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TÜV Rheinland (China) Ltd. (TÜV Rheinland)

VERIFICATION REPORT

Verification of the Joint Implementation Large-scale Project

Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere

Initial and first periodic verification:
01/06/2009 – 30/11/2012

Report No. 01 998 9105072887 –VR1
Revision No. 02

Customer: "AGS-2008" LLC

VERIFICATION REPORT

Date of first issue: 07/12/2012	Project No: 01 998 9105072887
Executor: TÜV Rheinland (China) Ltd. (TÜV Rheinland)	Organizational unit: TÜV Rheinland Ukraine Ltd. Technical Competence Center
Customer: "AGS-2008" LLC	Client ref.: Zagorskiy Sergiy Igorovych

Summary:

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed the initial and first periodic verification of emission reductions generated by the JI project "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" for the period from 01/06/2009 till 30/11/2012.

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 14/12/2012 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 2.0 dated 22/11/2012.

The emission reductions were calculated correctly on the basis of the approved monitoring plan contained in the project design document version 2.0 dated 22/11/2012.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) is able to verify that the emission reductions generated by the JI project "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" for the period from 01/06/2009 till 30/11/2012 amount to 1 961 394 tonnes of CO_2 equivalent.

Report No.: 01 998 9105072887 – VR1	Subject Group: JI
Project title: Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere	
Work carried out by: Dr. Valery Yakubovsky – Team Leader, Technical Competence Center Director Dr. Yuriy Kononov – Technical Expert; Ganna Zadnipriana – Auditor; Dmytro Rakovych – Trainee.	
Work verified by: Dr. Lixin Li – Technical Reviewer	TÜV Rheinland (China) Ltd. (TÜV Rheinland)
Verification Report approved by: Dr. Manfred Brinkmann – Accredited Independent Entity Operational Manager	

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Date of this revision:	Revision No.:	Number of pages:
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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) has performed the initial and first periodic verification of the emission reductions generated by the JI project "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" for the period from 01/06/2009 till 30/11/2012.

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 14/12/2012.

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 2.0 dated 22/11/2012 and the monitoring report version 2.0 dated 14/12/2012.

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) TÜV Rheinland Japan 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 Japan Ltd. (TÜV Rheinland) planned and performed the verification by obtaining evidence information and explanations that TÜV Rheinland Japan 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 (China) Ltd. (TÜV Rheinland) opinion the emission reductions generated by the JI project "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" for the period from 01/06/2009 till 30/11/2012 are

fairly stated, accurate and free of material errors, omissions, or misstatements in the monitoring report, version 2.0 dated 14/12/2012. The GHG emission reductions were calculated correctly on the basis of the registered project design document version 2.0 dated 22/11/2012.

TÜV Rheinland (China) (TÜV Rheinland) is able to verify that the emission reductions generated by the JI project "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" for the period from 01/06/2009 till 30/11/2012 amount to 1 961 394 tonnes of CO_2 equivalent.

2 INTRODUCTION

Company "AGS-2008" LLC has commissioned TÜV Rheinland (China) Ltd. (TÜV Rheinland) to carry out the verification of the JI project "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" (hereinafter "project") for the period from 01/06/2009 till 30/11/2012. 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 "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" for the period from 01/06/2009 till 30/11/2012.

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:	"Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere"
Type of JI activity:	Large-scale
Baseline and monitoring methodology:	JI specific approach
Project entity participant:	"AGS-2008" LLC
Other project participants:	ProEffect OÜ
Location of the project:	Settlement Verhnyoherasymivska, Krasnodonskiy District, Lugansk region, Ukraine
Crediting period of the project:	01/06/2009 – 31/12/2012
Period verified in this report:	01/06/2009 – 30/11/2012
Period verified in previous verification report:	Not applicable

Purpose of the proposed project is dismantling and processing waste heaps by extracting thermal coal from carbonaceous rock, thus avoiding carbon dioxide emissions into the atmosphere from burning carbon component. The project is ecological and is aimed at improving the environmental situation in the region by preventing self-heating and self-ignition of waste heaps, formed by coal mines.

