



RINA

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Final

“Kocaeli Landfill Gas to Electricity Project – Turkey”
in
Turkey

Monitoring period: 01/03/2012 to 30/06/2013

Report N° 2013-TQ-24-MD

Revision N° 1.3 Aa

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Project Title: Kocaeli Landfill Gas to Electricity Project – Turkey	Country: Turkey	Estimated VERs (tCO_{2e}): 126,773.5								
GS Registration Reference N°: 1013	Monitoring period: 01/03/2012 to 30/06/2013	Certified VERs (tCO_{2e}): 74,208								
Client: Korfez Enerji A.S.	Client contact: Mr. Fethullah DEMIRCAN									
Report No.: 2013-TQ-24-MD	Revision: 1.3 Aa	Date of this report: 03/03/2014								
Approved by (Final Report – Authorized officer signing for the DOE):  Laura Severino		Date of approval: 04/03/2014								
Methodology										
Number: ACM0001	Version: 12.0.0 of 25/11/2011	Title: Flaring or use of landfill gas								
		Scale Large								
		SS(s): 13								
RINA Services S.p.A. (RINA), commissioned by Korfez Enerji San. ve Tic. A.S., has verified the greenhouse gas emission reductions reported for the project activity “Kocaeli Landfill Gas to Electricity Project – Turkey” in Turkey, GS Registration Reference N° 1013, for the period 01/03/2012 to 30/06/2013, with regard to the relevant requirements for GS activities. The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable GS VER requirements, which refer to CDM rules, in order to be certified. The project was validated by TÜV Rheinland (Validation Report No: 21218553, Version no: 01 issued on 10/10/2012) and it was registered on 06/12/2012 under GS registration reference N° 1013. The GHG emission reductions were calculated on the basis of the approved methodology ACM0001, version 12.0.0, Flaring or use of landfill gas of 25/11/2011 and the monitoring plan included in the registered Project Design Document, version 05 of 14/02/2013. In conclusion, it is RINA's opinion that the project activity “Kocaeli Landfill Gas to Electricity Project – Turkey”, in “Turkey”, as described in the Monitoring Report version 6.0 of 03/03/2014, meets all relevant requirements for GS and CDM activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology “ACM0001”, “Consolidated baseline and monitoring methodology for landfill gas project activities”, version 12 of 25/11/2011. Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 01/03/2012 to 30/06/2013 amount to 74,208 tCO_{2e}. <table> <tr> <td>Baseline Emissions</td> <td>74,214.29 tCO_{2e}</td> </tr> <tr> <td>Project Emissions</td> <td>5.06 tCO_{2e}</td> </tr> <tr> <td>Leakage</td> <td>0 tCO_{2e}</td> </tr> <tr> <td>Net GHG emission reductions/removal</td> <td>74,208 tCO_{2e}</td> </tr> </table>			Baseline Emissions	74,214.29 tCO _{2e}	Project Emissions	5.06 tCO _{2e}	Leakage	0 tCO _{2e}	Net GHG emission reductions/removal	74,208 tCO _{2e}
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Net GHG emission reductions/removal	74,208 tCO _{2e}									

Work carried out by: İŞİL TIMUROĞLU Tuğçe KIRATLI	☒ No distribution without permission from the Client or organizational unit responsible ☐ Strictly confidential ☐ Unrestricted distribution
Work verified by (Final Report)  Rita Valoroso	Keywords: Climate Change, Kyoto Protocol, Verification, Gold Standard

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Abbreviations

BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CDM-PCP	Clean Development Mechanism Project Cycle Procedure
CDM-PS	Clean Development Mechanism Project Standard
CDM-VVS	Clean Development Mechanism Validation and Verification Standard
CER(s)	Certified Emission Reduction (s)
CH ₄	Methane
CR	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
ER	Emission Reductions
GHG(s)	Greenhouse gas(es)
GS	Gold Standard
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
IZAYDAS	Izmit Waste Incineration and Storage Inc.
LSC	Large scale
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
NGO	Non-governmental Organization
ODA	Official Development Assistance
PDD	Project Design Document
PE	Project Emission
PMUM	Market Financial Conciliation Center (Piyasa Mali Uzlastirma Merkezi)
PP(s)	Project Participant(s)
Ref.	Document Reference
RINA	RINA Services Spa
SDI	Sustainable Development Indicator
SS(s)	Sectoral Scope(s)
SSC	Small Scale
TEIAS	Turkish Electricity Transmission Company (Türkiye Elektrik İletim A.Ş.)
UNFCCC	United Nations Framework Convention on Climate Change
VERs	Verified Emission Reduction(s)

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Appendix A: Gold Standard Verification Protocol

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1 INTRODUCTION

Korfez Enerji San. ve Tic. A.S. has commissioned RINA to carry out the verification and certification of emission reductions reported for the registered “Kocaeli Landfill Gas to Electricity Project – Turkey” project in Turkey, GS Registration Reference N°101 3, for the period 01/03/2012 to 30/06/2013.

This report summarizes the findings of the verification of the project, performed on the basis of GS VER requirements, which refer to CDM rules, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The objective of the verification is to have an independent review ex post determination by a Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the registered GS project activity during a defined monitoring period and to monitor the impact of project activity on sustainable development, throughout the monitoring of the non-neutral Sustainable Development Indicators and moreover to monitor all the mitigation and compensation measures put in place. Certification is the written assurance by the DOE that, during a specific time period, a proposed GS project activity achieved the reductions in anthropogenic emissions by sources of GHGs as verified and that all the defined Sustainable Development Indicators to be monitored have been monitored according to the sustainability monitoring plan and that all the mitigation measures forecast have been correctly and effectively implemented.

The objective of this verification/certification was to verify and certify emission reductions and effective implementation of the monitoring of sustainable development indicators and mitigation measures, reported for the “Kocaeli Landfill Gas to Electricity Project – Turkey” project in Turkey for the period 01/03/2012 to 30/06/2013.

1.2 Scope

The verification scope is:

- to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- to evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- to verify that reported GHG emission data is sufficiently supported by evidence;
- to evaluate whether all the mitigation measures have been effectively put in place according to the monitoring plan and that all the sustainable development indicators have been correctly monitored.

Verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable GS VER requirements which refer to CDM rules, in order to be certified.

UNFCCC criteria for CDM refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, and the subsequent decisions by the CDM Executive Board.

The GS criteria refer to GS requirements, GS Toolkit and supporting annexes.

Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring.

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2 METHODOLOGY

Verification was conducted using RINA procedures in line with the requirements specified in the GS Requirements, CDM M&P, the latest version of the CDM Validation and Verification Standard, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques.

The verification consisted of the following three phases:

- Desk review;
- On-site assessment;
- The resolution of outstanding issues and the issuance of the final verification report and certification.

The following sections outline each step in more detail.

2.1 Desk Review

The monitoring report, version 6.0 of 03/03/2014 [/3/](#), the emission reduction calculations provided in the form of a spreadsheet, “Kocaeli Landfill Gas to Electricity Project Turkey ER Calculation ver4 20012014.xlsx” version 04 of 20/01/2014 [/4/](#), the approved baseline and monitoring methodology ACM0001 version 12 [/11/](#), and all the documentation provided to support the monitoring period [/1 – 45/](#) were assessed as part of the verification. In addition, the Project Design Document (PDD) [/1/](#), in particular as regards the baseline estimations and the monitoring plan, the Passport version 01 of 13/01/2013 [/2/](#), and the validation report, revision 01 of 10/10/2012 [/12/](#) for the project, were reviewed.

The following table lists the documentation that was reviewed during the verification.

/1/	OAK Danışmanlık: CDM-PDD for “Kocaeli Landfill Gas to Electricity Project – Turkey” in Turkey, version 05 of 14/02/2013
/2/	OAK Danışmanlık: GS Passport for “Kocaeli Landfill Gas to Electricity Project – Turkey” in Turkey, version 01 of 13/01/2013
/3/	OAK Danışmanlık: Monitoring Report for “ Kocaeli Landfill Gas to Electricity Project – Turkey ” in Turkey, version 6.0 of 03/03/2014 OAK Danışmanlık: Monitoring Report for “ Kocaeli Landfill Gas to Electricity Project – Turkey ” in Turkey, version 5.0 of 10/02/2014 OAK Danışmanlık: Monitoring Report for “ Kocaeli Landfill Gas to Electricity Project – Turkey ” in Turkey, version 4.0 of 20/01/2014 OAK Danışmanlık: Monitoring Report for “ Kocaeli Landfill Gas to Electricity Project – Turkey ” in Turkey, version 3.0 of 05/11/2013 OAK Danışmanlık: Monitoring Report for “ Kocaeli Landfill Gas to Electricity Project – Turkey ” in Turkey, version 2.0 of 07/10/2013 OAK Danışmanlık: Monitoring Report for “ Kocaeli Landfill Gas to Electricity Project – Turkey ” in Turkey, version 1.0 of 17/06/2013
/4/	OAK Danışmanlık: Emission Reduction Calculation Spreadsheet “Kocaeli Landfill Gas to Electricity Project Turkey ER Calculation ver4 20012014.xlsx” version 04 of 20/01/2014 OAK Danışmanlık: Emission Reduction Calculation Spreadsheet “Kocaeli Landfill Gas to Electricity Project Turkey ER Calculation ver3 05112013.xlsx” version 03 of 05/11/2013 OAK Danışmanlık: Emission Reduction Calculation Spreadsheet “Kocaeli Landfill Gas to Electricity Project Turkey ER Calculation ver2 07102013.xlsx” version 02 of 07/10/2013 OAK Danışmanlık: Emission Reduction Calculation Spreadsheet “ Kocaeli Landfill Gas to Electricity Project Turkey ER Calculation ver 1 17062013.xlsx ” version 01 of 17/06/2013
/5/	The Gold Standard: The Gold Standard Validation & Verification Standard for Voluntary Offset Projects of June 2007
/6/	The Gold Standard: Voluntary Emission Reductions (VERs) Manual for Project Developers, of May 2006

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/7/	Gold Standard Foundation: Gold Standard Requirements, version 2.1 of 01/07/2009
/8/	Gold Standard Foundation: Gold Standard Toolkit, version 2.1 of 01/07/2009
/9/	The Gold Standard Foundation: Kocaeli Landfill Gas to Electricity Project, Turkey (GS1013) 8-week Registration Review Period Document of 22/02/2013
/10/	CDM Executive Board: Validation and Verification Standard, 05.0 of 04/10/2013
/11/	CDM Executive Board: Baseline and Monitoring Methodology "ACM0001", " Flaring or use of landfill gas ", version 12.0.0 of 25/11/2011
/12/	TÜV Rheinland: Validation Report for "Kocaeli Landfill Gas to Electricity Project – Turkey" in Turkey, No. 21218553 revision 01 of 10/10/2012
/13/	CDM Executive Board: Methodological Tool "Combined tool to identify the baseline scenario and demonstrate the additionality" version 03.0.1 of 11/08/2011
/14/	CDM Executive Board: Methodological Tool "Tool to determine project emissions from flaring gases containing methane "version 01.0.0 of 15/12/2006
/15/	CDM Executive Board: Methodological Tool "Tool to determine the mass flow of a greenhouse gas in a gaseous stream" version 02.0.0 of 03/06/2011
/16/	CDM Executive Board: Methodological Tool "Emissions from solid waste disposal sites" version 06.0.0 of 25/11/2011
/17/	CDM Executive Board: Methodological Tool "Tool to calculate the emission factor for an electricity system" Version 02.2.1 of 29/09/2011
/18/	CDM Executive Board: Methodological Tool 'Tool to calculate baseline, project and/or leakage emissions from electricity consumption' version 01 of 16/05/2008
/19/	CDM Executive Board: Monitoring Report Form (F-CDM-MR), version 03.1 of 02/01/2013
/20/	CDM Executive Board: Guideline for Completing the Monitoring Report Form, version 03.2 of 06/12/2012
/21/	Korfez Enerji San. ve Tic. A.S.: Operating Hours of Engines GM-01 to GM-02 Daily Operation Form, of 30/06/2013
/22/	Korfez Enerji San. ve Tic. A.S.: Screenshot for the Registration Date of the Project Activity, Submitted on 24/07/2013
/23/	Ministry of Energy and Natural Resources: Provisional Acceptance Protocol of 02/03/2012 (GM-1)
/24/	Ministry of Energy and Natural Resources: Provisional Acceptance Protocol of 15/10/2012 (GM-2)
/25/	Turkish Electricity Transmission Company (TEIAS): Monthly Meter Reading Protocols from 01/03/2012 to 30/06/2013
/26/	Alpha Zähler: Calibration Report of the Main Electricity Meter of 13/04/2011
/27/	Endress&Hauser: Calibration Reports of the flow meters, sn E8044D02000 and E8044E02000, of 22/08/2011
/28/	SIEMENS: Data Sheet for Gas Analyzer Siemens Ultramat 23, submitted on 21/05/2013
/29/	Social Security Agency: Residence Certificate of 12 Employees, submitted on 24/07/2013
/30/	Social Security Institution: Declaration of Employment for 12 Employees, submitted on 24/07/2013
/31/	Korfez Enerji San. ve Tic. A.S.: Attendance List of Fire and Fire Safety for 11 employees of 18/03/2013
/32/	Korfez Enerji San. ve Tic. A.S.: Attendance List of Occupational Health and Safety for 7 employees of 15/12/2012
/33/	Ministry of Labor and Social Security: Certificate of Occupational Health and Safety Expert for Turan Umit Kargin of 14/11/2012

