FINAL VERIFICATION REPORT "SANIBEY DAM AND HYDROELECTRIC POWER PLANT"

RINA

RINA SERVICES S.P.A.

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Summary:

RINA Services S.p.A. (RINA), commissioned by Sanibey Barajı Elektrik Uretim ve Ticaret A.S., has verified the greenhouse gas emission reductions reported for the project activity "Sanibey Dam and Hydroelectric Power Plant" in Turkey, for the period 02/12/2010 to 31/05/2012, with regard to the relevant requirements for CDM and VCS activities.

The GHG emission reductions were calculated on the basis of the approved methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources" version 12.1.0 of 26/11/2010 and the monitoring plan included in the validated VCS PD version 08 of 03/05/2012.

The objective of the verification is to have an independent review ex post determination of the monitored reductions in GHG emission reductions, reported for the "Sanibey Dam and Hydroelectric Power Plant" project in Turkey for the period 02/12/2010 to 31/05/2012.

Verification was conducted using RINA procedures in line with the requirements specified in the VCS Version 3 Requirements, CDM M&P, the latest version of the CDM Validation and Verification Manual, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques. The verification consisted of desk review, on-site assessment and the resolution of outstanding issues and the issuance of the final verification report and certification.

The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable VCS Version 3 requirements, which refer to CDM rules, in order to be certified.

In conclusion, it is RINA's opinion that the project activity "Sanibey Dam and Hydroelectric Power Plant", in "Turkey", as described in the Monitoring Report version 03 of 08/10/2012, meets all relevant requirements for VCS and CDM activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 12.1.0 of 26/11/2010. Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 02/12/2010 to 31/05/2012 amount to 853,840 tCO_2e.

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1 INTRODUCTION

Sanibey Barajı Elektrik Uretim ve Ticaret A.S. has commissioned RINA to carry out the verification and certification of emission reductions reported for the registered "Sanibey Dam and Hydroelectric Power Plant" project in Turkey, for the period 02/12/2010 to 31/05/2012.

This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria for CDM and VCS, 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 VCS project activity during a defined monitoring period. Certification is the written assurance by the DOE that, during a specific time period, a proposed VCS project activity achieved the reductions in anthropogenic emissions by sources of GHGs as verified.

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 "Sanibey Dam and Hydroelectric Power Plant" project in Turkey for the period 02/12/2010 to 31/05/2012.

1.2 Scope and Criteria

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 VCS Version 3 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.

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.

1.3 Level of assurance

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 VCS and CDM validation and verification. The verification team and the technical reviewers consist of the following personnel:

Role/Qualification	Last Name	First Name	Country
VCS Team Leader – VCS Verifier – Technical Expert	Timuroglu	Isil	Turkey
Technical Reviewer	Valoroso	Rita	Italy
Technical Reviewer in Training	Alfieri	Felice	Italy

1.4 Summary Description of the Project

The project is hydroelectric power plant located in Eastern Mediterranean Region, Aladag District of the Adana Province, Turkey. The project activity consists of 2 vertical axis Francis turbines, each with an 155.33 MWe capacity and making the total installed capacity of 310.66 MWe as confirmed through the Generation License /13. The project boundary in the validated VCS PD /1/ is in line with the actual project boundary. The generated electricity is fed to the national grid. The generated electricity is transmitted to the National Electricity System through Yedigoze Substation, with a 380 kV transmission line. The geographic coordinates of the project activity is confirmed via GPS device during the site visit.

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

Project Participant(s)	Sanibey Barajı Elektrik Uretim ve Ticaret A.S.		
Project Title	Sanibey Dam and Hydroelectric Power Plant		
Location of the project	Eastern Mediterranean Region, Aladag District of the Adana Province, Turkey		
Methodology(ies)	ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 12.1.0 of 26/11/2010 /6/		
Sectoral Scope(s)	1	**RINA's Technical Area(s)**	1.2
Validated VCS PD	Version 08 of 03/05/2012		
VCS Registration Reference No	The project is not registred yet.		
Starting date of the crediting period	02/12/2010 (as confirmed through the Temporary Acceptance Protocol /14/)		
Project's crediting period	02/12/2010 to 28/05/2020		
Monitoring period	02/12/2010 to 01/12/2020 (both days included)		
Project documentation link	The project is not registred yet.		

2 VALIDATION PROCESS, FINDINGS AND CONCLUSION

2.1 Validation Process

The project was validated by Bureau Veritas (Validation Report version 06 of 03/05/2012 /7/) as confirmed through the VCS Validation Deed of Representation of 03/05/2012 /23/.

2.2 Validation Findings

2.2.1 Gap Validation

The project was validated by Bureau Veritas (Validation Report version 06 of 03/05/2012 /7/) as confirmed through the VCS Validation Deed of Representation of 03/05/2012 /23/.

2.2.2 Methodology Deviations

There is not any deviation in the applied methodology to the project activity.

2.2.3 Project Description Deviations

In the validated VCS PD for "Sanibey Dam and Hydroelectric Power Plant" in Turkey, version 08 of 03/05/2012 /1/, the source of the net electricity generation is defined as "Monthly Meter Reading Protocols". However, since TEIAS started to monitor electricity remotely, Monthly Meter Reading Protocols are not available. Therefore, the source of the parameter is defined as "Market Financial Settlement Center (PMUM) records which are the basis of the invoices. The source for cross checking the amount of produced electricity is also revised as "Monthly Reports of Internal SCADA System".