Waste heaps, formed by the coal mines, inclined to spontaneous combustion because of the presence of the coal fraction in them. As a result of physical and chemical processes in the middle of the waste heaps burning of coal-containing fractions and other combustible components occurs, leading to fugitive greenhouse gas emissions and other harmful pollutants in the environment. Measures on extinguishing the waste heaps are not regularly conducted, so the probability of

spontaneous combustion is very high. Oxidation process of combustible elements in the waste heaps is slow and unpredictable, because it is difficult to identify centres of burning and eliminate them. Implementation of certain measures on extracting coal from the waste heaps are quite costly and are not possible without additional incentives.

Baseline scenario assumes that the problem of waste heaps combustion will not be effectively resolved, carbonaceous rock of waste heaps will undergo self-ignition and burn 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. In addition, the baseline scenario assumes coal extraction by mining method that leads to fugitive methane emissions during extraction and carbon dioxide emissions for electricity consumption from the power grid of Ukraine.

This JI project is implemented on the territory of settlement Verhnyoherasymivska Village Council, Krasnodonskiy District of Lugansk region of Ukraine. Project boundaries include waste heaps #1, #2, #3, formed by the mine "Krasnodarska", and also enrichment complex, located close to the waste heap #1.

The project "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" involves the introduction of complex of measures aimed at waste heaps dismantling with the aim of black coal extraction, which will partially replace coal that would otherwise be extracted by mining method, which would in turn lead to fugitive emissions of methane and carbon dioxide by electricity consumption.

The decision on the implementation of this project was taken on March 10, 2008. During 2009 agreement with company-contractor, who will provide transportation services, was signed, and lease agreement of concentrating mill and contract on recultivation of the waste heaps were concluded. Starting date of the project is March 10, 2008, when an order on implementation of this project using Joint Implementation Mechanism under the Kyoto Protocol was signed. Because of the fact that the proposed project is very expensive, the only incentive for the implementation of these actions was JI mechanism, which allows selling emission reduction units (ERUs) generated as a result of the project activity, at the International emissions trading market.

The project has been registered under national procedure as Track 1 JI project with the PDD version 2.0 dated 22/11/2012. The documentation on the project including the PDD, approval by the host Party, Determination report is available at:

http://ji.unfccc.int/JIITLProject/DB/MXVNLGGBFGA3URW0I8HPVB49C3S826/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 03/12/2012 was assessed as part of the verification. In addition, the project's Project Design Document version 2.0 dated 22/11/2012 and project's Determination Report No. 01 998 9105072887 – DR dated 29/11/2012, 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 14/12/2012.

The verification findings presented in this report relate to the monitoring report version 2.0 dated 14/12/2012 and project as described in the PDD version 2.0 dated 22/11/2012.

The following tables outline the documentation reviewed during the verification. Documents provided by "AGS-2008" 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 "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" version 2.0 dated 22/11/2012 in Ukrainian.
/2/	PDD "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" version 2.0 dated 22/11/2012 in English.
/3/	Monitoring Report, version 1.0 dated 03/12/2012
/4/	Monitoring Report, version 2.0 dated 14/12/2012
/5/	GHG emission reduction calculation spreadsheet in Excel.
/6/	"Joint implementation determination and verification manual", version 01, JISC.
/7/	"Guidance on criteria for baseline setting and monitoring", version 03, JISC.
/8/	Letter of Approval for JI project "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" from SEIA #3936/23/7 dated 21/12/2012
/9/	*Written project approval by a Party involved - Estonia #12-1/11002-2 від 17/12/2012*

Table 3 – Category 2 Documents

No.	Title of the document
/10/	Acceptance certificate of coal products for July 2009 dated 04/08/2009.
/11/	Acceptance certificate of coal products for September 2009 dated 02/10/2009.
/12/	Acceptance certificate of coal products for November 2009 dated 02/12/2009.
/13/	Acceptance certificate of coal products for February 2010 dated 04/03/2010.
/14/	Acceptance certificate of coal products for March 2010 dated 02/04/2010.
/15/	Acceptance certificate of coal products for September 2010 dated 06/10/2010.
/16/	Acceptance certificate of coal products for March 2011 dated