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/34/	Ahmet Elginkan Mesleki ve Teknik Eğitim Merkezi: Participation Certificate of Occupational Health and Safety for Mehmet Hakan Kaya, of 09/03/2013
/35/	Ahmet Elginkan Mesleki ve Teknik Eğitim Merkezi: Participation Certificate of Occupational Health and Safety for Turan Umit Kargin, of 09/03/2013
/36/	Korfez Enerji San. ve Tic. A.S.: The sample of raw data for 10/10/2012 and 07/01/2013, submitted on 24/07/2013
/37/	The Ministry of Trade and Industry: Regulation of Metering and Testing of Metering Systems of 24/07/1994
/38/	Ozturk Mak. San. ve Tic. Ltd. Sti.: Container purchase agreement of 22/03/2011
/39/	Operational Instructions of T-mass 65I Thermal Mass Flow Measuring System, submitted on 07/10/2013
/40/	SET Teknik Emniyet ve Çevre Teknolojileri: Calibration Certificate of Siemens Ultramat-23 of 23/07/2013
/41/	Photo of WIKA temperature meter (class B), submitted on 30/10/2013
/42/	Market Financial Settlement Center (PMUM): All Monthly Electricity Records from 01/03/2012 to 30/06/2013
/43/	Social Security Institution: Payroll Sheet List for all Employees of 16/07/2013
/44/	Operational Specifications of Ultramat-23 Gas Analyzer, submitted on 07/10/2013
/45/	Website: http://www.endress.com/eh/home.nsf/#products/~onsite-offsite-calibration-metrology-measurement-efficiency Argument: Endress+Hause Accreditation Language: English, Retrieved on: 03/03/2014

2.2 On-site assessment

On 24/07/2013, RINA visited the plant located in Solaklar district, Kocaeli province of Turkey. During the on-site assessment of the project, RINA assessed the implementation and operation of the proposed project activity, reviewed the information flows for generating, aggregating and reporting the monitoring parameters, interviewed key personnel of the plant to confirm the operational and data collection procedures, cross-checked between information provided in the monitoring report and data plant, checked the monitoring equipment including calibration performance, reviewed calculations and assumptions made in determining the GHG data and emission reductions, checked the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters, checked the correct and effective implementation of the mitigation measures foreseen in the sustainability monitoring plan, to prevent violation or the risk of violating a safeguarding principle of the “Do No Harm” Assessment or to “neutralize” a Sustainable Development Indicator.

The project personnel were interviewed with the purpose to see how the monitoring procedures were implemented; the whole process was explained to the verification team during the site visit on 24/07/2013. The carbon consultant was interviewed about the monitoring report and related parameters on, which the whole process related emission reduction calculation and sustainability monitoring plan was explained.

During the site visit, the mukhtar and the school manager of Solaklar Village were interviewed about the improvements to the school library and villages from where the students come to the Solaklar Primary School. They confirmed and appreciated the support and the contribution of the project for the Solaklar Primary School. Total number of student is 168 with the pupils transported from the nearby villages such as Kozluca, Dagkoy, Biberoglu, Eseler, Hasanoglu, Sofaoglu, Recepkoy, Durhasan and Emirhan.

Environmental issues like odour, nuisance and garbage collection in Kocaeli province were also discussed during the interview. It was explained that odour, nuisance rate was reduced by 90%

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compared to four years ago. It was also detailed that the garbage is collected in specific areas in Kandira and Karamursel, and then transferred to the project area in Solaklar where all the garbage of Kocaeli, except from Cayirova, Darica and Gebze is gathered in.

Additionally, the Izaydas Landfill Areas Manager, Mahmut KILDIZE was interviewed. He is included in all the process and decisions are made together with Körfez Enerji since the beginning of the project, as he declared. He explained that Izaydas has 7 lots in their area and Korfez Enerji can use all of them, except one lot that is devoted to hazardous waste. About leachate management, he justified that the wastewater treatment plant, which the leachate was sent to be treated, was not in operation. During this monitoring period the leachate was sent to another treatment plant by pipelines.

The key personnel interviewed and the main topics of the interviews are summarized in the table below.

	Date	Name and Role	Organization	Topic
/a/	24/07/2013	Omer AKYUREK <i>Consultant</i>	OAK Danismanlik	Monitoring plan Monitoring methodology
/b/	24/07/2013	Fetullah DEMIRCAN <i>Electrical Engineer</i>	Korfez Enerji	Monitoring data Implementation status of the project
/c/	24/07/2013	Turan Umit KARGIN <i>Environmental Engineer</i>	Korfez Enerji	Monitoring equipments and operation Calibration certificates
/d/	24/07/2013	Cemalettin KESKIN <i>Electricity Operator</i>	Korfez Enerji	Training Certificates Electricity Generation
/e/	24/07/2013	Burhan TUGTEKIN <i>The Mukhtar</i>	Solaklar Village	Benefit of the project to the village
/f/	24/07/2013	Muzaffer YILDIZ <i>School Manager</i>	Solaklar Village	Local Employment Project Effects
/g/	24/07/2013	Mahmut KILDIZE <i>Landfill Areas Manager</i>	IZAYDAS	Improvements to the School Treatment of Leachate

2.3 Resolution of outstanding issues

The objective of this phase of the verification is to resolve any outstanding issues which need to be clarified for RINA's positive conclusion on the monitoring report and emission reductions.

To guarantee transparency a verification protocol has been customized for the project. The protocol shows in a transparent manner the requirements, means of verification and the results from verifying the identified criteria. The verification protocol consists of three tables; the different columns in these tables are described in the figure below (see Figure 1). The completed verification protocol is enclosed in Appendix A to this report.

A corrective action request (CAR) is raised if one of the following occurs:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

A clarification request (CR) is raised if information is insufficient or not clear enough to determine whether the applicable GS VER requirements, which refer to CDM rules, have been met.

CARs, CRs identified are included in the verification protocol in Appendix A of this report.

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Figure 1 Gold Standard Verification protocol tables

Verification Protocol, Table 1 - Requirement checklist				
Checklist Question	Ref.	MoV	Comments	Conclusion
Checklist questions organized in five different sections.	Makes reference to documents where the answer to the checklist question or item is found.	Explain how conformance with the checklist question is investigated. Examples are document review (DR), interview or any other follow-up actions (I), cross checking (CC) with available information relating to projects, (N/A) means not applicable.	The discussion on how the conclusion is arrived at and the conclusion on the compliance with checklist question so far.	For CAR and CR see the definitions above. OK is used if the information and evidence provided is adequate to demonstrate compliance with GS VER/CDC requirements which refer to CDM rules.

Verification Protocol, Table 2: Resolution of Corrective Action Requests and Clarification			
Corrective action requests and/or clarification requests	Reference to Table 1	Response by project participants	Verification Conclusion
The CAR and/or CRs raised in table 1 are repeated here.	Reference to the checklist question number in Table 1 where the CAR or CR is explained.	The responses given by the project participants to address the CARs and/or CRs.	The verification team's assessment and final conclusion of the CARs and/or CRs.

Verification Protocol, Table 3 - Forward Action Requests		
Forward action request	Reference to Table 1	Response by project participants Verification Conclusion
The FAR raised in table 1 is repeated here.	Reference to the checklist question number in Table 1 where the FAR is explained.	Response by the project participants on how forward action request will be addressed.

2.4 Internal quality control

All the revisions of the verification report, before being submitted to the client, were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent RINA instructions.

The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for CDM/GS validation and verification.

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2.5 Verification team and the technical reviewer(s)

The verification team and the technical reviewers consist of the following personnel:

Role/Qualification	Last Name	First Name	Type of involvement*					
			DR	SV	REP	TE	TR	TER
GS Team Leader, GS Verifier, Technical Expert in Training	Timuroğlu	Işıl	x	x	x			
GS Verifier in Training, Technical Expert	Kıratlı	Tuğçe	x	x	x	x		
Technical Reviewer	Menon	Rekha					x	x

*DR: Document Review; SV: Site Visit/Interview; REP: Reporting; TE: Technical Expert in Technical Area; TR: Technical Review; TER: Technical Expert in Technical Area for Technical Review.

3 VERIFICATION FINDINGS

The findings of the verification related to the monitoring period from 01/03/2012 to 30/06/2013 as documented and described in the monitoring report version 6.0 of 03/03/2014 /3/ are stated in the following sections.

The verification requirements, the means of verification and the results from verifying the identified criteria are documented in more detail in the verification protocol in Appendix A.

3.1 Description of the project activity

The main information of the project is summarized in the table below.

Project Participant(s)	Korfez Enerji San. ve Tic. A.S.		
Project Title	Kocaeli Landfill Gas to Electricity Project – Turkey		
Location of the project	Solaklar District, Kocaeli Province of Turkey		
Methodology(ies)	“ ACM0001”, “ Flaring or use of landfill gas ”, version 12.0.0 of 25/11/2011 /11/		
Sectoral Scope(s)	13	RINA's Technical Area(s)	13.1
Registered PDD	Revision 05 of 14/02/2013		
Date of registration	06/12/2012	GS Registration Reference N°	1013
Starting date of the crediting period	01/03/2012		
Project's crediting period	01/03/2012 to 28/02/2019		
Monitoring period	01/03/2012 to 30/06/2013 (both days included)		
Project documentation link	http://mer.markit.com/br-reg/public/index.jsp?q=kocaeli&s=cp		

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The purpose of the project activity is the generation of the electricity by using the LFG from the landfill. It involves the installation of gas engines, gas extraction system, flaring system. The total capacity is expected to reach 2.4 MW (1.2 MW x 2) during the project development. However, the actual capacity of the project activity is approximately 2.2 MW (1.2 MW + 1.063 MW) with the decision of the project owner and it is acceptable since it is not more than the mentioned in the PDD [/1/](#). The electricity produced is delivered to the Turkish national grid (TEIAS). The emission reductions are estimated to be 126,773.5 tCO₂e. During the 1st monitoring period of 01/03/2012 to 30/06/2013 (both days included) the emission reductions to 74,208 tCO₂e.

3.2 Remaining issues (FARs) from previous validation or verification

Based on the review of the validation report and 8-week Registration Review Period Document of 22/02/2013 [/9/](#), there were no FARs to be addressed during verification.

3.3 Monitoring Report

The Monitoring Report for the project activity “Kocaeli Landfill Gas to Electricity Project – Turkey”, in “Turkey”, version 6.0 of 03/03/2014 submitted by the Korfez Enerji San. ve Tic. A.S. have been the basis for the verification process.

RINA confirms that the above MR is based on the currently valid MR template [/19/](#) and is completed in accordance with the applicable guidance document [/20/](#).

3.4 Project implementation

Actual implementation of the registered project activity

It was verified during the site visit conducted on 24/07/2013 that the proposed project activity has been implemented and it is in operation on 01/03/2012 in accordance with the project activity described in the registered PDD [/1/](#). The total installed capacity of the project activity is to 2.2 MW with 2 units of gas engines installed with a capacity of 1.2 MW (GM1) and 1.063 MW (GM2).

The project activity is registered as Gold Standard Project activity on 06/12/2012 as confirmed through the screenshot of the market registry [/22/](#).

It was confirmed during on site visit that the gas collection system, the enclosed flares, and the power generation unit was installed by the end of first monitoring period.

2 units of gas engine have been installed with a total capacity of 2.2 MW (1.2 MW-GM1 and 1.063 MW- GM2), which are dedicated to the landfill gas extracted from the landfill area. 2 engines have been commissioned in two phase as explained below:

- On 02/03/2012, one power generation unit (GM-1) has commissioned as confirmed through the Temporary Acceptance Protocol [/23/](#).
- On 15/10/2012, one power generation unit (GM-2) has commissioned as confirmed through the Temporary Acceptance Protocol [/24/](#).

In the registered PDD [/1/](#) it has been defined that the project activity has 2 units of gas engines with a capacity of 1.2 MW. However, the actual capacity of the engines are 1.2 MW and 1.063 MW as confirmed during the site-visit.

Based on the on-site inspection and checking the above documents, RINA confirms that the project activity has been implemented and it is in operation as described above in accordance with the project activity in the registered PDD [/1/](#).

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Post registration changes

There are no post registration changes from the registered monitoring plan or applied methodology within this monitoring period.

3.5 Methodology for determining Emission Reductions.

According to the applied methodology ACM0001 "Consolidated baseline and monitoring methodology for landfill gas project activities" version 12.0.0 [/11/](#), the emission reductions have been calculated based on the following formula:

$$ER_y = BE_y - PE_y$$

Where:

ER_y = Emission reduction in year y (tCO₂e/yr)

BE_y = Baseline emissions in year y (tCO₂e/yr)

PE_y = Project emissions in year y (tCO₂e/yr)

Baseline emissions

In accordance with ACM0001 "Flaring or Use of Landfill Gas" version 12.0.0 [/11/](#), baseline emissions are calculated as follows:

$$BE_y = BE_{CH_4,y} + BE_{EC,y}$$

Where:

BE_y = Baseline emissions in year y (tCO₂e/yr)

$BE_{CH_4,y}$ = Baseline emissions of methane from SWDS in year y (tCO₂e/yr)

$BE_{EC,y}$ = Baseline emissions associated with electricity generation in year y (tCO₂eq/yr)

Project emissions

In accordance with ACM0001 "Flaring or Use of Landfill Gas" version 12.0.0, the project emissions are calculated as follows:

$$PE_y = PE_{EC,y}$$

Where:

$PE_{EC,y}$ = Emission from consumption of electricity due to the project activity in year y (tCO₂e/yr).