In the validated VCS PD for "Sanibey Dam and Hydroelectric Power Plant" in Turkey, version 08 of 03/05/2012 /1/, the description of measurement methods and procedures to be applied for the parameter "A_{PJ}" is defined as "Measured from topographical surveys, maps, satellite pictures, etc" and the QA/QC Procedures procedure to be applied was defined as "The readings will be done during the period when the water flow is high to have the largest reservoir area". However, the QA/QC procedure is revised as "The reservoir area mentioned above is the maximum reservoir area at maximum altitude. This water level only occurs at the Q500 flood discharge" and the calculation method is defined as "The reservoir area is calculated by a topographical engineer based on the map showing the reservoir area at the maximum altitude."

In the validated VCS PD for "Sanibey Dam and Hydroelectric Power Plant" in Turkey, version 08 of 03/05/2012 /1/, it is mentioned that "*The Electrical Engineers will receive sufficient and continuous training in terms of monitoring and verification on aspects such as meter's reading and calibration and reading's recording, adjustment and reporting every year. If new personnel are hired, they will have to follow up a training program and will be trained in the specific skills required to carry out the Monitoring Plan*". However, the electrical engineers are not trained in terms of meter readings and calibration, since the meter readings are made by TEIAS in every month remotely and the company is not responsible for the calibration of the meters.

These changes are permanent during the crediting period and have been assessed as per the "Clean Development Mechanism Validation and Verification Standard", version 02.0 of 25/11/2011 /5/ and "Project Standard", version 01.0 of 25/11/2011 /27/. The additionality of the project activity is demonstrated by applying investment analysis as per the validated VCS PD /1/.

Therefore, this change does not affect the additionality of the project activity. It has been confirmed that this change does not affect the applicability/application of baseline methodology. Also, the scale of the VCS project remains the same.

2.2.4 New Project Activity Instances

Not applicable.

2.3 Validation Conclusion

The project was validated by Bureau Veritas (Validation Report version 06 of 03/05/2012 /7/) as confirmed through the VCS Validation Deed of Representation of 03/05/2012 /23/.

The changes are permanent during the crediting period and have been assessed as per the "Clean Development Mechanism Validation and Verification Standard", version 02.0 of 25/11/2011 /5/ and "Project Standard", version 01.0 of 25/11/2011 /27/. The additionality of the project activity is demonstrated by applying investment analysis as per the validated VCS PD /1/. Therefore, this change does not affect the additionality of the project activity. It has been confirmed that this change does not affect the applicability/application of baseline methodology. Also, the scale of the VCS project remains the same.

Thus, the requirements of the VCS Standard Version 3 /4/ were satisfied and RINA confirms that the project conforms to the validation criteria for projects, in accordance with "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 12.1.0 of 26/11/2010 /6/.

3 VERIFICATION PROCESS

3.1 Method and Criteria

Verification was conducted using RINA procedures in line with the requirements specified in the VCS Version 3 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:

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

3.2 Document Review

The monitoring report version 01 of 25/06/2012, version 02 of 18/09/2012 and version 03 of 08/10/2012 /2/, the emission reduction calculations provided in the form of a spreadsheet, "Sanibey_Verification(02.12.2010-31.05.2012)_ERs_Calculation.xls" version 01 submitted on 27/06/2012 and "Sanibey_Verification(02.12.2010-31.05.2012)_ERs_Calculation_v2_18.09.2012.xls" version 02 submitted on 18/09/2012 /8/, the approved baseline and monitoring methodology ACM0002 version 12.1.0 /6/ and all the documentation provided to support the monitoring period /01-27/ were assessed as part of the

verification. In addition, the VCS Project Description (VCS PD) /1/, in particular as regards the baseline estimations and the monitoring plan, and the validation report, version 06 of 03/05/2012 /7/ for the project, were reviewed.