No.	Title of the document
	01/04/2011.
/17/	Acceptance certificate of coal products for April 2011 dated 04/05/2011.
/18/	Acceptance certificate of coal products for May 2011 dated 01/06/2011.
/19/	Acceptance certificate of coal products for April 2012 dated 10/05/2012.
/20/	Acceptance certificate of coal products for May 2012 dated 01/06/2012.
/21/	Acceptance certificate of coal products for September 2012 dated 07/10/2012.
/22/	Acceptance certificates of consumed electricity from supplying company for 2011
/23/	Acceptance certificates of consumed electricity from supplying company for 2012
/24/	Order of Director of "AGS-2008" LLC No.65 dated 10/03/2008 on the proposed JI project implementation involving mechanisms of the Kyoto Protocol
/25/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for July 2009
/26/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for August 2009
/27/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for September 2009
/28/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for October 2009
/29/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for February 2010
/30/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for March 2010
/31/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for April 2010
/32/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for May 2010
/33/	Acceptance certificate of work completion on the number of

No.	Title of the document
	transported carbonaceous rock and consumed diesel fuel for August 2011
/34/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for September 2011
/35/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for October 2011
/36/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for November 2011
/37/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for September 2012
/38/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for October 2012
/39/	Acceptance certificate of work completion on the number of transported carbonaceous rock and consumed diesel fuel for November 2012
/40/	Decision No.5 of Verhnyoherasymivska Village Council on transfer of waste heap to closed corporation "Prominvest-ecology" dated 29/01/1999.
/41/	Deed of assignment of coal production rock wastes of Verhnyoherasymivska Village Council
/42/	Results of determining the petrographic composition of mine heaps average samples. Sample #8
/43/	Lithological composition of mine heaps samples. Sample #7. Mine "Krasnodarska"
/44/	Results of determining the petrographic composition of mine heaps average samples. Sample #7
/45/	Technical passport of waste heap #1
/46/	Technical passport of waste heap #2
/47/	Technical passport of waste heap #3
/48/	Agreement No.118/04-2009 dated 18/04/2009 on transfer by Melnyk A.V. of waste heaps #1,2,3 of "AGS-2008" LLC with the aim of their recultivation
/49/	Lease agreement of concentrating complex for processing carbonaceous rock of heaps "AGS-2008" LLC No.115/05-2009 dated 15/05/2009.
/50/	Agreement No.119/05-2009 dated 19/05/2009 between "AGS-2008" LLC and "SMU" LLC on providing transportation services for waste heaps dismantling
/51/	Working draft of complex construction for processing coal containing materials of former coal mines
/52/	Environmental impact assessment. EIA. 2007 Scientific Research Production and Commercial Firm "CER "Eko-Tera

No.	Title of the document
	Ukraine" LLC.
/53/	Attestation certificate of laboratory on conducting activities to determine fuel etc. No.207 dated August 29, 2008
/54/	Attestation certificate of laboratory on conducting activities to determine fuel etc. No. 285 dated September 23, 2011
/55/	Passport of electricity meter Actaris SL7000.
/56/	Technical passport of automobile scales of type "BA-60CM"
/57/	Order No.112/6 on information storage
/58/	Order on Coal Mining Safety and Health Approval for coal mine #62 dated 22/03/2012
/59/	Report on the fire risk of Lugansk Region's waste heaps, Scientific Research Institute "Respirator", Donetsk, 2012
/60/	Monitoring instruction, acting at "AGS-2008" LLC
/61/	Agreement with the laboratory "MCM "Bilorichenska" JSC No.320/-05 on May 20, 2009.
/62/	Agreement with the laboratory "MCM "Bilorichenska" JSC No.423/7-09 on September 23, 2011.
/63/	Agreement No.14/05-2009 dated May 13, 2009 between "AGS-2008" LLC and "ENERGOCEMENT" LLC on conducting weighing on scales "BA-60CM"
/64/	Acceptance certificate of waste heaps #1,2,3 to the Agreement No. 118/04-2009 dated 18/04/2009.
/65/	Results of the analysis of coal products. Quality certificate for 2012
/66/	Results of the analysis of coal products. Quality certificate for June 2009
/67/	Results of the analysis of coal products. Quality certificate for July 2009
/68/	Results of the analysis of coal products. Quality certificate for August 2010
/69/	Results of the analysis of coal products. Quality certificate for September 2010
/70/	Results of the analysis of coal products. Quality certificate for October 2011
/71/	Results of the analysis of coal products. Quality certificate for December 2011

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 "AGS-2008" 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/	Zagorskiy Sergiy Igorovych	Director	"AGS-2008" LLC