Since there is no consumption of fossil fuels due to the project activity, for the purpose other than electricity generation, there are no emissions from fossil fuel consumption and therefore $PE_{FC,y}$ is equal to "0" and has not been included in equation.

The project emissions from consumption of electricity by the project activity $PE_{EC,y}$ shall be calculated using the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption".

When applying the tool, electricity sources j in the tool corresponds to the sources of electricity consumed due to the project activity.

$PE_{EC,y}$ is calculated as follows:

$$PE_{EC,y} = \sum EC_{PJ,y} * EF_{EL,j,y} * (1+TDL_{j,y}) =$$

Where:

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$PE_{EC,y}$ = Project emissions from electricity consumption in year y (tCO₂e/year)

$EC_{PJ,y}$ = Quantity of electricity consumed by the project electricity consumption source j in year y (MWh/year)

$EF_{EL,j,y}$ = Emission factor for electricity generation for source j in year y (tCO₂e/MWh)

$TDL_{j,y}$ = Average technical transmission and distribution losses for providing electricity to source j in year y

Leakage

According to methodology ACM0001 version 12.0.0 [/11/](#), no leakage effects need to be accounted. The project activity does not involve off-site transportation of waste materials.

3.5.1 Compliance of the monitoring plan with the monitoring methodology and applicable methodological tools

The registered project activity applies the approved baseline and monitoring methodology ACM0001 version 12 [/11/](#). RINA confirms that the monitoring plan in the registered PDD [/1/](#) complies with the applied CDM methodology and with the sustainability indicators established by the Appendix D of the Gold Standard requirements [/7/](#).

3.5.2 Deviation in GHG emission reduction

Additionality assessment has been performed according to the “Tool for the demonstration and assessment of additionality” approved by UNFCCC in the registered PDD [/1/](#). The baseline scenario selection and the calculation of emission reductions have been carried out in a conservative manner. An approved CDM methodology, ACM0001 version 12 [/11/](#) has been applied in order to determine the baseline scenario and calculate emission reductions.

3.5.3 Compliance of monitoring with monitoring plan

The monitoring plan in the monitoring report version 6.0 of 03/03/2014 [/3/](#) complies with the monitoring plan in the registered PDD [/1/](#) and both the monitoring methodologies, ACM0001 version 12 [/11/](#) has been properly implemented and followed. All the parameters, as listed in the following sections, have been monitored according the applied methodology and the relevant CDM EB decisions and GS requirements. The sustainability indicators in the monitoring report [/3/](#) comply with the sustainability indicators established by the Appendix D of the Gold Standard Requirements. No change has been occurred to the key sustainable development indicators during this monitoring period. RINA can thus confirm the implementation of the project monitoring was appropriate.

The following parameters have been monitored in accordance with the monitoring plan in the registered PDD [/1/](#) and the monitoring report [/3/](#).

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3.5.3.1 Data and parameters fixed ex-ante or at renewal crediting period

DATA/PARAMETER	Source of data	Reported value for the project period	Assessment/Observation
OX_{top-layer} Fraction of methane that would be oxidized in the top layer of the SWDS in the baseline	Tool: Emissions from solid waste disposal sites	0.1	The parameter is used for the calculation of baseline emission as per the tool of "Emissions from solid waste disposal sites".
GWP_{CH4} Global Warming Potential of Methane	IPCC	2012: 21 tCO ₂ e/tCH ₄ 2013: 25 tCO ₂ e/tCH ₄	As per the IPCC the value 21 is fixed for the first and 25 is fixed for the second commitment period. It shall be updated according to any future COP/MOP decision.
n_{flare,h} Flare efficiency in hour h	Registered PDD /1/	0%	The value considered is according with the registered PDD and it is fixed as 0% for the conservative reason.
p_{CH4,n} Density of methane under normal conditions	Registered PDD /1/	0.716 kg/m ³	The parameter is used for the calculation of the emission reduction. According to the registered PDD, the value is fixed as 0.716 kg/m ³ .
EF_{EL,y} Emission factor for the production of the electricity	Registered PDD /1/	0.542 tCO ₂ eq/MWh	The parameter is used for calculation of baseline and project emission. The value is calculated ex-ante and has been fixed throughout the first crediting period as per the registered PDD /1/ .
W_{H2S} Fraction of Sulphide within the LFG	Registered Gold Standard Project Passport /2/	0.5%	As per the registered Gold Standard Project Passport /2/ is used for Gold Standard Sustainable Development Monitoring Parameter SD. 1 "Air Quality".

3.5.3.2 Sampling plan

There are no data or parameter determined by a sampling approach.

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3.5.3.3 Data and parameters monitored ex-post

DATA/PARAMETER	Operation of the energy plant – ID.22
Data Unit	Hr
Description	Operation of energy plant
Source of data to be used	The amount of hours is monitored with a counting device in each power generation unit
Value data for the monitoring period	GM1: 10,030.5 h GM2: 5,706.8 h
Measuring and reporting frequency; recording procedure	The counting devices of the engines are counting the operational hours continuously as the operational hours are also used for maintenance reasons. The operational hours of the MWM engine are recorded by the monitoring system; the operational hours of the Jenbacher engine are recorded manual at least monthly.
Type of monitoring equipment and its accuracy	The operation of the energy plant is measured for each power generation unit by a counting device. Every power generation unit has its own counting device totalizing the amount of hours.
Calibration frequency/interval	N/A
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of baseline emission have been crosschecked with Daily Operation Form /21/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The operational hours of the MWM engine are recorded by the monitoring system; the operational hours of the Jenbacher engine are recorded manual at least monthly. The data are transferred correctly to the excel sheet of the emission reduction calculation.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	V_{t,db} – ID.23
Data Unit	m ³ dry gas / h
Description	Volumetric flow of the gaseous stream
Source of data to be used	The Volumetric flow of the gaseous stream is measured continuously through a mass flow meter
Value data for the monitoring period	2012: 3,261,599 2013: 4,887,227
Measuring and reporting frequency; recording procedure	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
Type of monitoring equipment and its accuracy	During the monitoring period the following instruments have been used: – Thermal mass flow measuring system by Endress & House, Proline t-mass 65I, sn E8044E02000 The accuracy of Thermal mass flow Proline t-mass 65I is defined as 1.0% as confirmed through the data sheet /39/ .
Calibration frequency/interval	The flow meter has been calibrated on 22/08/2011 by the supplier as confirmed through the calibration record /27/ . The calibration frequency is every 3 years as per the manufacturer's specifications /39/ . The manufacturer (Endress+Hause) is accredited to ISO 17025 as confirmed through their websites /45/ .
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of baseline emission have been crosschecked with the raw data of the ER Calculation, version 4 of 20/01/2014 /4/ .
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	V_{CH₄,t,db} – ID.24
Data Unit	m ³ gas CH ₄ / m ³ dry gas
Description	Volumetric fraction of CH ₄ in a time interval t on a dry basis
Source of data to be used	The methane fraction in the LFG is measured continuously by a gas analyzer.
Value data for the monitoring period	2012: 52.87% 2013: 54.07%
Measuring and reporting frequency; recording procedure	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
Type of monitoring equipment and its accuracy	During the monitoring period the following instruments have been used: – Gas Analyzer, ULTRAMAT 23 , sn 7MB2337-2CR10-3DR1 The accuracy of the gas analyzer ULTRAMAT 23 is 0.2% as confirmed through the ULTRAMAT data sheet of supplier /28/ .
Calibration frequency/interval	The Project owner is unable to find the document for initial calibration of the meter. Therefore, the meter was sent to calibration on 23/07/2013. According to the calibration report /40/ , the meter does not show any errors in the measuring equipment. As a conservative approach, the maximum permissible error of 0.2% of the equipment as mentioned in data sheet /44/ , is applied to all the measurement result of this equipment. Therefore, the lower values were obtained as a conservative approach. The calibration frequency of the parameter is 12 months as confirmed through the Operational Specifications of Ultramat-23 Gas Analyzer /44/ .
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of baseline emission have been crosschecked with the raw data of the ER Calculation, version 4 of 20/01/2014 /4/ .
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	T_t – ID.25
Data Unit	K
Description	Temperature of the gaseous stream in a time interval t
Source of data to be used	Temperature measure
Value data for the monitoring period	2012: 47.98°C (321.13 °K) 2013: 43.72°C (316.87 °K)
Measuring and reporting frequency; recording procedure	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
Type of monitoring equipment and its accuracy	During this monitoring period the following temperature meter have been used: – Temperature meter WIKA TR-10_H, sn 1102D580 The accuracy class of the device is class B which does mean a tolerance of +/- (0.3 + 0.0050 * t). t is the value of the temperature in °C without consideration of the sign.
Calibration frequency/interval	The project owner is unable to find the document for initial calibration of the meter ID.25. However even a conservative approach is adopted and the maximum error margin is applied (1% according to the manufacturers specifications) to the measurement results of the equipment will be still under 600C, which is below the threshold value for the applicability of dry gas as described under the MR.
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of baseline emission have been crosschecked with the raw data of the ER Calculation, version 4 of 20/01/2014 /4/ .
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	EC _{BL,y} – ID.26
Data Unit	MWh
Description	Net amount of electricity generated using LFG
Source of data to be used	The monthly meter reading protocols /25/ .
Value data for the monitoring period	2012: 6,021.42 MWh 2013: 9,092.38 MWh
Measuring and reporting frequency; recording procedure	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
Type of monitoring equipment and its accuracy	During this monitoring period the following electricity meter have been used: – Electricity meters ELSTER A1500, sn 00443932-2011 The accuracy of the electricity meter ELSTER A1500 is 0.5s as confirmed through the calibration report of the electricity meter /26/ .
Calibration frequency/interval	The electricity meter has been calibrated on 13/04/2011 by the Elster manufacturer as confirmed through the calibration record /26/ . As per the “Regulation of Metering and Testing of Metering Systems”, the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation /37/ .
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of baseline emission have been crosschecked with the PMUM records /42/ .
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server and reported monthly. It is also stored by PMUM on the web site.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	EC _{PJ,y} – ID.27
Data Unit	MWh
Description	Quantity of electricity consumed by the project activity
Source of data to be used	The monthly meter reading protocols /25/ .
Value data for the monitoring period	2012: 6.36 MWh 2013: 1.42 MWh
Measuring and reporting frequency; recording procedure	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server and reported monthly. It is also stored by PMUM on the web site..
Type of monitoring equipment and its accuracy	During this monitoring period the following electricity meters have been used: – Electricity meters ELSTER A1500, sn 00443932-2011 The accuracy of the electricity meter ELSTER A1500 is 0.5s as confirmed through the calibration report of the electricity meter /26/ .
Calibration frequency/interval	The electricity meter has been calibrated on 13/04/2011 by the supplier as confirmed through the calibration record /26/ . As per the “Regulation of Metering and Testing of Metering Systems”, the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation /37/ .
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of baseline emission have been crosschecked with the electricity page of the ER Calculation, version 4 of 20/01/2014 /4/ .
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	TDL _{k,y} ; TDL _{j,y} – ID.28
Data Unit	-
Description	Average technical transmission and distribution losses in year y
Source of data to be used	As no reliable information could be found for this period, a default factor of 20% is used for TDL _{j,y} (used to calculate PE _{EC}) and a default factor of 3% is used for TDL _{k,y} (used to calculate BE _{EC}), which is in line with the “Tool to calculate baseline, project and/or leakage emissions from electricity consumption”.
Value data for the monitoring period	20%; 3%
Measuring and reporting frequency; recording procedure	It is used for calculation of project emission as per the “Tool to calculate baseline, project and/or leakage emission from electricity consumption”.
Type of monitoring equipment and its accuracy	-
Calibration frequency/interval	-
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of project emission are confirmed through the methodological tool /18/ .
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	It is used for calculation of project emission as per the “Tool to calculate baseline, project and/or leakage emission from electricity consumption”.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	FV _{RG,h} – ID.29
Data Unit	m ³ / h
Description	Volumetric flow of the residual gas (to the flare) in dry basis in the hour h
Source of data to be used	The Volumetric flow of the residual gas is measured continuously through a mass flow meter
Value data for the monitoring period	2012: 116,439 2013: 74,769
Measuring and reporting frequency; recording procedure	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
Type of monitoring equipment and its accuracy	During the monitoring period the following instruments have been used: – Thermal mass flow measuring system by Endress & House, Proline t-mass 65I, sn E8044D02000 The accuracy of Thermal mass flow Proline t-mass 65I is defined as 1.0%.
Calibration frequency/interval	The flow meter has been calibrated on 22/08/2011 by the supplier as confirmed through the calibration record /27/. The calibration frequency is every 3 years as per the manufacturer's specifications /39/.
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of baseline emission have been crosschecked with the raw data of the ER Calculation, version 4 of 20/01/2014 /4/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	$f_{V_{CH_4, RG, h}}$ – ID.30
Data Unit	m ³ gas CH ₄ / m ³ dry gas
Description	Volumetric fraction of CH ₄ in the residual gas on dry basis
Source of data to be used	Volumetric fraction of CH ₄ in the residual gas on dry basis
Value data for the monitoring period	2012: 53,37% 2013: 55,49%
Measuring and reporting frequency; recording procedure	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
Type of monitoring equipment and its accuracy	During the monitoring period the following instruments have been used: – Gas Analyzer, ULTRAMAT 23 , sn 7MB2337-2CR10-3DR1 The accuracy of the gas analyzer ULTRAMAT 23 is 0.2% as confirmed through the ULTRAMAT data sheet of supplier /28/ .
Calibration frequency/interval	Calibration with calibration gas only required every twelve months, depending on the application as per the data sheet of the ULTRAMAT gas analyzer /44/ .
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of baseline emission have been crosschecked with the results page of the ER Calculation, version 4 of 20/01/2014 /4/ .
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	T _{flare} – ID.31
Data Unit	°C
Description	Temperature in the exhaust gas of the enclosed flare
Source of data to be used	The temperature in the exhaust gas of the enclosed flare is measured with the temperature meter
Value data for the monitoring period	About 1,000°C when flare is operational.
Measuring and reporting frequency; recording procedure	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
Type of monitoring equipment and its accuracy	It is measured using temperature meters. During this monitoring period the following temperature meters have been used: – Temperature meter Krom Schroder, VAS120R/NW, sn 88000004 The accuracy information of the temperature meter is not collected since no emission reductions are claimed from flaring.
Calibration frequency/interval	The calibration frequency of the temperature meter is not collected since no emission reductions are claimed from flaring.
How were the values in the monitoring report verified and cross-checked?	The values used for calculation of baseline emission have been crosschecked with the raw data of the ER Calculation, version 4 of 20/01/2014 /4/ .
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	Other flare operational parameters
Data Unit	-
Description	Data and parameters that are required to monitor whether the flare operates within the range of operating conditions according to manufacturer's specifications
Source of data to be used	-
Value data for the monitoring period	-
Measuring and reporting frequency; recording procedure	The flare temperature is monitored continuously and recorded hourly.
Type of monitoring equipment and its accuracy	Data and parameters that are required to monitor whether the flare operates within the range of operating conditions according to manufacturer's specifications.
Calibration frequency/interval	-
How were the values in the monitoring report verified and cross-checked?	-
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	-
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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DATA/PARAMETER	Gold Standard Toolkit Annex C / Methane Utilization Ratio
Data Unit	Ratio
Description	In accordance with Annex C of the GS Toolkit v2.1, the methane utilization ratio will be monitored over the monitoring period. The utilization ratio will be calculated as LFG utilized by the engines over the total amount of LFG extracted (LFG utilized + LFG flared). This ratio will at least correspond to 65%.
Source of data to be used	The parameter is monitored with flow meters
Value data for the monitoring period	2012: 96.55% 2013: 98.51%
Measuring and reporting frequency; recording procedure	-
Type of monitoring equipment and its accuracy	N/A
Calibration frequency/interval	-
How were the values in the monitoring report verified and cross-checked?	-
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	-
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	In case of failures of the data recording system, no emission reduction will be claimed for that period. A logbook will be written and will be registered the without data recording. During this monitoring period all the data were available and no failure is recorded.