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

/1/	GAIA Finansal Danismanlik Hizmetleri Tic. Ltd. Sti.: VCS PD for "Sanibey Dam and Hydroelectric Power Plant" in Turkey, version 08 of 03/05/2012
/2/	GAIA Finansal Danismanlik Hizmetleri Tic. Ltd. Sti.: Monitoring report for "Sanibey Dam and Hydroelectric Power Plant" in Turkey, version 01 of 25/06/2012 GAIA Finansal Danismanlik Hizmetleri Tic. Ltd. Sti.: Monitoring report for "Sanibey Dam and Hydroelectric Power Plant" in Turkey, version 02 of 18/09/2012 GAIA Finansal Danismanlik Hizmetleri Tic. Ltd. Sti.: Monitoring report for "Sanibey Dam and Hydroelectric Power Plant" in Turkey, version 03 of 08/10/2012
/3/	VCS Verified Carbon Standard: VCS Program Guide, VCS Version 03, v3.4 of 04/10/2012
/4/	VCS Verified Carbon Standard: VCS Standard, VCS Version 03, v3.3 of 04/10/2012
/5/	CDM Executive Board: Clean Development Mechanism Validation and Verification Standard, version 02.0 of 25/11/2011
/6/	CDM Executive Board: Baseline and Monitoring Methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 12.1.0 of 26/11/2010
/7/	Bureau Veritas Certification Holding SAS: Validation Report for "Sanibey Dam and Hydroelectric Power Plant" version 06 of 03/05/2012
/8/	GAIA Finansal Danismanlik Hizmetleri Tic. Ltd. Sti.: Emission Reduction Calculation Spreadsheet "Sanibey_Verification(02.12.2010-31.05.2012)_ERs_Calculation.xls" version 01, submitted on 27/06/2012 GAIA Finansal Danismanlik Hizmetleri Tic. Ltd. Sti.: Emission Reduction Calculation Spreadsheet "Sanibey_Verification(02.12.2010-31.05.2012)_ERs_Calculation_v2_18.09.2012.xls" version 02, submitted on 18/09/2012
/9/	VCS Verified Carbon Standard: VCS Verification Report Template Version 3.2
/10/	CDM Executive Board: Methodological Tool "Tool to calculate the emission factor for an electricity system", version 02 of 16/10/2009
/11/	Turkish Electricity Transmission Company (TEIAS): First Index Protocol of 04/10/2010
/12/	Turkish Electricity Transmission Company (TEIAS): Meter Test Reports of 12/06/2012
/13/	Energy Market Regulatory Authority: Generation License numbered EU/799-2/651 of 22/06/2006
/14/	The Ministry of Energy and Natural Resources: Temporary Acceptance Protocol of 02/12/2010 (Unit 1)
/15/	The Ministry of Energy and Natural Resources: Temporary Acceptance Protocol of 26/01/2011 (Unit 2)
/16/	Market Financial Conciliation Center (PMUM): All Monthly Electricity Records with in the Monitoring Period (from 02/12/2010 to 31/05/2012)
/17/	The Ministry of Trade and Industry: Regulation of Metering and Testing of Metering Systems of 24/07/1994
/18/	Energy Market Regulatory Authority: Communiqué for Measurement Devices used in the Electricity Market of 22/03/2003
/19/	Sanibey Barajı Elektrik Uretim ve Ticaret A.S.: Request Letter sent to TEIAS for providing OSF form of 14/09/2012

/20/	Turkish Electricity Transmission Company (TEIAS): OSF Forms related to the monitoring period 02/12/2010 to 31/05/2012
/21/	Sanibey Barajı Elektrik Uretim ve Ticaret A.S.: Expropriation Document, Reservoir Area Calculation Table
/22/	Sanibey Barajı Elektrik Uretim ve Ticaret A.S.: SCADA Monthly Electricity Generation Record, from March 2011 to May 2012
/23/	Bureau Veritas Certification Holding SAS: VCS Validation Deed of Representation of 03/05/2012
/24/	Sanibey Barajı Elektrik Uretim ve Ticaret A.S.: Technical Drawing of Reservoir Area approved by M.Sc. Topographical Engineer, Kemal Ozkan
/25/	Dokay Engineering and Consultancy Ltd. Co.: Assessment of Land Acquisition and Involuntary Resettlement Process in Accordance with the Requirements of the IFC of June 2008
/26/	VCS Verified Carbon Standard: VCS Monitoring Report Template Version 3.2
/27/	CDM Executive Board: Project Standard, version 01.0 of 25/11/2011

3.3 Interviews

The Plant Manager was interviewed during the site visit. To see how the monitoring procedures were implemented, the whole process was explained to the verification team during the site visit. The carbon consultant was interviewed about the monitoring report and related parameters. Whole process related emission reduction calculation was explained.

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

	Date	Name and Role	Organization	Topic
/a/	04/07/2012	Gurkan BAYRAKTAR *Carbon Consultant*	GAIA Finansal Danismanlik Hizmetleri Tic. Ltd. Sti.	Monitoring plan Monitoring methodology Monitoring data Implementation status of the project Monitoring equipments and operation Calibration certificates Emission Reductions calculation
/b/	04/07/2012	Taner SENGONUL *HEPP Investment Assistant Coordinator*	Sanibey Barajı Elektrik Uretim ve Ticaret A.S.	
/c/	04/07/2012	Muhsin DERVISOGULLARI *Environmental Engineer*	Sanibey Barajı Elektrik Uretim ve Ticaret A.S.	
/d/	04/07/2012	Zafer KARAKUZULU *Plant Manager*	Sanibey Barajı Elektrik Uretim ve Ticaret A.S.	

3.4 Site Inspections

On 04/07/2012, RINA visited the wind power plant located in Aladag district, Adana province of Turkey. During the on-site assessment of the project, all the equipments and the systems were accessible. 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.

3.5 Resolution of Any Material Discrepancy

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 VCS requirements, which refer to CDM rules, have been met.

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

Figure 1 Verification protocol tables

Verification Protocol, Table 1 - Requirement checklist					
Checklist Question	**Ref.**	**MoV**	**Comments**	**Draft Conclusion**	**Final Conclusion**
Checklist questions organized in seven 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, CR and FAR see the definitions above.	OK is used if the information and evidence provided is adequate to demonstrate compliance with VCS 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.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

It was verified during the site visit conducted on 04/07/2012 that the proposed project activity has been implemented and it is in operation in accordance to the project activity described in the validated VCS PD /1/.

The project activity has been implemented in 2 phases. On 02/12/2010, the power plant has started operation with 1 turbine and on 26/01/2011 the remaining 1 turbine has been commissioned. Each commissioning date was confirmed through the Temporary Acceptance Protocols /14/ /15/. The carbon crediting period and therefore the monitoring starts when the plant commences electricity generation. Therefore, the crediting period starts on 02/12/2010.