/2/	Skrypchenko Elina Volodymyrivna	Accountant	"AGS-2008" LLC
/3/	Deryayev Oleksiy Yuriyevych	Technologist	"AGS-2008" LLC
/4/	Sklyar Yuriy Volodymyrovych	Power engineer	"AGS-2008" LLC

Table 5 – Interview topics

No.	Date	Interviewed organization	Interview topics
/1/	05/12/2012	"AGS-2008" 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 18 Corrective action requests and 05 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
Dr. Yuriy Kononov	Technical Expert
Ganna Zadnipriana	Auditor
Dmytro Rakovych	Trainee

4 VERIFICATION FINDINGS

This section summarizes the findings from the verification of the emission reductions generated by the JI project "Carbonaceous rock processing and concentrating with the aim of reducing greenhouse gas emissions into the atmosphere" for the period from 01/06/2009 till 30/11/2012.

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 from SEIA of Ukraine No. 3936/23/7 dated 21/12/2012.

Written project approval by a Party involved in JI SSC project, other than the host Party was obtained:

Letter of Approval from Ministry of the Environment of Estonia No. 12-1/11002-2 dated 17/12/2012.

Written project approvals are available at:
http://ji.unfccc.int/JIITLProject/DB/MXVNLGGBFGA3URW0I8HPVB49C3S826/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 2.0 dated 22/11/2012 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 project reported for the period from 01/06/2009 till 30/11/2012 amount to 1 961 394 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 2.0 dated 22/11/2012.

Identified problem areas for project implementation, project participants' answers and conclusions of TÜV Rheinland Japan 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 version 2.0 dated 22/11/2012.
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 2.0 dated 22/11/2012.

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 14/12/2012.

The emission factor used to calculate emission reductions are selected in accordance with the registered PDD version 2.0 dated 22/11/2012. The choice of this emission factor is appropriately justified in the PDD version 2.0 dated 22/11/2012 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 2.0 dated 22/11/2012.

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 (01/06/2009 – 30/11/2012) 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 2.0 dated 22/11/2012.

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 2.0 dated 22/11/2012. 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 version 2.0 version 22/11/2012.

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 2.0 dated 22/11/2012.
According to the Monitoring Report, version 2.0 dated 14/12/2012 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 (01/06/2009 – 30/11/2012) are provided in table 7 below.

Table 7 – Results for Emission Reductions for Monitoring Period

Monitoring Period:	**01/06/2009 – 30/11/2012**
Emissions for the project scenario:	13 128 tCO_2e
Emissions for the baseline scenario:	1 515 350 tCO_2e

Leakage:	-459 172 tCO_2e
Emission reductions:	1 961 394 tCO_2e

4.7 Remaining issues, CARs from previous 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) #3936/23/7 dated 21/11/2012 and from the foreign country (Estonia) #12-1/11002-2 dated 17/12/2012.