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3.5.3.4 Gold Standard sustainability monitored parameters

Data variable	Source of Data	Reported value for the project period
SDI.1 Air Quality Levels of Sulphide combusted in the landfill gas engines	Data are calculated based on the amount of LFG destroyed in the engines.	29,275 m ³
Assessment		
The levels of Sulphide combusted in the landfill gas engines is calculated based on the amount of landfill gas combusted in the engines as 29,275 m ³ of H ₂ S has been reduced due to the project activity within this monitoring period as presented and calculated in the excel sheet /4/ .		

Data variable	Source of Data	Reported value for the project period
SDI.2 Quality of Employment Provided trainings	Attendance list and certificates of trainings	5 trainings were organized
Assessment		
The number of staff attended to various trainings is monitored through the training certificates and attendance list. During this monitoring period, 5 trainings were organized. The training certificates and attendance list were checked during the on-site inspection, from /31/ to /35/ .		

Data variable	Source of Data	Reported value for the project period
SDI.3 Human and Institutional Capacity	Improvements to the school library	On-site visit observation Interview of the village Mukhtar
Assessment		
The improvements to the school library are monitored at each monitoring period by visual observation and through the interview with the mukhtar of the Solaklar Village. During on site visit, the school manager was interviewed about the improvements to the school library. He confirmed and it is observed that the improvements to the school library were performed by the project activity. A school class converted to a school library. The tables and the books were provided by the project activity.		

Data variable	Source of Data	Reported value for the project period
SDI.4 Quantitative Employment and Income Generation Number of contracts	Social Security Institution	12 people are employed currently
Assessment		
The number of contracts is monitored through the documentation of Declaration of Employment obtained from Social Security Institution /30/ and Residence Certificate obtained from Social Security Agency /29/ . It is confirmed that project activity hired 12 employees.		

Data variable	Source of Data	Reported value for the project period
SDI.5 Management of Leachate Management of	Interviews with IZAYDAS	The leachate is collected and treated by IZAYDAS.

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Leachate		
Assessment		
The management of leachate is monitored annually. During on site visit, it is confirmed that IZAYDAS is responsible for collecting and treating the leachate.		

3.5.4 Assessment of data and calculation of emission reductions

Availability of the data

All the monthly meter protocols [/25/](#) are available for the project participant. All PMUM records [/42/](#) within this monitoring period was checked during the site visit. The monthly meter reading protocols [/25/](#) were crosschecked with the PMUM records [/42/](#). In addition, daily data [/36/](#) that includes the parameters used to calculate emission reduction was sampled for the whole monitoring period and crosschecked with the raw data excel sheet [/4/](#).

Cross-check reported data

The data of generated electricity are transferred correctly to the excel sheet [/4/](#) and emission reduction is calculated correctly. The excel sheet is crosschecked with the PMUM records [/42/](#) and the monthly meter reading protocols [/25/](#) and it seems appropriate.

3.5.5 Accuracy of emission reduction calculations

The emission reduction calculations provided in the spreadsheet [/4/](#) have been verified to be correct and in line with the registered PDD [/1/](#).

The emission reductions from the project for the monitoring period as reported in the monitoring report revision 3.0 of 05/11/2013 [/3/](#) is equivalent to 74,208 tCO₂e (on average 4,638 tCO₂e per month). The reported emission reductions are 41.46% lower than the estimated emission reduction of 126,773.5 tCO₂e (on average 7,923 tCO₂e per month) for the period as per the registered PDD [/1/](#).

The data presented in the monitoring report [/3/](#) were assessed by reviewing in detail project documentation, collection of monitored data, observation of established monitoring and reporting practices and assessment of the reliability of monitoring equipment. Sufficient evidence was presented and verified by RINA for the reported emission reductions as listed in the above Section 3.4.3.2.

3.5.6 Accuracy of the GS indicators of sustainable development

All the documented evidences related to the sustainable monitored parameters such as Declaration of Employment obtained from Social Security Institution [/30/](#), Residence Certificate obtained from Social Security Agency [/29/](#), training certificates and attendance list from [/31/](#) to [/35/](#) and payroll sheets of SGK records [/43/](#) are provided as an objective evidence.

3.5.7 Management system and quality control

The monitoring arrangements in the monitoring plan are feasible within the project design. The electricity meters measures continuously and are programmed to save hourly values automatically. All the data are stored at PMUM server. Also, the Grid Company submits monthly a protocol to the project owner. The PMUM records were crosschecked with the monthly meter protocols. The monthly electricity data are transferred correctly to the excel sheet used for the emission reduction calculations. The electricity consumption is monitored continuously by two electricity meters. TEIAS is responsible for the calibration and maintenance of the electricity meters.

Quality assurance and quality control procedure is taken to monitor the equipment and data collection. The monitoring systems on errors are checked regularly by the VER-Team. In the case of errors, corrective actions will be undertaken. All data are stored in the central daily form [/36/](#) withdrawn from the system. Every day the server creates a file with all hourly data saved and the stored data are transferred to a computer. There are daily checks if the data from the day before was stored successfully on the servers. Aggregation of data and cross checks takes place periodically.

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

Korfez Enerji San. ve Tic. A.S. (the project owner) is responsible for the operation and monitoring of the project activity and it is in line with the registered PDD [/1/](#).

The electricity generation supplied to the grid and electricity consumption from the grid is read from the electricity meters through Monthly Meter Reading Protocols by the TEIAS personnel. The monthly meter reading protocols are prepared as per these readings. The plant personnel records the electricity generation from the meters and the responsible engineer checks the figures regularly. In case of difference between the data, TEIAS will be informed. The generated electricity is measured by two meters that were sealed by TEIAS. The project owner has no control on the meters.

The electricity generation supplied to the grid and electricity consumption from the grid is stored by PMUM on the web site. The Project owner has an ID and password to access this data on the web site. The project owner can easily access the data by using this portal. The project owner also archives a hardcopy of these protocols, scanned and stored electronically.

The calculation of GS VERs for the first verification period is carried out through the spreadsheet "Kocaeli Landfill Gas to Electricity Project Turkey ER Calculation ver3 05112013.xlsx" [/4/](#). The on-site visit at Kocaeli landfill waste management plant confirmed that the monitoring and reporting is carried out consistently and in line with the established procedures.

The collected data during the monitoring period will be kept by the project owner at least two years after the last issuance of VERs as stated in the registered PDD [/1/](#) and monitoring report [/2/](#).

GOLD STANDARD VERIFICATION/CERTIFICATION REPORT

4 VERIFICATION AND CERTIFICATION OPINION

RINA Services Spa (RINA) has performed verification of the emission reductions reported for the project activity "Kocaeli Landfill Gas to Electricity Project – Turkey" in Turkey, GS Registration Reference N° 1013, for the period 01/03/2012 to 30/06/2013, with regard to the relevant requirements for GS activities.

The project participants of the "Kocaeli Landfill Gas to Electricity Project – Turkey" project are responsible for:

- the preparation of greenhouse gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered project design document version 05 of 14/02/2013
- the development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project

It is the responsibility of RINA to express an independent verification opinion about the project's conformity with the requirements of paragraph 62 of the CDM modalities and procedures, GS requirements and on the reported greenhouse gas emission reductions from the project.

Based on documented evidence and corroborated by an on-site assessment RINA can confirm that:

- the project has been implemented and operated as per the registered PDD;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable CDM and GS VER requirements;
- monitoring is in place as per the applied baseline and monitoring methodology;
- monitoring complies with the monitoring plan in the registered PDD;
- the monitoring plan in the registered PDD is as per the applied baseline and monitoring methodology.

It is RINA's opinion that the GHG emission reductions stated in the monitoring report version 6.0 of 03/03/2014 for the "Kocaeli Landfill Gas to Electricity Project – Turkey" project in Turkey for the period 01/03/2012 to 30/06/2013 are fairly stated. The GHG emission reductions were calculated correctly, the sustainability development indicators were correctly monitored, on the basis of the approved monitoring methodology "ACM0001", "Flaring or use of landfill gas", version 12.0.0 of 25/11/2011, and the monitoring plan contained in the registered PDD.

Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 01/03/2012 to 30/06/2013 amount to 74,208 tCO₂e.

Year 2012 01/03/2012 to 31/12/2012 26,645 tCO₂e

Year 2013 01/01/2013 to 30/06/2013 47,563 tCO₂e

GHG Emission Reductions or Removals	tCO ₂ e
Baseline Emissions	74,214
Project Emissions	5.06
Leakage	0
Net GHG emission reductions or removals	74,208

Istanbul, 03/03/2014



Isil TIMUROGLU
GS Team Leader
RINA Denizcilik ve Belgelendirme Ltd. Sti.

Genova, 04/03/2014



Laura Severino
Authorized officer signing for the DOE
RINA Services S.p.A.