The project activity consists of 2 vertical axis Francis turbines, each with an 155.33 MWe capacity and making the total installed capacity of 310.66 MWe as confirmed through the Generation License /13/. The project boundary in the validated VCS PD /1/ is in line with the actual project boundary. The generated electricity is fed to the national grid. The generated electricity is transmitted to the National Electricity System through Yedigoze Substation, with a 380 kV transmission line. The geographic coordinates of the project activity is confirmed via GPS device during the site visit.

The deviations have been occurred during this monitoring period of 02/12/2010 to 31/05/2012, which are permanent during the crediting. The project description deviations are explained under Section 2.2.3 of this report. These changes are permanent during the crediting period and have been assessed as per the "Clean Development Mechanism Validation and Verification Standard", version 02.0 of 25/11/2011 /5/ and "Project Standard", version 01.0 of 25/11/2011 /27/. The additionality of the project activity is demonstrated by applying investment analysis as per the validated VCS PD /1/. Therefore, this change does not affect the additionality of the project activity. It has been confirmed that this change does not affect the applicability/application of baseline methodology.

Based on the onsite 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/.

Based on the review of Validation Report for "Sanibey Dam and Hydroelectric Power Plant" version 06 of 03/05/2012 issued by Bureau Veritas /7/ no remaining issues was identified.

4.2 Accuracy of GHG Emission Reduction or Removal Calculations

The emission reduction calculations provided in the spreadsheet /8/ have been verified to be correct and in line with the validated VCS PD /1/. According to the applied methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 12.1.0 of 26/11/2010 /6/, the emission reductions have been calculated based on the following formula:

$ERy = BEy - PEy - LEy$

Where:

BEy = Baseline emissions in year y (tCO_2e/yr)

PEy = Project emissions in year y (tCO_2e/yr)

LEy = Leakage emissions in year y (tCO_2e/yr)

Baseline emissions

The baseline emissions include the CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity, multiplying the electricity supplied to the grid (MWh) with the combined margin CO_2 emission factor for grid connected power generation in year.

BEy = $(EG_y - EG_{baseline}) \times EF_{grid,CM,y}$

Where:

EG_y = Annual electricity supplied by the project to the grid (MWh)

$EG_{baseline}$ = Baseline electricity supplied to the grid in the case of modified or retrofit facilities (MWh). For new power plants this value is taken as zero.

$EF_{grid,CM,y}$ = Combined margin grid emission factor (tCO_2/MWh)

Project emissions

Project emissions has been assumed to be 0 since the power density is larger than 10 W/m^2 as per the ACM0002 version 12.1.0 of 26/11/2010 /6/ as defined in the validated VCS PD /1/. During this monitoring period, the reservoir area (A_{PJ}) and installed capacity (Cap_{PJ}) has not changed, therefore there is no change in power density and is still larger than 10 W/m^2.

Leakage emissions

The leakage emissions are assumed to be zero as per the ACM0002 version 12.1.0 of 26/11/2010 /6/ as defined in the validated VCS PD /1/.

The data presented in the monitoring report /2/ 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.

Parameters Available at Validation and Data Fixed Ex-ante

DATA/PARAMETER	Source of data	Reported value for the project period	Assessment/Observation
$EF_{grid,CM,y}$ Baseline emission factor	TEIAS statistics	0.5429 tCO_2/MWh	According to the approved methodology ACM0002 version 12.1.0, the combined emission factor has been determined using the ex-ante option and so it is not requested to monitor and recalculate the emission factors during the crediting period. The combined emission factor is determined to be 0.5429 tCO_2/MWh in the VCS PD /1/ and validation report /7/.

Parameters and Data Monitored

DATA/PARAMETER	$EG_{facility,y}$
Data Unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Source of data to be used	PMUM Records
Value data for the monitoring period	1.572.741,64 MWh

Measuring and reporting frequency; recording procedure	Continuously monitoring and monthly recording
Type of monitoring equipment and its accuracy	Two unit electricity meters (two main meters and two backup meters) are installed at the project site. The main meters are ACTARIS SL761A with serial number 5304206 and 5304209. The backup meters are ACTARIS SL761 with serial number 5304208 and 5304207. The meters have the accuracy of 0.2s as confirmed through the first index protocol /11/ and test reports /12/. The accuracy class of the meters complies with the "Communiqué for Measurement Devices used in the Electricity Market" /18/.
Calibration frequency/interval	TEIAS is responsible for calibration and maintenance of the meters as per the validated VCS PD /1/. The project owner has no control on the meters since the meters are sealed by the TEIAS as confirmed during the site visit. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration. The meters were tested by the electricity transmission company at the project site on 04/10/2010 after the meters were installed /11/. Also, the TEIAS has checked the meters on 12/06/2012 as confirmed through the test reports /12/. As per the "'Regulation of Metering and Testing of Metering Systems" /17/, the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation. During the on-site assessment, it was confirmed that the meters are in place and functioning well. During this monitoring period, no break down has been recorded.
How were the values in the monitoring report verified and cross-checked?	The net electricity generation is based on PMUM records /16/ and crosschecked with OSF forms /20/ and SCADA Monthly records /22/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by Automatic Meter Reading System (OSOS) by the TEIAS. In addition to the measurements made by TEIAS, the internal SCADA system measures the produced electricity. The plant manager checks the records and reports to Operation Manager who is VER coordinator. The collected data during the monitoring period will be kept by the project owner at least two years after end of the last crediting period as stated in the validated VCS PD /1/ and monitoring report /2/, which is in line with the ACM0002 version 12.1.0 of 26/11/2010 /6/.
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?	All the data were available for the whole monitoring period.