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.	OK	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 indicate the number and the name of the document, which regulates the project starting date.	**CAR 01.**	OK
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. **CAR 02.** Please provide explanation as to why achieved emission reductions during the reporting period in this monitoring report differ from those ones indicated in the	**CAR 02.** **CAR 03.** **CL 01.** **CL 02.**	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
		PDD. **CL 01.** Please provide explanations concerning monitoring period, for which emission reductions were calculated and the results are presented in Tables. **CL 02.** Please provide explanations, what class and grade of coal produced by the project. How this coal is connected with that one, produced under the baseline scenario. **CAR 03.** Please provide documentary evidence (certificate) from the State Statistics Committee on specific consumption of electricity per tonne of coal produced in the coal mine.		
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.** Provide justification if actions of special machinery drivers and cargo transport will not result in receiving false or inaccurate data on consumption of diesel fuel during project activity. **CAR 05.** During site visit, it was stated that under the project coal production of 1-50 mm class is extracted. The technology used under the project indicates that there is receiving coal concentrate of two classes of 1-13	**CAR 04.** **CAR 05.** **CAR 06.** **CAR 07.**	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
		mm and 13-50 mm with different quality indicators. Please explain clearly the procedure of accounting the amount of different classes of coal, procedure of this coal weighing, as well as analyzing samples of different coal classes. **CAR 06.** Reference to DSTU 3668-99, according to which density of diesel fuel is determined, is incorrect. Please make the appropriate corrections. **CAR 07.** Please add information on measuring devices including their general photo, photo of installation location and factory number.		
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 08.** Information concerning the determination of water and ash content of coal products is not fully indicated. To avoid misunderstandings, please provide sectoral/national standards or normative legal acts under which the procedure of coal samples studies is conducted. **CAR 09.** Please provide clear and complete information when calibration of automobile scales were performed that are used for weighing coal products under the project.	**CAR 08.** **CAR 09.** **CAR 10.** **CL 03.** **CL 04.**	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
		CAR 10. Reference to National Inventory Report in Ukraine for 1990-2010 is indicated incorrectly. Please make the appropriate corrections. **CL 03.** Please indicate the exact period in the table of this monitoring report, for which data were collected and emission reductions were calculated. **CL 04.** Please provide an explanation of the use of data source for fugitive methane emission factor during operation of coal mines.		
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. **CAR 11.** Please specify in the monitoring report the data source that will be used in case of unavailability of research results of coal samples from Coal Chemistry Laboratory. **CAR 12.** Please provide relevant references to orders of NEIA containing information on the ratio of indirect carbon dioxide emissions from electricity consumption.	**CAR 11.** **CAR 12.**	OK
3.5. Is the calculation of emission reductions or enhancements of net removals calculated based on conservative assumptions and the most	95 (d)	The calculation of emission reductions or enhancements of net removals are calculated based on conservative assumptions and the most plausible scenarios in a	**CAR 13.**	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
plausible scenarios in a transparent manner?		transparent manner. **CAR 13**. According to the monitoring report, the amount of electricity consumed as a result of the project activity is measured using electricity meter. It is indicated in Table 6 that this parameter is also calculated. Please make appropriate corrections or clarifications.		
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 plans?	99 (b)	Not applicable	OK	OK
6. Data management				

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
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.	OK	
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 14**. Please provide license of the Third party of the project that performed installation and connection of electricity meters and other electrical equipment. **CAR 15.** Please specify the Third party that performed installation and connection of electricity meters.	**CAR 14.** **CAR 15.**	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 maintained in a traceable manner. **CAR 16.** Numbering of equations in Table 10 of this monitoring report is broken according to determined PDD version 2.0 dated 22/11/2012. Please make the appropriate corrections. **CL 05.** Unit of measuring amount of diesel fuel in the PDD is presented in tones. Please provide explanation why in this monitoring report this parameter is presented in litres.	**CAR 16.** **CL 05.**	OK
6.4. Is the data collection and management system	101 (d)	Implemented data collection and management system is	**CAR 17.**	OK

CHECKLIST QUESTION	DVM* paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
for the project in accordance with the monitoring plan?		in accordance with the monitoring plan, as described in the PDD determination of which is considered to be final. **CAR 17.** Not all Third parties of the project are mentioned in Section C.2. Please add relevant information. **CAR 18.** Annex 2 contains information about the location of the measurement points and measurement devices. Please add for this scheme Coal Chemistry Laboratory.	**CAR 18.**	

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 indicate the number and the name of the document, which regulates the project starting date.	93	The starting date of the project is March 10, 2008 when the order No. 65 dated 10/03/2008 was signed by the director of "AGS-2008" LLC on JI project implementation. Appropriate explanation was given. Please see revised version of the monitoring report, version 2.0., as well as supporting documents.	**Issue is closed** on the basis of made corrections
2.	**CAR 02.**	Please provide explanation as to why achieved emission reductions during the reporting period in this monitoring report differ from those ones indicated in the PDD.	94	Detailed explanation as well as table with comparable levels of emission reductions under the project was provided. Please see revised version of the monitoring report, version 2.0.	**Issue is closed** on the basis of made corrections
3.	**CAR 03.**	Please provide documentary evidence (certificate) from the State Statistics Committee on specific consumption of electricity per tonne of coal produced in	94	Corresponding certificate is presented in Annex 4 of this monitoring report.	**Issue is closed** on the basis of made corrections