APPENDIX A

GOLD STANDARD VERIFICATION PROTOCOL

TABLE 1 REQUIREMENTS CHECKLIST

Checklist Question	Reference	MoV ¹	Comments	Conclusion
A	Description of Project Activity			
A.1	Title of the project activity, revision number and date of Monitoring Report	/1/ /3/	The title of the project activity is defined as “Kocaeli Landfill Gas to Electricity Project – Turkey” in the registered PDD /1/ and Monitoring Report version 1.0 /3/. However, it is not in line with the GS Registry Market. Also, the name of the client given as Korfez Enerji A.S. should be reconsidered. In addition, format of the completion date, registration date and Monitoring period should be corrected as per the guideline “Guidelines for Completing the F-CDM-MR” .	CR-1 OK
A.2	Is the actual implementation and operation of the proposed project activity in accordance with the project activity in the registered PDD?	/1/ /3/ /4/ /23/ /24/	It is confirmed during the site visit performed on 24/07/2013 that project activity is implemented and operated as per the registered PDD /1/. The starting date of project activity is 22/03/2011 as per the registered PDD. The starting date is mentioned as a construction start date in the monitoring report. However, it could not be confirmed since the supporting document is not provided to the verification team. After a test period, the first crediting period of the project activity started on 02/03/2012 as per the Provisional Acceptance Protocol of the first engine /23/. However, it is stated as 01/03/2012 in the monitoring report. During on site visit, it was confirmed that the gas collection system, the enclosed flares, and the power generation unit was installed by the end of first monitoring period as per the Provisional Acceptance Protocol /23/. 2 units of gas engine have been installed with a total capacity of 2.2 MW (1.2 MW-GM1 and 1.063 MW-GM2), which are dedicated to the landfill gas extracted	CR-1 OK

¹ MoV: DR document review, I interview, CC cross checking

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			from the landfill area. 2 engine has been commissioned in two phase as explained below: - On 02/03/2012, one power generation unit (GM-1) has commissioned as confirmed through the Temporary Acceptance Protocol /23/. - On 15/10/2012, one power generation unit (GM-2) has commissioned as confirmed through the Temporary Acceptance Protocol /24/. The end date of monitoring period is defined as 31/03/2013 in the Monitoring Report /3/. However, during on site visit, 30/06/2013 was agreed by the PP and the consultant. According to the alteration, monthly meter readings for April, May and June; and all the PMUM records for crosscheck should be provided to the verification team. Estimated Emission Reduction is indicated as 86,229 tCO₂ in the first page and Section E.5 of the monitoring report. However, the same value was mentioned only for the year of 2012 in the registered PDD. In addition, in Section E.4 and Section E.7 of the monitoring report, the values should be updated as per the monitoring period of 01/03/2012 – 30/06/2013. Also in Table 3 “Baseline Emissions”, the value of the total 2012 is not correct and in line with the excel sheet /4/. The registered project activity applies the approved baseline and monitoring methodology ACM0001 version 12 of 25/11/2011 /11/.	OK
A.3	/1/ /11/	DR		OK
B	Monitoring			
B.1	Monitoring plan			
B.1.1	/1/ /3/ /11/	DR, CC	The monitoring plan of the registered GS project activity complies with the applied methodology ACM0001 version 12 of 25/11/2011 /11/ .	OK
B.1.2	/1/ /2/ /3/	DR, CC	The monitoring complies with the monitoring plan presented in the registered PDD /1/ and GS Passport /2/ . The data and parameters that need to be monitored as per the registered PDD /1/ and GS Passport /2/ are	OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
B.1.3	/1/ /3/ /8/	DR, CC	The sustainability indicators included in the monitoring report /3/ complies with the minimum contents specified in paragraph 4.1 of the GS Toolkit /8/ .	OK
B.1.4	/1/ /3/	DR, CC, I	No change has been occurred during the monitoring period of 01/03/2012 to 31/03/2013 as confirmed through the site inspection and interviews.	OK
B.2	Data and parameters that are available at validation and that are not monitored			
B.2.1	/1/ /2/ /3/	DR, CC	The following parameters were available at validation stage and that doesn't need to be monitored during the crediting period: ID.1 Fraction of methane that would be oxidized in the top of layer of the SWDS in the baseline ($OX_{top-layer}$): It is defined as 0.1 as per the methodological tool "Emission from solid waste disposal sites". ID.2 Global Warming Potential of methane (GWP_{CH_4}): It is defined as 21 tCO₂e/tCH₄ for the monitoring period that falls within the first commitment period and 25 tCO₂e/tCH₄ for the monitoring period that falls within the second commitment period as per the Kyoto Protocol in the registered PDD. ID.6 Flare efficiency in hour h ($\eta_{flare,h}$): It is defined as 0 % in the registered PDD /1/. ID.7 Density of methane under normal conditions ($\rho_{CH_4,n}$): It is defined as 0.716 kg/m³ in the registered PDD /1/. Emission factor for the production of electricity in the project activity ($EF_{EL,y}$): The emission factor has been determined using the ex-ante option, so it is not requested to monitor and recalculate in this crediting period. The emission factor is determined to be 0.542 tCO₂/MWh in the registered PDD /1/.	GR-2 OK

Checklist Question	Reference	Mov ¹	Comments	Conclusion
B.3 Data and parameters monitored				
B.3.1 Data/Parameter monitored / Data unit / Description / Source of data to be used / Value data for the monitoring period	/1/ /3/ /11/ /14/ /15/ /16/ /17/ /18/ /21/	DR, CC, I	SD.1 Fraction of sulphide within the LFG determined ex-ante for SDI.3 (W_{H_2S}): It is defined as 0.5% in the registered GS Passport /2/. The parameter is used for GS Sustainable Development Monitoring Parameter SD.1 Air Quality. However, it is mentioned as SD.3 Other Pollutants in the monitoring report. ID.22 Operation of the Energy Plant (hr): The amount of hours is registered by a counting device in each power generation unit. The operation hour of GM1 is 10,030.5 hours and GM2 is 5,706.8 hours were verified through the internal records /21/. However, in the monitoring report, it is defined as 8614 for GM1 and 3670 for GM2. ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): It is measured continuously by a mass flow meter. The 2012 data is 3,261,599 and the 2013 data is 2,440,192. However, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): It is measured continuously by a gas analyzer. The 2012 data is defined as 52.87% and the 2013 data is defined as 55.56% in the monitoring report. However, in rawdata2012 of the excel sheet it could be calculated as 52.07% for 2012. In addition, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.25 Temperature of the gaseous stream in a time interval t (T_j): It is measured by a temperature meter. The 2012 data is 47.98°C (321.13 K) and the 2013 data is 29.91°C (303.06 K). However, according to the monitoring period of 01/03/2012 to 30/06/2013, April,	CAR-2 OK

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): It is measured continuously by electricity meter of the grid company. The 2012 value is 6,021.42 MWh and the 2013 value is 4,592.71 MWh. However, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. In addition, please explain why whether any (1+TDLy) was not included to the calculation of baseline emission from electricity consumption in year ($BE_{EC,y}$). ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,y}$): It is measured continuously by electricity meter of the grid company. The 2012 value is 6.36 MWh and the 2013 value is 0.29 MWh. However, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.28 Average technical transmission and distribution losses in year y (TDL_y): According to the “Tool to calculate baseline, project and/or leakage emissions from electricity consumption” a default factor of 20% is used. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): It is measured continuously by a mass flow meter. The 2012 data is 116,439 m³/h and the 2013 data is 36,878 m³/h. However, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis ($f_{v,CH_4,RG,h}$): It is measured continuously by a gas analyzer. The 2012 data is 52.87% and the 2013	

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			data is 55.56%. However, in rawdata2012 of the excel sheet it could be calculated as 52.07% for 2012. In addition, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. Also number of the ID and the name of the parameter is presented as ID.24 and $f_{CH_4, RG, h}$, respectively. Please correct as per the registered PDD. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}): It is measured by a temperature meter. During this monitoring period, T_{flare} is used occasionally. However, the value of the monitored parameter is not defined in the Monitoring Report. ID.32 Other flare operational parameters: Data and parameters that are required to monitor whether the flare operates within the range of operating conditions according to manufacturer's specifications. Gold Standard Toolkit Annex C / Methane Utilization Ratio: It is calculated with the ID.23 ($V_{t,db}$) and ID.29 ($FV_{RG, h}$).	
B.3.2	1/ /3/ /11/ /14/ /15/ /16/ /17/ /18/ /26/ /28/	DR, CC, I	ID.22 Operation of the Energy Plant (hr): The operation of the energy plant is measured for each power generation unit by a counting device. Every power generation unit has its own counting device totaling the amount of hours. ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): The volumetric flow of the gaseous stream is measured continuously through the mass flow meter. During the monitoring period the following instruments have been used: Thermal mass flow measuring system by Endress & House, Proline t-mass 651, sn E8044E02000 The accuracy of Thermal mass flow Proline t-mass 651 is defined as 1.5%. However, it could not be confirmed	CAR-3 OK

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			since the data sheet of ENDRESS&HOUSE is not provided to the verification team. In addition, the serial number of the flow meter was not correct. ID.24 Volumetric fraction of CH₄ in a time interval t on a dry basis ($V_{CH_4,t,db}$): The volumetric fraction is measured by a gas analyzer. During the monitoring period the following instruments have been used: – Gas Analyzer, ULTRAMAT 23 , sn 7MB2337-2CR10-3DR1 The accuracy of the gas analyzer ULTRAMAT 23 is 0.2% as confirmed through the ULTRAMAT data sheet of supplier /28/. However, it is defined as 2.5% in the monitoring report. ID.25 Temperature of the gaseous stream in a time interval t (T_t): It is measured using temperature meters. During this monitoring period the following temperature meters have been used: – Temperature meter WIKA TR-10_H, sn 1102D580 The accuracy of the temperature meter WIKA TR-10_H is defined as 1.0%. However, to confirm the accuracy, a supporting document was not provided to the verification team. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): It is measured using electricity meters. During this monitoring period the following electricity meters have been used: – Electricity meters ELSTER A1500, sn 00443932-2011 The accuracy of the electricity meter ELSTER A1500 is 0.5s as confirmed through the calibration report of the electricity meter /26/. ID.27 Quantity of electricity consumed by the project activity ($EC_{P,y}$): It is measured using electricity meters. During this monitoring period the following electricity meters have been used:	

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			– Electricity meters ELSTER A1500, sn 00443932-2011 The accuracy of the electricity meter ELSTER A1500 is 0.5s as confirmed through the calibration report of the electricity meter /26/. ID.28 Average technical transmission and distribution losses in year y (TDL_y): It is used for calculation of project emission as per the “Tool to calculate baseline, project and/or leakage emission from electricity consumption”. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h (FV_{RG,h}): The volumetric flow of the residual gas in dry basis is measured continuously through the mass flow meter. During the monitoring period the following instruments have been used: – Thermal mass flow measuring system by Endress & House, Proline t-mass 65I, sn E8044D02000 The accuracy of Thermal mass flow Proline t-mass 65I is defined as 1.5%. However, it could not be confirmed since the data sheet of ENDRESS&HOUSE is not provided to the verification team. In addition, the serial number of the flow meter was not correct. ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis (f_{v,CH₄,RG,h}): The volumetric fraction is measured by a gas analyzer. During the monitoring period the following instruments have been used: – Gas Analyzer, ULTRAMAT 23, sn 7MB2337-2CR10-3DR1 The accuracy of the gas analyzer ULTRAMAT 23 is 0.2% as confirmed through the ULTRAMAT data sheet of supplier /28/. However, it is defined as 2.5% in the monitoring report. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}): It is measured using temperature meters. During this monitoring period the following	

Checklist Question	Reference	Mov ¹	Comments	Conclusion
B.3.3	Are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate?	1/ /3/ /11/ /14/ /15/ /16/ /17/ /18/ /26/ /27/ /37/	temperature meters have been used: – Temperature meter Krom Schroder, VAS120R/NW, sn 88000004 The accuracy of the temperature meter Krom Schroder, VAS120R/NW is not mentioned in the monitoring report. ID.32 Other flare operational parameters: Data and parameters that are required to monitor whether the flare operates within the range of operating conditions according to manufacturer's specifications. Gold Standard Toolkit Annex C / Methane Utilization Ratio: Data is derived from monitoring parameters ID. 23 and ID. 29 ID.22 Operation of the Energy Plant (hr): The operation of the energy plant is measured for each power generation unit by a counting device. ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): The flow meter has been calibrated on 22/08/2011 by the supplier as confirmed through the calibration record /27/. However, the calibration date and the frequency have not been defined in the monitoring report and the supporting document is not provided to the verification team. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): The calibration report and the supporting document for the calibration frequency are not provided to the verification team and are not presented in the monitoring report. ID.25 Temperature of the gaseous stream in a time interval t (T_j): The calibration report and the supporting document for the calibration frequency are not provided to the verification team and are not presented in the monitoring report. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): The electricity meter has been calibrated on 13/04/2011 by the Elster manufacturer as confirmed through the calibration record /26/. As per the	CAR-4 OK

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			“Regulation of Metering and Testing of Metering Systems”, the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation /37/. However, the calibration date and the frequency are not mentioned in the monitoring report. ID.27 Quantity of electricity consumed by the project activity (EC_{PI,y}): The electricity meter has been calibrated on 13/04/2011 by the supplier as confirmed through the calibration record /26/. As per the “Regulation of Metering and Testing of Metering Systems”, the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation /37/. However, the calibration date and the frequency are not mentioned in the monitoring report. ID.28 Average technical transmission and distribution losses in year y (TDL_y): It is used for calculation of project emission as per the “Tool to calculate baseline, project and/or leakage emission from electricity consumption”. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h (FV_{RG,h}): The flow meter has been calibrated on 22/08/2011 by the supplier as confirmed through the calibration record /27/. However, the calibration frequency and the calibration date of the flow meter have not been defined in the monitoring report and the supporting document is not provided to the verification team. ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis (f_{v,CH₄,RG,h}): The calibration report and the supporting document for the calibration frequency are not provided to the verification team and are not presented in the monitoring report. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}): The calibration report and the supporting document for the calibration frequency are	

Checklist Question	Reference	Mov ¹	Comments	Conclusion
B.3.4 Is the monitoring frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?	1/ /3/ /11/ /14/ /15/ /16/ /17/ /18/	DR, CC, I	not provided to the verification team and are not presented in the monitoring report. ID.32 Other flare operational parameters: Data and parameters that are required to monitor whether the flare operates within the range of operating conditions according to manufacturer's specifications. Gold Standard Toolkit Annex C / Methane Utilization Ratio: Data is derived from monitoring parameters ID. 23 and ID. 29. ID.22 Operation of the Energy Plant (hr): The operational hours of the MWM engine are recorded by the monitoring system; the operational hours of the Jenbacher engine are recorded manual at least monthly. ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.25 Temperature of the gaseous stream in a time interval t (T_j): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.26 Net amount of electricity generated using LFG ($EC_{BL,j}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,j}$): The monitoring system works with continuous measurement devices. It is programmed to	OK