DATA/PARAMETER	**Cap_{PJ}**
Data Unit	MW
Description	Installed capacity of the hydro power plant after the implementation of the project activity
Source of data to be used	Generation License
Value data for the monitoring period	310.66 MWe (155.33 MWe x 2)
Measuring and reporting frequency; recording procedure	Yearly
Type of monitoring equipment and its accuracy	The parameter is monitored through the the Temporary Acceptance Protocol /14/ /15/ and crosschecked with Generation License /13/.
Calibration frequency/interval	NA
How were the values in the monitoring report verified and cross-checked?	The equipment label has been seen during on-site visit. Also, the installed capacity is confirmed through the Temporary Acceptance Protocol /14/ /15/ and crosschecked with Generation License /13/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	NA
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?	All the data were available for the whole monitoring period.

DATA/PARAMETER	A_{PJ}
Data Unit	m^2
Description	Area of the reservoir measured on the surface of the water, after the implementation of the project activity, when the reservoir is full
Source of data to be used	Technical drawing
Value data for the monitoring period	14,299,205.54 m^2
Measuring and reporting frequency; recording procedure	Yearly
Type of monitoring equipment and its accuracy	The parameter is monitored through the technical drawing issued.
Calibration frequency/interval	NA
How were the values in the monitoring report verified and cross-checked?	The parameter is monitored through the technical drawing /24/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	NA
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?	All the data were available for the whole monitoring period.

Emission Reductions Achieved

The emission reductions calculation reported in the Monitoring Report version 03 of 18/10/2012 /2/ and calculation spreadsheet "Sanibey_Verification(02.12.2010-31.05.2012)_ERs_Calculation_v2_18.09.2012.xls" version 02 of 18/09/2012 /8/ have been verified to be correct.

The reported emission reductions are equivalent to 853,840 during the monitoring period from 02/12/2010 to 31/05/2012 (totally 18 months). According to the registered VCS PD /1/, the estimated emission reductions are equivalent to 524,729.1 tCO_2e annually. Since the net emission reduction for 2011 year covers all year, the estimated emission reductions are compared with the 2011 emission reduction which is calculated as 511,782.92 tCO_2e. The reported averaged emission reductions are 2.5% lower than the estimated average emission reductions.

4.3 Quality of Evidence to Determine GHG Emission Reductions or Removals

Two unit electricity meters (two main meters and two backup meters) are installed at the project site. The main meters are ACTARIS SL761A with serial number 5304206 and 5304209. The backup meters are ACTARIS SL761 with serial number 5304208 and 5304207. The meters have the accuracy of 0.2s as confirmed through the first index protocol /11/ and test reports /12/. The accuracy class of the meters complies with the "Communiqué for Measurement Devices used in the Electricity Market" /18/.

TEIAS is responsible for calibration and maintenance of the meters as per the validated VCS PD /1/. The project owner has no control on the meters since the meters are sealed by the TEIAS as confirmed during the site visit. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration. The meters were tested by the electricity transmission company at the project site on 04/10/2010 after the meters were installed /11/. Also, the TEIAS has checked the meters on 12/06/2012 as confirmed through the test reports /12/. As per the "Regulation of Metering and Testing of Metering Systems" /17/, the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation.

The net electricity generation is based on PMUM records /16/ and crosschecked with OSF forms /20/ and SCADA Monthly records /22/. The verified electricity generation is in line with the emission reduction excel sheet /8/.

4.4 Management and Operational System

The electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by Automatic Meter Reading System (OSOS) by the TEIAS. In addition to the measurements made by TEIAS, the internal SCADA system measures the produced electricity. The plant manager checks the records and reports to Operation Manager who is VER coordinator. 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 collected data during the monitoring period will be kept by the project owner at least two years after end of the last crediting period as stated in the validated VCS PD /1/ and monitoring report /2/ in line with the ACM0002 version 12.1.0 of 26/11/2010 /6/. The installed capacity of the hydro power plant after the implementation of the project activity is monitored through Temporary Acceptance Protocol /14/ /15/ and crosschecked with Generation License /13/. The reservoir area measured on the surface of the water, after the implementation of the project activity, when the reservoir is full is monitored through the technical drawing /24/.

The responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan presented in the in the validated VCS PD /1/ as confirmed through the interviews.

Plant Manager (Electrical Engineer) is responsible for compliance with VER monitoring plan. Accounting Manager is responsible for providing data about electricity invoices to Operation Manager. Operation Manager is the VER coordinator and responsible for emission reduction calculations and preparing monitoring report.

The collected data during the monitoring period will be kept by the project owner at least two years after end of the last crediting period as stated in the validated VCS PD /1/ and monitoring report /2/ in line with the ACM0002 version 12.1.0 of 26/11/2010 /6/.

During the site visit, the suitability of the management system for monitoring and reporting has been assessed and found acceptable and in line with the monitoring plan presented on Monitoring Report version 03 of 08/10/2012 /2/.

5 VERIFICATION CONCLUSION

RINA Services Spa (RINA) has performed verification of the emission reductions reported for the project activity "Sanibey Dam and Hydroelectric Power Plant" in Turkey, for the period 02/12/2010 to 31/05/2012, with regard to the relevant requirements for CDM and VCS activities.

It is RINA's opinion that the GHG emission reductions stated in the Monitoring Report version 03 of 08/10/2012 for the "Sanibey Dam and Hydroelectric Power Plant" project in Turkey for the period 02/12/2010 to 31/05/2012 are fairly stated. The GHG emission reductions were calculated correctly, on the basis of the approved monitoring methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity from renewable sources", version 12.1.0 of 26/11/2010 and the monitoring plan contained in the validated VCS PD.