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		the coal mine.		Please see revised version of the monitoring report, version 2.0., as well as supporting documents.	
4.	**CAR 04.**	Provide justification if actions of special machinery drivers and cargo transport will not result in receiving false or inaccurate data on consumption of diesel fuel during project activity.	95 (a)	Technical services for recultivation of waste heaps are provided by the company-contractor. So clarity and reliability of collecting relevant information as well as monitoring the implementation of internal working regulations is conventional internal enterprise interests. Only consumption of that fuel, which refers to the project activity, is taken into account under the project. In the case of diesel fuel consumption by other technique (or equipment), this amount will be included in the calculations of GHG emissions. Please see revised version of the monitoring report, version 2.0.	**Issue is closed** on the basis of made corrections
5.	**CAR 05.**	During site visit, it was stated that	95 (a)	Coal production of 1-50 mm class which is the final product,	**Issue is closed** on the basis of

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		under the project coal production of 1-50 mm class is extracted. The technology used under the project indicates that there is receiving coal concentrate of two classes of 1-13 mm and 13-50 mm with different quality indicators. Please explain clearly the procedure of accounting the amount of different classes of coal, procedure of this coal weighing, as well as analyzing samples of different coal classes.		is produced under the project. Coal concentrate of 1-50 mm class is shipped as ROM coal. More detailed information is presented in the monitoring report. Please see revised version of the monitoring report, version 2.0.	made corrections
6.	**CAR 06.**	Reference to DSTU 3668-99, according to which density of diesel fuel is determined, is incorrect. Please make the appropriate corrections.	95 (a)	Valid DSTU 4840-2007 'Diesel fuel. Specifications' is provided. Please see revised version of the monitoring report, version 2.0.	**Issue is closed** on the basis of made corrections
7.	**CAR 07.**	Please add information on measuring devices including their general photo, photo of installation location and factory number.	95 (a)	Relevant information was provided in Annex 4 of this monitoring report. Please see revised version of the monitoring report, version 2.0.	**Issue is closed** on the basis of made corrections
8.	**CAR 08.**	Information concerning the determination of water and ash content of coal products is not fully indicated.	95 (b)	Quantitative indicators of coal ash and water content are determined in accordance with	**Issue is closed** on the basis of made corrections

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		To avoid misunderstandings, please provide sectoral/national standards or normative legal acts under which the procedure of coal samples studies is conducted.		normative documents: DSTU 4096-2002, GOST 27314-91, GOST 11022-95, etc. Please see revised version of the monitoring report, version 2.0.	
9.	**CAR 09.**	Please provide clear and complete information when calibration of automobile scales were performed that are used for weighing coal products under the project.	95 (b)	Relevant information was provided. Please see revised version of the monitoring report, version 2.0.	**Issue is closed** on the basis of made corrections
10.	**CAR 10.**	Reference to National Inventory Report in Ukraine for 1990-2010 is indicated incorrectly. Please make the appropriate corrections.	95 (b)	http://unfccc.int/files/national_reports/annex_i_ghg_inventories/national_inventories_submissions/application/zip/ukr-2012-nir-13apr.zip Appropriate reference was corrected. Please see revised version of the monitoring report, version 2.0	**Issue is closed** on the basis of made corrections
11.	**CAR 11.**	Please specify in the monitoring report the data source that will be used in	95 (c)	Guide of quality, volume of coal production and enrichment	**Issue is closed** on the basis of

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		case of unavailability of research results of coal samples from Coal Chemistry Laboratory.		products in 2008-2010, Ministry of Coal Industry of Ukraine, State Committee of Ukraine, and Lugansk 2010 (see Annex 4). Indicators for thermal coal. Please see revised version of the monitoring report, version 2.0	made corrections
12.	**CAR 12.**	Please provide relevant references to orders of NEIA containing information on the ratio of indirect carbon dioxide emissions from electricity consumption.	95 (c)	Orders of National Environmental Investment Agency: No. 63 dated 15/04/2011[1] for 2009 No. 43 dated 28/03/2011[2] for 2010 No. 75 dated 12/05/2011[3] for 2011 (2012). Please see revised version of	**Issue is closed** on the basis of made corrections

[1] http://www.neia.gov.ua/nature/doccatalog/document?id=127172
[2] http://www.neia.gov.ua/nature/doccatalog/document?id=126006
[3] http://www.neia.gov.ua/nature/doccatalog/document?id=127498

