correct number of electricity meter with accordance to passport documents and its name according to certificate of type approval. **CAR 11.** Provide accurate and true date of introduction of electricity SL7000 Smart into the operation.		
6.4. Is the data collection and management system for the project in accordance with the monitoring plan?	101 (d)	Implemented data collection and management system is in accordance with the monitoring plan, as described in the PDD determination of which is considered to be final. **CAR 12.** Please provide sensible explanation how will be ensured internal audit, what control measures are implemented at the enterprise.	**CAR 12.** **CAR 13.** **CAR 14.**	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
		CAR 13. Please explain how information is exchanged between accountant and chief technologist and chief power engineer, based on data flow diagram or correct this scheme. **CAR 14.** Specify in Figure 2 Appendix 2 lab as one of the points of measurement monitoring data.		

DVM* - Joint Implementation Determination and Verification Manual, version 01

Table 2 - Resolution of CARs, CLs and FARs

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
1.	**CAR 01.**	Please specify appropriate document confirming starting date of the project investment phase.	93	Relevant document (lease № 10-69/2007 processing complex for processing rock mass terricons) confirming this date provided to the AIE. Section A.6. MR version 2.0 dated 15/11/2012 was added relevant information on the early investment phase of the project: 29.10.2007 - Start of the investment phase.	Issue is closed
2.	**CAR 02.**	Please provide appropriate document indicating the completion of the project investment phase.	93	Document (contract No. 1007-123 dated January, 25 2008 on recultivation of waste heap) confirming the date of completion of the investment phase was provided to the AIE. Section A.6. MR version 2.0 dated 15/11/2012 was added relevant information concerning the completion of the investment phase of the project: 25.01.2008 - Signing a contract remediation waste heap.	Issue is closed

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
3.	**CAR 03.**	Please state the date of decision to implement the project "Rock Mass Processing of the Waste Heap with the Aim of Decreasing the Greenhouse Gases Emissions into the Atmosphere" under the Kyoto protocol with involving JI mechanism.	93	February 2, 2007 is the date of signing the order by director of "REMSTROYPROEKT 2002»LLC № 14 and is the date of decision to implement the project under the Kyoto protocol with involving JI mechanism. Relevant information is presented in Table 1, section A.6. MR version 2.0 dated 15/11/2012..	Issue is closed
4.	**CAR 04.**	Please provide appropriate justification that coal concentrate, which is stored in the warehouse of finished goods, does not lead to GHG emissions into the atmosphere.	95 (a)	Warehousing coal will not lead to self-ignition and subsequent burning, because shipping coal is a continuous process without long delays. So that coal theoretically had the opportunity to spontaneous combustion, prolonged storage and accumulation of heap of finished products are needed, the project provides constant sales market of coal production, so the warehouse serves as a small buffer between producer and consumer.Relevant explanation has been provided in section	Issue is closed

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				MR version 2.0 dated 15/11/2012.	
5.	**CAR 05.**	Please, provide link to data source for emission factor for electricity consumption in section B.2.1. of MR.	95 (b)	The data source of emission factor for electricity consumption is orders of the State Environmental Investment Agency, which are published on the Internet site of the agency annually. Relevant information has been provided in section B.2.1. MR version 2.0 dated 15/11/2012.	Issue is closed
6.	**CAR 06.**	Please provide more precise reference to the average electricity consumption per ton of extracted coal in Ukraine.	95 (b)	The data source of specific energy consumption per tonne of produced is the State Statistics Service of Ukraine, which publishes this information in statistical collection. More precise reference is presented in Table 5, Section B.2.1 MR version 2.0 dated 15/11/2012	Issue is closed
7.	**CAR 07.**	According to determined PDD version 2.1 dated September 26, 2012 (Section D.1.1.1) parameter – using of diesel fuel is registered in tons (t).	101(a)	In the internal company reports the amount of diesel fuel is reported in litres. To convert this amount into the tones the following formula is used:	Issue is closed

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				Diesel Fuel in Tones = (0.85 Diesel Fuel in Litres)/1000* Where 0.85 stands for the density of diesel fuel in kg/l. Data are taken from DSTU 4840-2007 Diesel Fuel. Technical Requirements. Relevant explanation was provided in section B.2.3. MR version 2.0 dated 15/11/2012.	
8.	**CAR 08.**	Please provide appropriate chronology of calibration of automobile weights "VTA-60" starting from 2007.	101 (b)	Calibration was conducted in accordance with the technical regulations of weights by the following chronology: 25/12/2007, 25/12/2008, 25/12/2009, 25/12.2010. Calibrations confirmed that the measurements provided by the device are valid. This explanation is presented in section B.1.2 of MR version 2.0 dated 15/11/2012.	Issue is closed
9.	**CAR 09.**	Please add information in Section B.1.2 on the enterprise that performed the installation and connection of electric meters.	101 (b)	Private Enterprise "Production and Commercial Firm "Energo Max" – installation and connection of electricity meters.	Issue is closed

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				Relevant information was provided in section B.1.2 MR version 2.0 dated 15/11/2012.	
10.	**CAR 10.**	Please, correct number of electricity meter with accordance to passport documents and its name according to certificate of type approval.	101(c)	Relevant information about the electricity meter «Actaris CL7000 Smart» was presented in Section B.1.2. MR version 2.0 dated 15/11/2012.	Issue is closed
11.	**CAR 11.**	Provide accurate and true date of introduction of electricity SL7000 Smart into the operation.	101(c)	Date of putting into the operation electricity meter SL7000 Smart is 01/11/2007. Relevant information was presented in section B.1.2. MR version 2.0 dated 15/11/2012.	Issue is closed
12.	**CAR 12.**	Please provide sensible explanation how will be ensured internal audit, what control measures are implemented at the enterprise.	101 (d)	Appropriate explanation of how internal audit will be provided by the company, is presented in section C.3. MR version 2.0 dated 15/11/2012.	Issue is closed
13.	**CAR 13.**	Please explain how information is exchanged between accountant and chief technologist and chief power engineer, based on data flow diagram or correct this scheme.	101 (d)	The functions and responsibilities of the relevant services, and data flow figure is described in detail in Section C.1.1 and C.2. MR version 2.0 dated 15/11/2012. Relevant	Issue is closed

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				corrections and explanations was made.	
14.	**CAR 14.**	Specify in Figure 2 Appendix 2 lab as one of the points of measurement monitoring data.	101 (d)	Coal laboratory eas added to Figure 2 Appendix 2 MR version 2.0 dated 15/11/2012.	Issue is closed
15.	**CL 01.**	Please state if there was any replacement of manufacturing equipment during the monitoring period.	92	Since the beginning of operation of complex for waste heap processing, project equipment has not changed. All technical characteristics of beneficiation complex meet relevant technical documentation. During monitoring period only routine preventive maintenance of existing project equipment were performed. This explanation is provided in section B.1.2. MR version 2.0 dated 15/11/2012.	Issue is closed
16.	**CL 02.**	Please provide an explanation on how on the use of fugitive methane emission factor during extraction of coal from mines from National Inventory Report for 1999-2009.	95 (d)	National Inventory Report In Ukraine for 1990-2009 gives clear and transparent information on the value of fugitive methane emission	Issue is closed

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				factor during operation of mines. In the new edition of this source this factor has no numerical value, and presented as a curve on the graph. This method of data demonstration does not allow accurate and transparent identifying appropriate factor value, but only shows the tendency of this indicator change by years. Application of this source provides availability of high level of uncertainty that puts into doubt overall results of calculations of emission reductions.	