Hence, RINA is able to certify that the emission reductions from the project during the monitoring period 02/12/2010 to 31/05/2012 amount to 853,840 tCO_2e.

GHG Emission Reductions or Removals	tCO_2e
Baseline Emissions	853,840
Project Emissions	0
Leakage	0
Net GHG emission reductions or removals	**853,840**

APPENDIX A

VERIFICATION PROTOCOL

TABLE 1 REQUIREMENTS CHECK LIST

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
A	**Monitoring Report**					
A.1	Does the used project title clearly enable the reader to identify the unique VCS activity? Is there an indication of a revision number, the date of the revision and the monitoring period?	/1/ /2/ /7/	DR, CC	The title of the project activity is "Sanibey Dam and Hydroelectric Power Plant" which is enable the reader to identify the unique VCS activity. The title is also in line with the validated VCS PD /1/ and Validation Report /7/. However, the title of the project activity is given as "Sanibey Dam and Hydroelectric Power Plant (Sanibey Dam&HEPP)" at the cover page of Monitoring Report version 01 dated 25/06/2012 /2/. The project ID is not available at the cover page of the Monitoring Report version 01 dated 25/06/2012 /2/ since the project is not registered to the VCS Project Database yet.	~~CL 1~~	OK
A.2	Does the project comply with the applicable requirements for completing the Monitoring Reports (latest version available)?	/2/ /3/ /4/ /9/	DR	The project complies with the applicable requirements for completing the Monitoring Reports.		OK
A.3	Does the MR comply with the template available (latest version)?	/2/ /3/ /4/ /9/	DR	The following issues do not comply with the VCS Monitoring Report Template /9/. - The contact presented at the cover page does not include website - The project description should be reviewed considering that the project is in operation (e.g., Sanibey Baraji Elektrik Uretim ve Ticaret A.S., a subsidiary of Sanko Enerji A.S. *plans to install* a hydro power plant in Adana, Turkey.). - Section 1.2 shall indicate whether the project is a grouped project. - Section 1.3 does not include	~~CAR 1~~	OK

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

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				roles/responsibilities for the project proponent(s).		
B	**Description of Project Activity**					
A.1	Title of the project activity, revision number and date of Monitoring Report	/1/ /2/ /7/	DR, CC	The title of the project activity is given as "Sanibey Dam and Hydroelectric Power Plant" in the Monitoring Report version 01 dated 25/06/2012 /2/. The title is also in line with the validated VCS PD /1/ and Validation Report /7/.		**OK**
A.2	Is the actual implementation and operation of the proposed project activity in accordance with the project activity in the registered VCS-PD?	/1/ /2/ /7/ /13/	DR, CC	The project activity consists of 2 vertical axis Francis turbines, each with an 155.33 MWe capacity and making the total installed capacity of 310.66 MWe as confirmed through the Generation License /13. The project boundary in the validated VCS PD /1/ is in line with the actual project boundary. The generated electricity is fed to the national grid. The generated electricity is transmitted to the National Electricity System through Yedigoze Substation, with a 380 kV transmission line. The geographic coordinates of the project activity is confirmed via GPS device during the site visit.		**OK**
A.3	Methodology applied for the registered project activity	/1/ /2/ /6/ /7/	DR	The project activity applies the approved baseline and monitoring methodology ACM0002 version 12.1.0 of 26/11/2010 /6/ as per the validated VCS PD /1/. However, the project activity is not registered yet. Also, as per the Validation Report /7/ which is submitted to verification team, the applied methodology is ACM0002 version 12.2.0.	~~**CL 2**~~	**OK**
B	**Monitoring**					
B.1	**Monitoring Plan**					
B.1	Is the actual implementation and operation of the proposed project activity in accordance with the project activity in the registered VCS-PD?	/1/ /2/ /7/ /13/	DR, CC, I	It was verified during the site visit conducted on 04/07/2012 that the proposed project activity has been implemented and it is in operation in accordance to the project activity described in the validated VCS PD /1/.		**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				The project activity consists of 2 vertical axis Francis turbines, each with an 155.33 MWe capacity and making the total installed capacity of 310.66 MWe as confirmed through the Generation License /13. The project boundary in the validated VCS PD /1/ is in line with the actual project boundary. The generated electricity is fed to the national grid. The generated electricity is transmitted to the National Electricity System through Yedigoze Substation, with a 380 kV transmission line. The geographic coordinates of the project activity is confirmed via GPS device during the site visit.		
B.2	In case of deviation between the registered project and the actual implementation/operation, do they comply with the requirements of the Project Standards?	/1/ /2/ /7/	DR	The project activity is not registered yet. Please refer to A.3 of this verification protocol.	~~CL 2~~	OK
B.3	For project activity that consist of more than one site: - describe the status of the implementation and starting date of operation of each site; For project activity with phased implementation: - describe the progress of the proposed project activity achieved in each phase number; - if the phased implementation is delayed, described the reasons and the expected implementation dates.	/1/ /2/ /7/ /14/ /15/	DR, CC, I	The project activity has been implemented in 2 phases. On 02/12/2010, the power plant has started operation with 1 turbine and on 26/01/2011 the remaining 1 turbine has been commissioned. Each commissioning date was confirmed through the Temporary Acceptance Protocols /14/ /15/. The carbon crediting period and therefore the monitoring starts when the plant commences electricity generation. Therefore, the crediting period starts on 02/12/2010.		OK
B.4	Methodology and methodological tool applied for the registered project activity	/1/ /2/ /6/ /7/ /10/		The project activity applies the approved baseline and monitoring methodology ACM0002 version 12.1.0 of 26/11/2010 /6/. However, the project activity is not registered yet. Also, as per the Validation Report /7/ which is submitted to verification team, the applied methodology is ACM0002 version 12.2.0. Please refer to Section A.3 of this verification	~~CL 2~~ ~~CL 3~~	OK OK