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			automatically save hourly values. The data are stored automatically at the server. ID.28 Average technical transmission and distribution losses in year y (TDL_y): It is used for calculation of project emission as per the “Tool to calculate baseline, project and/or leakage emission from electricity consumption”. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis ($f_{v,CH_4,RG,h}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.32 Other flare operational parameters: The flare temperature is monitored continuously and recorded hourly. Gold Standard Toolkit Annex C / Methane Utilization Ratio: Data is derived from monitoring parameters ID. 23 and ID. 29.	
B.3.5	1/ /3/ /11/ /14/ /15/ /16/ /17/ /18/	DR, CC, I	ID.22 Operation of the Energy Plant (hr): The operational hours of the MWM engine are recorded by the monitoring system; the operational hours of the Jenbacher engine are recorded manual at least monthly. ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,dry}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored	OK

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			automatically at the server. ID.24 Volumetric fraction of CH₄ in a time interval t on a dry basis ($V_{CH_4,t,db}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.25 Temperature of the gaseous stream in a time interval t (T_g): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,y}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.28 Average technical transmission and distribution losses in year y (TDL_y): It is used for calculation of project emission as per the “Tool to calculate baseline, project and/or leakage emission from electricity consumption”. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis ($f_{v,CH_4,RG,h}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.31 Temperature in the exhaust gas of the	

Checklist Question	Reference	Mov ¹	Comments	Conclusion
B.3.6 Does data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	1/ /3/ /11/ /14/ /15/ /16/ /17/ /18/	DR, CC, I	enclosed flare (T_{flare}): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.32 Other flare operational parameters: The flare temperature is monitored continuously and recorded hourly. Gold Standard Toolkit Annex C / Methane Utilization Ratio: Data is derived from monitoring parameters ID. 23 and ID. 29. ID.22 Operation of the Energy Plant (hr): The operational hours of the MWM engine are recorded by the monitoring system; the operational hours of the Jenbacher engine are recorded manual at least monthly. ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.25 Temperature of the gaseous stream in a time interval t (T_j): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,y}$): The monitoring system works with	OK

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.28 Average technical transmission and distribution losses in year y (TDL_y): It is used for calculation of project emission as per the “Tool to calculate baseline, project and/or leakage emission from electricity consumption”. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h (FV_{RG,h}): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis (f_{v,CH₄,RG,h}): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flared}): The monitoring system works with continuous measurement devices. It is programmed to automatically save hourly values. The data are stored automatically at the server. ID.32 Other flare operational parameters: The flare temperature is monitored continuously and recorded hourly. Gold Standard Toolkit Annex C / Methane Utilization Ratio: Data is derived from monitoring parameters ID. 23 and ID. 29.	
B.4 Monitoring of GS indicators of sustainable development /environmental impacts				
B.4.1	Data/Parameter monitored / Data unit / Description / Source of data to be used / Value data for the monitoring period <i>/1/ /2/ /3/ /29/ /30/ /31/ /32/ /33/ /34/ /35/</i>	DR, CC, I	The following GS sustainable development parameters are monitored as per the monitoring plan presented in the registered PDD <i>/1/</i> . SD.1 Air Quality: The level of sulphide combusted in the landfill gas engine is monitored at each monitoring period. The amount of H ₂ S is calculated based on the	~~CAR-5~~ OK

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			amount of LFG destroyed in the engines. As per the registered GS Passport /2/, in the calculation is used a conservative approach of 0.5% for the sulphide content. The monitoring results of the parameter should be updated according to the monitoring period of 01/03/2013 – 30/06/2013. SD.2 Quality of Employment: The provided trainings are monitored through the list of attendance to trainings given in the monitoring report. The given trainings during this monitoring period could be confirmed through the training certificates and attendance list /31/ /32/ /33/ /34/ /35/. SD.3 Human and Institutional Capacity: The improvements to the school library are monitored at each monitoring period by visual observation and through the interview with the mukhtar of the Solaklar Village. During on site visit, the school manager was interviewed about the improvements to the school library. He confirmed and it is observed that the improvements to the school library were performed by the project activity. A school class converted to a school library. The tables and the books were provided by the project activity. In addition, during the interview, the school manager mentioned some of the deficiencies that are required for the school. Before the school session starts, these deficiencies need to be resolved. Please clarify how this comment is taken into consideration. SD.4 Quantitative employment and income generation: The number of contracts is monitored through the documentation of Declaration of Employment obtained from Social Security Institution /30/ and Residence Certificate obtained from Social Security Agency /29/. 12 employees are defined in the Monitoring Report /3/. However, since the Social Security Institution record (at least the record for June)	

Checklist Question	Reference	Mov ¹	Comments	Conclusion
			was not provided to the verification team, it could not be confirmed that 12 employees are worked in the project activity for the whole monitoring period or not. SD.5 Management of Leachate: The management of leachate is monitored annually by the evidences that the leachate is collected and is being treated by IZAYDAS. However, during on site visit, it was observed that the treatment plant which the leachate was sent to be treated, was not in operation. Please clarify.	
B.4.2	/1/ /3/	DR, CC	The monitoring complies with the monitoring plan presented in the registered PDD. The following GS sustainable development parameters are monitored as per the registered monitoring plan: - Air Quality - Quality of Employment - Human and Institutional Capacity - Quantitative employment and income generation - Management of Leachate	OK
B.4.3	/1/ /2/ /3/ /29/ /30/ /31/ /32/ /33/ /34/ /35/ /36/	DR, CC	All the documented evidences related to the sustainable monitored parameters such as the Sample of Raw Data, Training Records, Declaration of Employment and Residence Certificate are collected and kept except Social Security Institution Record.	CAR-5 OK
B.5 Management, quality assurance and quality control				
B.5.1	/1/ /3/	DR, CC, I	An on-site inspection has been performed on 24/07/2013 and it is confirmed that the monitoring arrangements in the monitoring plan are feasible within the project design.	OK
B.5.2	/1/ /3/	DR, CC, I	The Grid Company submits monthly a protocol to the project owner. The monthly electricity data are transferred to the excel sheet used for the emission reduction calculations. The electricity consumption is monitored continuously by two electricity meters. TEIAS is responsible for the calibration and maintenance of the electricity meters.	OK

Checklist Question	Reference	Mov ¹	Comments	Conclusion
B.5.3 Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the project can be reported ex post and verified?	/1/ /3/	DR, CC, I	Quality assurance and quality control procedure is taken to monitor the equipment and data collection. The monitoring systems on errors are checked regularly by the VER-Team. In the case of errors, corrective actions will be undertaken. All data are stored in the central daily form /36/ withdrawn from the system. Every day the server creates a file with all hourly data saved and the stored data are transferred to a computer. There are daily checks if the data from the day before was stored successfully on the servers. Aggregation of data and cross checks takes place periodically. Korfez Enerji San. ve Tic. A.S. (the project owner) is responsible for the operation and monitoring of the project activity and it is in line with the registered PDD /1/.	OK
B.5.4 Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of VERs, for this project activity, whichever occurs later?	/1/ /3/	DR, CC	It is not mentioned in the in the Monitoring Report version 1.0 /3/ that the collected data during the monitoring period how long will be kept by the project owner.	~~CR-3~~ OK

TABLE 2 RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
CAR 1 The starting date of project activity is 22/03/2011 as per the registered PDD. The starting date is mentioned as a construction start date in the monitoring report. However, it could not be confirmed since the supporting document is not provided to the verification team. After a test period, the first crediting period of the project activity started on 02/03/2012 as per the Provisional Acceptance Protocol of the first engine /23/. However, it is stated as 01/03/2012 in the monitoring report. The end date of monitoring period is defined as 31/03/2013 in the Monitoring Report /3/. However, during on site visit, 30/06/2013 was agreed by the PP and the consultant. According to the alteration, monthly meter readings for April, May and June; and all the PMUM records for crosscheck should be provided to the verification team. Estimated Emission Reduction is indicated as 86,229 tCO₂ in the first page and Section E.5 of the monitoring report. However, the same value was mentioned only for the year of 2012 in the registered PDD. In addition, in Section E.4 and Section E.7 of the monitoring report, the values should be updated as per the monitoring period of 01/03/2012 – 30/06/2013. Also in Table 3 “Baseline Emissions”, the value of the total 2012 is not correct and in line with the excel sheet.	A.2	i. The reference document for the starting date of project activity has been provided to the DOE. ii. The crediting period starts on 01.03.2011 and ends on 28.02.2019 in accordance with the registered PDD. The Monitoring Report has adopted 01.03.2011, the start of the crediting period date as the start of the first monitoring period as well for consistency with the registered PDD. The Provisional Acceptance Protocol date is within the monitoring period mentioned under the MR and the crediting period under the registered PDD, therefore has no impact on the amount of monitored/reported emission reductions and should be considered conservative. Meter readings of the period 01/04/2013 – 30/06/2013 (April, May and June 2013) were now added to the Excel file and the Monitoring Report version 2. iii. The documents have been revised accordingly. 2nd Round Respond: The MR has been revised accordingly.	Review 1 (21/10/2013): The starting date of the project activity is assigned to 22/03/2011, which refers to the agreement on containers purchase /38/. The description about the starting date of the crediting period was found convincing. The end date of monitoring period is now defined as 30/06/2013 in the Monitoring Report /3/. All monthly meter readings and the PMUM records including the monitoring period were provided to the verification team. Estimated Emission Reduction is now indicated as 122,913 tCO₂. However, the calculation for 2013 is not in line with the current situation. (109,752/12=9,146 ; 9,146x6-from January to June=-54,876 ; 2012+2013=86,229+54,876=141,105 tCO₂) Section E.4 and E.7 were revised as per the monitoring period. In addition, Table 3 is also updated and now in line with the excel sheet. Hence, CAR 1 is not closed.
			Review 2 (18/11/2013): Estimated Emission Reduction is now corrected as 141,105 tCO₂ in the monitoring report, version 3 of 05/11/2013. Hence, CAR 1 is closed.

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
CAR 2 ID.22 Operation of the Energy Plant (hr): The operation hour of GM1 is 10,030.5 hours and GM2 is 5,706.8 hours were verified through the internal records [21]. However, in the monitoring report, it is defined as 8614 for GM1 and 3670 for GM2. ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) on a dry basis ($V_{t,db}$): It is measured continuously by a mass flow meter. The 2012 data is 3,261,599 and the 2013 data is 2,440,192. However, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): It is measured continuously by a gas analyzer. The 2012 data is defined as 52.87% and the 2013 data is defined as 55.56% in the monitoring report. However, in rawdata2012 of the excel sheet it could be calculated as 52.07% for 2012. In addition, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.25 Temperature of the gaseous stream in a time interval t (T_t): It is measured by a temperature meter. The 2012 data is 47.98°C (321.13 °K) and the 2013 data is 29.91°C (303.06 °K). However, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): It is measured continuously by electricity meter of the grid company. The 2012	B.3.1	ID.22 Operation of the Energy Plant (hr): The Monitoring Report has been revised accordingly. ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): The 2013 data is 4,887,227 Nm^3. The MR and excel sheet have been revised accordingly. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): 52.07% does represent the arithmetic average of the methane content and 52.87% does represent the weighted content. The PP is of the opinion, that the weighted average values does represent the situation more correct, so the value is not changed in the MR. The calculation of the (weighted) average of 2013 does now include the months April to June, The data is 54.07%. MR and Excel file are revised. ID.25 Temperature of the gaseous stream in a time interval t (T_t): The data of 2013 does now include the months April to June, the maximum temperature is in this period 43.72°C (316.87K). Excel file and MR are revised accordingly. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): The data of 2013 does now include the months April to June. Excel file and MR are revised accordingly. TDL_{k,y} is now included to the calculation	Review 1 (10/10/2013): ID.22 Operation of the Energy Plant (hr): The operation hour of GM1 is now corrected as 10,030.5 hours and GM2 is 5,706.8 hours in MR. ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): The 2013 data is revised as 4,887,227 by adding the last 3 months. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): The 2013 data is revised as 54,07% by adding the last 3 months and the explanation about the arithmetic and the weighted average is found acceptable. ID.25 Temperature of the gaseous stream in a time interval t (T_t): The 2013 data is revised as 43.72°C (316.87K) by adding the last 3 months. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): The 2013 data is revised as 9,092.38 MWh by adding the last 3 months. In addition, TDL_{k,y} is now included to the excel sheet of the baseline emissions to calculate BE_{EC}. ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,y}$): The 2013 data is revised as 1,42 MWh by adding the last 3 months. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): The 2013 data is revised as 74,769 Nm^3 by adding the last 3 months. ID.30 Volumetric fraction of CH_4 in the residual gas on dry basis ($f_{i,CH_4,RG,h}$): The 2013 data is revised as 54,07% by