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				the monitoring report, version 2.0	
13.	**CAR 13.**	According to the monitoring report, the amount of electricity consumed as a result of the project activity is measured using electricity meter. It is indicated in Table 6 that this parameter is also calculated. Please make appropriate corrections or clarifications.	95 (d)	Appropriate corrections were made. This parameter is only measured under the project. Please see revised version of the monitoring report, version 2.0	**Issue is closed** on the basis of made corrections
14.	**CAR 14.**	Please provide license of the Third party of the project that performed installation and connection of electricity meters and other electrical equipment.	101 (b)	Relevant information was provided. Please see revised version of the monitoring report, version 2.0, as well as supporting documents.	**Issue is closed** on the basis of made corrections
15.	**CAR 15.**	Please specify the Third party that performed installation and connection of electricity meters.	101 (b)	Relevant information is presented in Section C.2. Please see revised version of the monitoring report, version 2.0	**Issue is closed** on the basis of made corrections
16.	**CAR 16.**	Numbering of equations in Table 10 of this monitoring report is broken according to determined PDD version	101(c)	Breaking of equations numbering is corrected according to the determined PDD.	**Issue is closed** on the basis of made corrections

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		2.0 dated 22/11/2012. Please make the appropriate corrections.		Please see revised version of the monitoring report, version 2.0	
17.	**CAR 17.**	Not all Third parties of the project are mentioned in Section C.2. Please add relevant information.	101 (d)	PE "SPE "Enerhomax" is a Third party of the project. Please see revised version of the monitoring report, version 2.0, Section C.2.	**Issue is closed** on the basis of made corrections
18.	**CAR 18.**	Annex 2 contains information about the location of the measurement points and measurement devices. Please add for this scheme Coal Chemistry Laboratory.	101 (d)	Coal Chemistry Laboratory as one of the measuring points was added. Please see revised version of the monitoring report, version 2.0, Annex 2.	**Issue is closed** on the basis of made corrections
19.	**CL 01.**	Please provide explanations concerning monitoring period, for which emission reductions were calculated and the results are presented in Tables.	94	Monitoring report covers the period from 01/06/2009 to 30/11/2012. Relevant explanation was provided in the monitoring report. Please see revised version of the monitoring report, version 2.0	**Issue is closed** on the basis of made explanations

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
20.	**CL 02.**	Please provide explanations, what class and grade of coal produced by the project. How this coal is connected with that one, produced under the baseline scenario.	94	According to the project coal of grade "A" is mined. Technology of wet concentration of carbonaceous rock allows extracting coal of 1-50 mm class which is shipped to the consumer as ROM coal of energy class. Modern technology used under the project, allows extracting high-quality coal concentrate with low ash. Detailed explanation is given in MR. Please see revised version of the monitoring report, version 2.0	**Issue is closed** on the basis of made explanations
21.	**CL 03.**	Please indicate the exact period in the table of this monitoring report, for which data were collected and emission reductions were calculated.	95 (b)	Relevant explanations were provided. Please see revised version of the monitoring report, version 2.0	**Issue is closed** on the basis of made explanations
22.	**CL 04.**	Please provide an explanation of the use of data source for fugitive methane emission factor during operation of coal mines.	95 (b)	National Inventory Report in Ukraine for 1990-2009 gives clear and transparent information on the value of	**Issue is closed** on the basis of made explanations

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				fugitive methane emission factor during operation of mines. In the new edition of this source this factor does not have a numerical value, and is represented as a curve on the graph. This method of data demonstration does not give an opportunity to accurately and transparently identify appropriate factor value, but only shows trend of change of this indicator by years. Use of this source implies the existence of high level of uncertainty that puts into doubt general results of emission reductions calculations. Please see revised version of the monitoring report, version 2.0	
23.	**CL 05.**	Unit of measuring amount of diesel fuel in the PDD is presented in tones. Please provide explanation why in this monitoring report this parameter is presented in litres.	101 (c)	In the internal company reports is given amount of diesel fuel in litres. When calculating emissions for transferring this amount in tonnes the following formula is used: ***Diesel fuel in***	**Issue is closed** on the basis of made explanations

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				tones = (0.85*Diesel fuel in litres)/1000 Where 0.85 determines the density of diesel fuel in kg/l. Data are taken from DSTU 4840-2007 Diesel fuel. Specifications. Density of 0.85 kg/l is taken as conservative value, maximal. Values are converted from measurement units kg/m^3 into kg/l. Measurement unit in this monitoring report is given incorrectly. Appropriate corrections were made. Please see revised version of the monitoring report, version 2.0	