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				protocol. The following methodological tools are applied for the registered project activity: "Tool to calculate the emission factor for an electricity system, Version 01.1 of 29/07/2008 /10/" The additionality tool applied in the validated VCS PD is not given in the Monitoring Report version 01 dated 25/06/2012 /2/.		
C	**Compliance of the monitoring activities with the registered monitoring plan / Compliance of the monitoring plan with the monitoring methodology and methodological tool**					
C.1	**Monitoring plan**					
C.1.1	Does the monitoring plan included in the registered VCS project activity comply with the applied methodology?	/1/ /2/ /6/ /7/	DR, CC	The monitoring plan of the VCS project activity complies with the applied methodology ACM0002 /6/. However, the project activity has not been registered yet. Please refer to Section A.1 and A.3 of this verification protocol.	~~CL 1~~ ~~CL 2~~	OK OK
C.1.2	Does the monitoring comply with the monitoring plan in the registered VCS-PD?	/1/ /2/ /7/	DR, CC	The monitoring complies with the monitoring plan presented in the validated VCS PD /1/. The following parameters should be monitored as per the monitoring plan in the validated VCS-PD: - Quantity of net electricity generation supplied by the project to the grid in year y, $EG_{facility,y}$ - Installed capacity of the hydro power plant after the implementation of the project activity, Cap_{PJ} - Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full, A_{PJ}		OK
C.2	**Data and parameters fixed ex-ante or at renewal crediting period**					
C.2.1	Which parameters were available at validation and how were they verified?	/1/ /2/ /6/ /7/	DR, CC	As per the approved methodology ACM0002 version 12.1.0, the combined emission factor has been determined using the ex-ante option, so it is not requested to monitor and recalculate the emission factors during this crediting period. The combined emission factor is determined to be		OK

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				0.5429 tCO_2/MWh in the validated VCS PD /1/ and validation report /7/.		
C.2.2	What default data were selected and applied?	/1/ /2/ /6/ /7/	DR, CC	Please refer to Section C.2.1 of this protocol.		**OK**
C.3	**Data and parameters monitored ex-post**					
C.3.1	Which parameters have been monitored during the monitoring period?	/2/ /8/ /13/ /16/	DR, CC, I	***Quantity of net electricity generation supplied by the project to the grid in year y ($EG_{facility,y}$):*** The parameter is measured in MWh and it is monitored by two units electricity meters that are located at the project activity. The net electricity generation is based on PMUM records /16/. It is stated in the monitoring report that the meter reading records are used for crosschecking. However, the meter reading records are not provided. The net electricity generation could not be crosschecked. There is an error in the emission reduction excel sheet /8/ since the April 2012 electricity generation is not correct for second unit. The April 2012 electricity generation is given same for both units. ***Installed capacity of the hydro power plant after the implementation of the project activity (Cap_{PJ}):*** The parameter is measured in W and it is monitored through the supplier information as per the validated VCS PD. However, the source of the parameter is defined as Generation License in the Monitoring Report version 01, which is not in line with the validated VCS PD. The PP is requested to provide supplier information. ***Area of the reservoir measured on the surface of the water, after the implementation of the project activity, when the reservoir is full (A_{PJ}):*** The parameter is measured in m^2. The reservoir area after implementation of project activity when reservoir area is full is defined 14.299.205.54 m^2.	~~**CAR 2**~~	**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				The parameter is monitored through the topographical surveys, maps, satellite pictures, etc. as per the validated VCS PD. PP is requested to provide objective evidence to confirm the reservoir area.		
C.3.2	Is the measurement equipment described? Is the accuracy of the measurement equipment addressed and deemed appropriate?	/2/ /11/ /12/ /13/ /18/	DR, CC	***Quantity of net electricity generation supplied by the project to the grid in year y ($EG_{facility,y}$):*** Two unit electricity meters (two main meters and two backup meters) are installed at the project site. The main meters are ACTARIS SL761A with serial number 5304206 and 5304209. The backup meters are ACTARIS SL761 with serial number 5304208 and 5304207. The meters have the accuracy of 0.2s as confirmed through the first index protocol /11/ and test reports /12/. The accuracy class of the meters complies with the "Communiqué for Measurement Devices used in the Electricity Market" /18/. Two unit electricity meters (two main meters and two backup meters) are installed at the project site. However, the Monitoring Report version 01 /2/ includes only the information of one unit meter. ***Installed capacity of the hydro power plant after the implementation of the project activity (Cap_{PJ}):*** The parameter is monitored through the Generation License /13/. Therefore, measurement equipment is not used. Please refer to C.3.1 of this verification protocol. ***Area of the reservoir measured on the surface of the water, after the implementation of the project activity, when the reservoir is full (A_{PJ}):*** The parameter is monitored through the topographical surveys, maps, satellite pictures, etc. as per the validated VCS PD. Therefore, measurement equipment is not used. Please refer	~~CAR 2~~ ~~CAR 3~~	OK OK