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
value is 6,021.42 MWh and the 2013 value is 4,592.71 MWh. However, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. In addition, please explain why whether any (1+TDLy) was not included to the calculation of baseline emission from electricity consumption in year ($BE_{EC,y}$). ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,y}$): It is measured continuously by electricity meter of the grid company. The 2012 value is 6.36 MWh and the 2013 value is 0.29 MWh. However, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): It is measured continuously by a mass flow meter. The 2012 data is 116,439 m³/h and the 2013 data is 36,878 m³/h. However, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis ($f_{V,CH_4,RG,h}$): It is measured continuously by a gas analyzer. The 2012 data is 52.87% and the 2013 data is 55.56%. However, in rawdata2012 of the excel sheet it could be calculated as 52.07% for 2012. In addition, according to the monitoring period of 01/03/2012 to 30/06/2013, April, May and June of 2013 should be calculated; the excel sheet and the MR should be revised accordingly. Also number of the ID and the name of the parameter is presented as ID.24 and $f_{CH_4,RG,h}$ respectively. Please correct as		of the baseline emissions. As no reliable information could be found for this period, a default factor of 3% is used for $TDL_{k,y}$ (used to calculate BE_{EC}), which is in line with the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption" Version 01, EB 37 Annex 7. Excel file and MR are revised accordingly. ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,y}$): The data of 2013 does now include the months April to June. Excel file and MR are revised accordingly. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): The data of 2013 does now include the months April to June. Excel file and MR are revised accordingly. The data of 2013 is now 74,769 Nm³. ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis ($f_{V,CH_4,RG,h}$): The data of 2013 does now include the months April to June. Two rows in the excel file («intro») were added to calculate methane content of residual gas to flare separately. But instead of the arithmetic average as requested by the DOE the weighted average is calculated as this represents more precise the situation. The data are 53.37% (weighted, 2012) and 55.49% (2013). The incorrect ID number is corrected. Excel file and MR are revised accordingly. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}):	adding the last 3 months. Also, the ID number was corrected as ID.30. However, ID name should be corrected as "$f_{V,CH_4,RG,h}$" not "$f_{CH_4,RG,h}$". ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}): The necessary explanation was added to the monitoring report. Hence, CAR 2 is not closed. Review 2 (18/11/2013): ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis ($f_{V,CH_4,RG,h}$): ID name is now corrected as "$f_{V,CH_4,RG,h}$" in the monitoring report, version 3 of 05/11/2013. Hence, CAR 2 is closed.

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
per the registered PDD. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}): It is measured by a temperature meter. During this monitoring period, T_{flare} is used occasionally. However, the value of the monitored parameter is not defined in the Monitoring Report.		When the flare is operational, the temperature is about 1,000°C. This information is now added in the MR. 2nd Round Respond: Name of the parameter has been corrected under the MR.	
CAR 3 ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): The volumetric flow of the gaseous stream is measured continuously through the mass flow meter. During the monitoring period the following instruments have been used: - Thermal mass flow measuring system by Endress & House, Proline t-mass 651, sn E8044E02000 The accuracy of Thermal mass flow Proline t-mass 651 is defined as 1.5%. However, it could not be confirmed since the data sheet of ENDRESS&HOUSE is not provided to the verification team. In addition, the serial number of the flow meter was not correct. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): The volumetric fraction is measured by a gas analyzer. During the monitoring period the following instruments have been used: - Gas Analyzer, ULTRAMAT 23 , sn 7MB2337-2CR10-3DR1 The accuracy of the gas analyzer ULTRAMAT 23 is 0.2% as confirmed through the ULTRAMAT data sheet of supplier /28/. However, it is defined as 2.5% in the monitoring report.	B.3.2	ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): The value of 1.5% is indeed not correct as it represents the accuracy of a similar device, Proline t-mass 65F. The correct value is 1.0%, as could be seen in the data sheet submitted (page 11). The serial number is now corrected in the MR. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): The MR is revised accordingly. ID.25 Temperature of the gaseous stream in a time interval t (T_t): The sensor tolerance value per DIN EN 60751 is Class B as could be seen on the nameplate of the device (1 x Pt100 / B / 2: One Pt100 Sensor, accuracy class B, 2-wire connection method). For a thin film sensor (F), does that mean a tolerance of $\pm (0.3 + 0.005 t)$. t is the value of the temperature in °C without consideration of the sign. For a temperature of 60°C the tolerance is $\pm (0.3 + 0.005 \times 60) = \pm 0.6$ which is equivalent to 1%. The MR is updated with additional information. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): According to the data sheet /39/ it is confirmed that the accuracy of the flow meter is 1.0% and serial number of the flow meter is corrected in the monitoring report.	Review 1 (21/10/2013): ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): According to the data sheet /39/ it is confirmed that the accuracy of the flow meter is 1.0% and serial number of the flow meter is corrected in the monitoring report. ID.24 Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$): The accuracy of the gas analyzer ULTRAMAT 23 is now defined as 0.2% in the monitoring report. ID.25 Temperature of the gaseous stream in a time interval t (T_t): The sensor tolerance value is seen on the nameplate of the device /41/ (1 x Pt100 / B / 2: The accuracy class of the device is explained as per the DIN EN 60751-Class B in the monitoring report. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): According to the data sheet /39/ it is confirmed that the accuracy of the flow meter is 1.0% and serial number of the flow meter is corrected in the monitoring report.

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
ID.25 <i>Temperature of the gaseous stream in a time interval t (T_g):</i> It is measured using temperature meters. During this monitoring period the following temperature meters have been used: – Temperature meter WIKA TR-10_H, sn 1102D580 The accuracy of the temperature meter WIKA TR-10_H is defined as 1.0%. However, to confirm the accuracy, a supporting document was not provided to the verification team. ID.29 <i>Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$):</i> The volumetric flow of the residual gas in dry basis is measured continuously through the mass flow meter. During the monitoring period the following instruments have been used: – Thermal mass flow measuring system by Endress & House, Proline t-mass 65I, sn E8044D02000 The accuracy of Thermal mass flow Proline t-mass 65I is defined as 1.5%. However, it could not be confirmed since the data sheet of ENDRESS&HOUSE is not provided to the verification team. In addition, the serial number of the flow meter was not correct. ID.30 <i>Volumetric fraction of CH_4 in the residual gas on dry basis ($f_{v,CH_4,RG,h}$):</i> The volumetric fraction is measured by a gas analyzer. During the monitoring period the following instruments have been used: – Gas Analyzer, ULTRAMAT 23 , sn 7MB2337-2CR10-3DR1 The accuracy of the gas analyzer ULTRAMAT 23 is 0.2% as confirmed through the ULTRAMAT data sheet of supplier /28/. However, it is defined as 2.5% in the monitoring report.		(to the flare) in dry basis in the hour h ($FV_{RG,h}$): The value of 1.5% is indeed not correct as it represents the accuracy of a similare device, Proline t-mass 65F. The correct value is 1.0%, as could be seen in th data sheet submitted (page 11). The serial number is now corrected in the MR. ID.30 Volumetric fraction of CH_4 in the residual gas on dry basis ($f_{v,CH_4,RG,h}$): The MR is revised accordingly. ID.31 <i>Temperature in the exhaust gas of the enclosed flare (T_{flare}):</i> Since no emission reductions are claimed from flaring, no accuracy information is collected.	ID.30 <i>Volumetric fraction of CH_4 in the residual gas on dry basis ($f_{v,CH_4,RG,h}$):</i> The accuracy of the gas analyzer ULTRAMAT 23 is now defined as 0.2% in the monitoring report. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}): The description of the parameter is sufficient. <u>Hence, CAR 3 is closed.</u>

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
ID.31 <i>Temperature in the exhaust gas of the enclosed flare (T_{flae}):</i> It is measured using temperature meters. During this monitoring period the following temperature meters have been used: – Temperature meter Krom Schroder, VAS120R/NW, sn 880000004 The accuracy of the temperature meter Krom Schroder, VAS120R/NW is not mentioned in the monitoring report.			
CAR 4 ID.23 <i>Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$):</i> The flow meter has been calibrated on 22/08/2011 by the supplier as confirmed through the calibration record /27/. However, the calibration date and the frequency have not been defined in the monitoring report and the supporting document is not provided to the verification team. ID.24 <i>Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$):</i> The calibration report and the supporting document for the calibration frequency are not provided to the verification team and are not presented in the monitoring report. ID.25 <i>Temperature of the gaseous stream in a time interval t (T_t):</i> The calibration report and the supporting document for the calibration frequency are not provided to the verification team and are not presented in the monitoring report. ID.26 <i>Net amount of electricity generated using LFG ($EC_{BL,y}$):</i> The electricity meter has been calibrated on 13/04/2011 by the Elster manufacturer as confirmed through the	B.3.3	ID.23 <i>Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$):</i> In accordance with the “Regulation on “Measurement and Measuring Tools”, gaseous stream meters have to be calibrated within a frequency of once per 10 years². The Monitoring Report has been revised accordingly. ID.24 <i>Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$):</i> Each meter including (ID.30) is installed as pre-calibrated from the factory. In accordance with the “Regulation on “Measurement and Measuring Tools”, gaseous stream meters have to be calibrated within a frequency of once per 10 years³. However the PP is unable to find the document for initial calibration of the meter ID.30. The meter was sent to calibration on 23.07.2013 (calibration report is submitted to the DOE). According to the calibration report the meter does not show any errors in the measuring equipment. As a conservative approach, the maximum permissible	Review 1 (10/10/2013): ID.23 <i>Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$):</i> The calibration date and the frequency of the flow meter is now defined in the monitoring report. However, in operational instructions of the equipment /39/ it is presented that “a recalibration interval of every 2 to 3 years is recommended”. ID.24 <i>Volumetric fraction of CH_4 in a time interval t on a dry basis ($V_{CH_4,t,db}$):</i> The given explanation was found sufficient. In addition, the calibration certificate /40/ was provided to the verification team. However, the last calibration date should be defined in the monitoring report. ID.25 <i>Temperature of the gaseous stream in a time interval t (T_t):</i> According to the manufacturers specifications the accuracy of the meter was defined as 1% in the monitoring report. However, the data sheet of the WIKA TR-10_H was not provided to the verification team to confirm the conservative approach for the

² Reference: [http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=\(Article 9.b\)](http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=(Article 9.b))

³ Reference: [http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=\(Article 9.b\)](http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=(Article 9.b))

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
calibration record /26/. However, the calibration date and the frequency are not mentioned in the monitoring report. ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,y}$): The electricity meter has been calibrated on 13/04/2011 by the supplier as confirmed through the calibration record /26/. However, the calibration date and the frequency are not mentioned in the monitoring report. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): The flow meter has been calibrated on 22/08/2011 by the supplier as confirmed through the calibration record /27/. However, the calibration frequency and the calibration date of the flow meter have not been defined in the monitoring report and the supporting document is not provided to the verification team. ID.30 Volumetric fraction of CH_4 in the residual gas on dry basis ($f_{V,CH_4,RG,h}$): The calibration report and the supporting document for the calibration frequency are not provided to the verification team and are not presented in the monitoring report. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}): The calibration report and the supporting document for the calibration frequency are not provided to the verification team and are not presented in the monitoring report.		error of 0.2% of the equipment is applied to all the measurement result of this equipment. This approach is also in line with the CDM validation and verification standard v.04.0 paragraph 238. The MR and the ER excel sheet has been revised accordingly (refer to row 32 under worksheet "Results"). ID.25 Temperature of the gaseous stream in a time interval t (T_t): the PP is unable to find the document for initial calibration of the meter ID.25. However even a conservative approach is adopted and the maximum error margin is applied (1% according to the manufacturers specifications) to the measurement results of the equipment will be would be still under 60°C, which is below the threshold value for the applicability of dry gas as described under the MR. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): In accordance with the "Regulation on "Measurement and Measuring Tools", electricity meters have to be calibrated within a frequency of once per 10 years⁴. The meter was initially calibrated on 13/04/2011 and is valid for 10 years. The Monitoring Report has been revised accordingly. ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,y}$): In accordance with the "Regulation on "Measurement and Measuring Tools", electricity meters have to be calibrated within a frequency of once per 10 years⁵.	calibration. ID.26 Net amount of electricity generated using LFG ($EC_{BL,y}$): It is now presented in the monitoring report that the electricity meters have been calibrated on 13/04/2011. ID.27 Quantity of electricity consumed by the project activity ($EC_{PJ,y}$): It is now presented in the monitoring report that the electricity meters have been calibrated on 13/04/2011. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): It is now presented in the monitoring report that the flow meters have been calibrated on 22/08/2011. ID.30 Volumetric fraction of CH_4 in the residual gas on dry basis ($f_{V,CH_4,RG,h}$): The calibration date was presented as 23/07/2011 in the monitoring report. In addition, the explanations are sufficient about the conservative approach. ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}): The description of the parameter for the calibration is sufficient. Hence CAR 4 is not closed. Review 2 (18/11/2013): ID.23 Volumetric flow of the gaseous stream (to the electricity generating units) in time interval t on a dry basis ($V_{t,db}$): The calibration frequency was corrected as 3 years as per the operational

⁴ Reference: [http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=\(Article 9.b\)](http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=(Article 9.b))

⁵ Reference: [http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=\(Article 9.b\)](http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=(Article 9.b))

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
		The meter was initially calibrated on 13/04/2011 and is valid for 10 years. The Monitoring Report has been revised accordingly. ID.29 Volumetric flow of the residual gas (to the flare) in dry basis in the hour h ($FV_{RG,h}$): In accordance with the "Regulation on "Measurement and Measuring Tools", gaseous stream meters have to be calibrated within a frequency of once per 10 years⁶. The meter was initially calibrated on 22/08/2011 and is valid for 10 years. The Monitoring Report has been revised accordingly. ID.30 Volumetric fraction of CH₄ in the residual gas on dry basis ($f_{v,CH_4,RG,h}$): Each meter including (ID.30) is installed as pre-calibrated from the factory. In accordance with the "Regulation on "Measurement and Measuring Tools", gaseous stream meters have to be calibrated within a frequency of once per 10 years⁷. However the PP is unable to find the document for initial calibration of the meter ID.30. The meter was sent to calibration on 23.07.2013 (calibration report is submitted to the DOE). According to the calibration report the meter does not show any errors in the measuring equipment. As a conservative approach, the maximum permissible error of 0.2% of the equipment is applied to all the measurement result of this equipment. This approach is also in line with the CDM validation and verification	instructions of the equipment /39/. ID.24 Volumetric fraction of CH₄ in a time interval t on a dry basis ($V_{CH_4,t,db}$): The Description is found to be adequate for the calibration date of this parameter. ID.25 Temperature of the gaseous stream in a time interval t (T_j): The description and the calculation is found sufficient for accuracy of the temperature meter. Hence, CAR 4 is closed.

⁶ Reference: [http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=\(Article 9.b\)](http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=(Article 9.b))

⁷ Reference: [http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=\(Article 9.b\)](http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch=(Article 9.b))

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
		standard v.04.0 paragraph 238. The MR and the ER excel sheet has been revised accordingly (refer to row 32 under worksheet "Results"). <i>ID.31 Temperature in the exhaust gas of the enclosed flare (T_{flare}):</i> Since no emission reductions are claimed from flaring, no calibration is conducted for this equipment. 2nd Round Respond: ID.23: The calibration frequency is revised to 3 years taking into account the gaseous stream is clean and dry. ID.24: As previously explained The meter is installed as pre-calibrated from the factory. In accordance with the "Regulation on "Measurement and Measuring Tools", gaseous stream meters have to be calibrated within a frequency of once per 10 years⁸. However the PP is unable to find the document for initial calibration of the meter ID.30. The meter was sent to calibration on 23.07.2013. According to the calibration report, the meter does not show any errors in the measuring equipment. As a conservative approach, the maximum permissible error of 0.2% of the equipment is applied to all the measurement result of this equipment. This approach is also in line with the CDM validation and verification standard v.04.0 paragraph 238. ID.25: The sensor tolerance value per	

⁸ Reference: [http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch= \(Article 9.b\)](http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.6381&MevzuatIliski=0&sourceXmlSearch= (Article 9.b))

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
		DIN EN 60751 is Class B as could be seen on the nameplate of the device (1 x Pt100 / B / 2: One Pt100 Sensor, accuracy class B, 2-wire connection method). For a thin film sensor (F), does that mean a tolerance of +/- (0.3 + 0.005 [t]). [t] is the value of the temperature in °C without consideration of the sign. For a temperature of 60°C the tolerance is +/- (0.3 + 0.005*60) = +/- 0.6 which is equivalent to 1%.	
CAR 5 <i>SD.1 Air Quality:</i> The monitoring results of the parameter should be updated according to the monitoring period of 01/03/2013 – 30/06/2013. <i>SD.3 Human and Institutional Capacity:</i> The improvements to the school library are monitored at each monitoring period by visual observation and through the interview with the mukhtar of the Solaklar Village. During on site visit, the school manager was interviewed about the improvements to the school library. He confirmed that the improvements were performed by the project activity. A school class converted to a school library. The tables and the books were provided by the project activity. In addition, during the interview, the school manager mentioned some of the deficiencies that are required for the school. Before the school session starts, these deficiencies need to be resolved. Please clarify how this comment is taken into consideration. <i>SD.4 Quantitative employment and income generation:</i> Since the Social Security Institution record (at least the record for June) does not provided to the verification team, it could not be confirmed that 12 employees are worked in the project activity for the whole monitoring period or	B.4.1 B.4.3	<i>SD.1 Air Quality:</i> The monitoring results are now corrected in the revised MR. <i>SD.3 Human and Institutional Capacity:</i> The PP is willing and dedicated to address these issues as soon as possible. The following issues will be addressed; - The floor of the classroom will be renewed. - Classroom interior walls will be painted - The computer class will be moved from upper floor to lower floor as requested by the school management - Classroom doors will be repaired/renewed - Data and electricity infrastructure will be renewed - The library will be moved to its new place as requested by the school management All these issued can be verified during the next verification site visit.	Review 1 (10/10/2013): <i>SD.1 Air Quality:</i> The monitoring results of the parameter was updated according to the monitoring period of 01/03/2013 – 30/06/2013. <i>SD.3 Human and Institutional Capacity:</i> According to the PP's prescience, the following issues will be addressed; - The floor of the classroom will be renewed. - Classroom interior walls will be painted - The computer class will be moved from upper floor to lower floor as requested by the school management - Classroom doors will be repaired/renewed - Data and electricity infrastructure will be renewed - The library will be moved to its new place as requested by the school management All these issued should be verified during the next verification site visit.

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
not. <i>SD.5 Management of Leachate:</i> The management of leachate is monitored annually by the evidences that the leachate is collected and is being treated by IZAYDAS. However, during on site visit, it was observed that the treatment plant which the leachate was sent to be treated, was not in operation. Please clarify.		<i>SD.4 Quantitative employment and income generation:</i> Social Security Institution records for June is provided to the DOE. <i>SD.5 Management of Leachate:</i> It should be noted that treatment of leachate is not within the responsibility of the PP but under the authority of IZAYDAS. As discussed with representatives from IZAYDAS during the verification site visit, the leachate has been managed by IZAYDAS through collecting and sending the leachate to the Municipalities waste water treatment centre. IZAYDAS recently has decided to treat the leachate through a dedicated leachate treatment centre to be built near the landfill area. The construction of the new dedicated leachate treatment centre has started in January 2013 and planned to start its operation in November 2013. During the construction period (between January 2013 and November 2013), the leachate is collected in small ponds and later sent to “42 Evler” Water treatment centre via waste water trucks. Therefore the leachate is treated continuously. The new leachate treatment centre could be verified during the next monitoring period.	<i>SD.4 Quantitative employment and income generation:</i> the Social Security Institution record was now provided to the verification team. It could be confirmed that more than 12 employees are worked in the project activity for the whole monitoring period. <i>SD.5 Management of Leachate:</i> It is confirmed that the management of leachate is under the responsibility of IZAYDAS. The representatives defined that the leachate was treated in 42 Evler Water Treatment Center since the decision of the new leachate treatment centre was taken. However, it should be verified during the next monitoring period that the new centre is in operation and the leachate is treated. Hence, CAR 5 is closed. However, FAR 1 and FAR 2 are raised.
CR 1 The title of the project activity defined as “Kocaeli Landfill Gas to Electricity Project – Turkey in the registered PDD /1/ is not in line with the GS Registry Market. Also, the name of the client given as Korfez Enerji A.S. should be reconsidered. In addition,	A.1	The title of the project activity is revised to «Kocaeli Landfill Gas to Electricity Project» in line with the registry. Under the registered PDD, the Project Participant is Körfez Enerji A.Ş., which is	Review 1 (10/10/2013): The title of the project activity is defined as “Kocaeli Landfill Gas to Electricity Project – Turkey” in the registered PDD and Validation Report. Therefore, the GS Registry should be corrected. “Turkey” should be added to the title of the project

Corrective action and/ or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
format of the completion date, registration date and Monitoring period should be corrected as per the guideline “Guidelines for Completing the Project Design Document Form”.		the special purpose company established according to local laws and regulations. The format of dates is corrected to be in line with the «Guideline for Completing the monitoring form». 2nd Round Respond: - The PP will apply for GS to change the registry name during the application for issuance. - Registration date format has been revised.	in the monitoring report. The format of the completion date and Monitoring period was corrected as per the guideline. However, registration date format was not updated. Hence, CR is not closed. Review 2 (18/11/2013): A FAR is raised to monitor changing the title of the project activity in the GS Registry. Hence, CR 1 is closed. FAR 3 is raised.
CR 2 SD.1 Fraction of sulphide within the LFG determined ex-ante for SDI.3 (W_{H_2S}): The parameter is used for GS Sustainable Development Monitoring Parameter SD.1 Air Quality. However, it is mentioned as SD.3 Other Pollutants in the monitoring report.	B.2.1	The description of the parameter SD.1 in section D.1 of the MR is revised.	Review 1 (10/10/2013): SD.1 Fraction of sulphide within the LFG determined ex-ante for SDI.3 (W_{H_2S}): The explanation for the parameter is revised as SD.1 Air Quality. Hence, CR 2 is closed.
CR 3 It is not mentioned in the in the Monitoring Report version 1.0 /3/ that the collected data during the monitoring period how long will be kept by the project owner.	B.5.4	Section C. of the MR is revised accordingly.	Review 1 (10/10/2013): It is now mentioned that the data is archived and stored electronically during the crediting period and two years after. Hence CR 3 is closed.

TABLE 3 FORWARD ACTION REQUEST

Forward action request	Reference to Table 1	Response by project participants Verification conclusion
FAR 1 SD.3 Human and Institutional Capacity: According to the PP's prescience,	B.4.1	The FAR will be taken into account during the next monitoring period

Forward action request	Reference to Table 1	Response by project participants Verification conclusion
the following issues will be addressed; - The floor of the classroom will be renewed. - Classroom interior walls will be painted - The computer class will be moved from upper floor to lower floor as requested by the school management - Classroom doors will be repaired/renewed - Data and electricity infrastructure will be renewed - The library will be moved to its new place as requested by the school management All these issued should be verified during the next verification site visit.		RINA opinion: The Gold Standard Sustainable Development Monitoring Parameter will be monitored during the next verification period.
FAR 2 <i>SD.5 Management of Leachate:</i> It is confirmed that the management of leachate is under the responsibility of IZAYDAS. The representatives defined that the leachate was treated in 42 Evler Water Treatment Center since the decision of the new leachate treatment centre was taken. However, it should be verified during the next monitoring period that the new centre is in operation and the leachate is treated.	B.4.1	The FAR will be taken into account during the next monitoring period RINA opinion: The Gold Standard Sustainable Development Monitoring Parameter will be monitored during the next verification period.
FAR 3 Changing the title of the project activity in the GS Registry will be monitored during the next verification.	A.1	The FAR will be taken into account during the next monitoring period RINA opinion: The title of the project activity will be monitored during the next verification period.
FAR 4 Since the project owner is unable to find the document for initial calibration of the meter ID.25, the temperature meter WIKA TR-10_H, sn 1102D580 should be calibrated and monitored during the next verification.	3.5.3.3	The FAR will be taken into account during the next monitoring period RINA opinion: The calibration of the meter will be monitored during the next verification period.



RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Isil Timuroglu

è qualificato come¹:
is qualified as:

GS-TEC, GS-VAL, GS-VER, GS-TL,
VCS-TEC, VCS-VAL, VCS-VER, VCS-TL,
SCS-TEC, SCS-VAL, SCS-VER, SCS-TL,
Local expert (Turkish language),
CDM-TEC, CDM-VAL, CDM-VER, CDM-TL

per le seguenti aree tecniche:
for the following technical areas:

1.2, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Energy generation from renewable energy sources	1
13.1	Waste handling and disposal	13

in accordo alle istruzioni della Divisione Certificazione.
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
-	13/02/2012	-
4	12/09/2013	Annual revision

Il Resp. QPT
Head of QPT

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
DET: Determiner

CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS: Gold Standard
SCS: SocialCarbon Standard
JI: Joint Implementation

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports



RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Tugce Kiratli

è qualificato come¹:
is qualified as:

CDM-TEC, JI-TEC, VCS-TEC, GS-TEC, VCS-VAL, VCS-
VER, GS-VAL, GS-VER, GS-TL, VCS-TL

per le seguenti aree tecniche:
for the following technical areas:

1.2, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2*	Energy generation from renewable energy sources	1
13.1	Waste handling and disposal	13

*Just for GS and VCS, not for CDM

in accordo alle istruzioni della Divisione Certificazione.
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
4	14/01/2014	Updated qualification as VCS-GS TL
0	26/11/2012	-

Il Resp. QPT
Head of QPT

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
DET: Determiner

CDM: Clean Development Mechanism
VCS: Verified Carbon Standard:
GS: Gold Standard
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JI: Joint Implementation

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RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Rekha Menon

è qualificato come¹:
is qualified as:

CDM-TEC, CDM-VAL, CDM-VER, CDM-TL, CDM-FIN-EXP,
VCS-TEC, VCS-VAL, VCS-VER, VCS-TL, VCS-FIN-EXP,
GS-TEC, GS-VAL, GS-VER, GS-TL, GS-FIN-EXP,
SCS-TEC, SCS-VAL, SCS-VER, SCS-TL, SCS-FIN-EXP
JI-TEC

per le seguenti aree tecniche:
for the following technical areas:

1.2, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Energy generation from renewable energy sources	1
13.1	Waste Handling and Disposal	13

in accordo alle istruzioni della Divisione Certificazione.
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	06-03-2008	-
8	03-06-2013	Annual revision

Il Resp. QPT
Head of QPT

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
DET: Determiner

CDM: Clean Development Mechanism
VCS : Verified Carbon Standard:
GS: Gold Standard
SCS: SocialCarbon Standard
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