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				to C.3.1 of this verification protocol.		
C.3.3	Is the measuring/reading/recording frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?	/1/ /2/ /6/	DR, I	***Quantity of net electricity generation supplied by the project to the grid in year y ($EG_{facility,y}$):*** The electricity generation supplied to the grid and electricity consumption from the grid is monitored continuously by two unit meters and recorded monthly as verified during the site visit. Monitoring frequency is in line with the applied methodology /6/ and validated VCS PD /1/. ***Installed capacity of the hydro power plant after the implementation of the project activity (Cap_{PJ}):*** The parameter is monitored yearly in line with the applied methodology /6/ and validated VCS PD /1/. ***Area of the reservoir measured on the surface of the water, after the implementation of the project activity, when the reservoir is full (A_{PJ}):*** The parameter is monitored yearly in line with the applied methodology /6/ and validated VCS PD /1/.		**OK**
C.4	**Calibration requirements**					
C.4.1	Are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate?	/1/ /2/ /11/ /12/ /17/	DR, CC	TEIAS is responsible for calibration and maintenance of the meters as per the validated VCS PD /1/. The project owner has no control on the meters since the meters are sealed by the TEIAS as confirmed during the site visit. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration. The meters were tested by the electricity transmission company at the project site on 04/10/2010 after the meters were installed /11/. Also, the TEIAS has checked the meters on 12/06/2012 as confirmed through the test reports /12/. As per the "'Regulation of Metering and Testing of Metering Systems" /17/, the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance		**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				with the national regulation.		
C.4.2	Does the calibration cover the monitoring period?	/1/ /2/ /11/ /12/ /17/	DR, CC	The meters were tested by the electricity transmission company at the project site on 04/10/2010 after the meters were installed /11/. Also, the TEIAS has checked the meters on 12/06/2012 as confirmed through the test reports /12/. As per the "'Regulation of Metering and Testing of Metering Systems" /17/, the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation.		**OK**
C.4.3	Has the calibration frequency been respected?	/1/ /2/ /11/ /12/ /17/	DR, CC	The meters were tested by the electricity transmission company at the project site on 04/10/2010 after the meters were installed /11/. Also, the TEIAS has checked the meters on 12/06/2012 as confirmed through the test reports /12/. As per the "'Regulation of Metering and Testing of Metering Systems" /17/, the meters shall be calibrated every 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation.		**OK**
C.4.4	In case of delay, describe the applied maximum permissible error	/2/ /11/ /12/ /17/	DR, CC	Please refer to Section C.4.3 of this protocol.		**OK**
C.5	**Monitoring of the sustainable indicators**					
C.5.1	Is the monitoring of sustainable development indicators/environmental impacts warranted by legislation in the Host Country?	/1/	DR	The monitoring of sustainable development indicators is not requested by the legislation in the Host Country.		**OK**
C.6	**Management system and quality control**					
C.6.1	How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design?	/1/ /2/	DR, I	An on-site inspection has been performed on 04/07/2012 and it has been confirmed that the monitoring arrangements in the monitoring plan are feasible within the project design.		**OK**
C.6.2	Are procedures identified for day-to-day record handling (including what records to keep, storage area of records and how to process	/1/ /2/ /6/	DR, CC, I	The electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by Automatic	~~CL 4~~	**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
	performance documentation)? 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 CERs, for this project activity, whichever occurs later?			Meter Reading System (OSOS) by the TEIAS. TEIAS informs the plant manager by e-mail, the OSF Form is sent to plant manager. The plant manager checks the records and reports to Operation Manager who is VER coordinator. However, the OSF forms are not available during the site visit. The plant manager has mentioned that the OSF forms are sent by the TEIAS recently. The collected data during the monitoring period will be kept by the project owner at least two years after end of the last crediting period as stated in the validated VCS PD /1/ and monitoring report /2/ in line with the ACM0002 version 12.1.0 of 26/11/2010 /6/.		
C.6.3	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/ /2/	DR, I	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 collected data during the monitoring period will be kept by the project owner at least two years after end of the last crediting period.		**OK**
C.6.4	Are the responsibilities and authorities for monitoring and reporting in accordance with the responsibilities and authorities stated in the monitoring plan?	/1/ /2/	DR, I	The responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan presented in the in the validated VCS PD /1/ as confirmed through the interviews. Plant Manager (Electrical Engineer) is responsible for compliance with VER monitoring plan. Accounting Manager is responsible for providing data about electricity invoices to Operation Manager. Operation Manager is the VER coordinator and responsible for emission reduction		**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
				calculations and preparing monitoring report.		
C.6.5	Does data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	/1/ /2/	DR, I	The data management (from monitoring equipment to emission reduction calculation) ensures correct transfer of data and reporting of emission reductions.		**OK**
D.1	**Assessment of data and calculation of emission reductions / Accuracy of emission reduction calculations**					
D.1.1	How were the values in the monitoring report verified and cross-checked?	/2/ /8/ /13/ /14/ /15/ /18/ /19/ /20/		***Quantity of net electricity generation supplied by the project to the grid in year y ($EG_{facility,y}$):*** The net electricity generation is verified throughthe PMUM records /16/. However, the net electricity generation could not be crosschecked. Please refer to Section C.3.1 of this verification protocol. ***Installed capacity of the hydro power plant after the implementation of the project activity (Cap_{PJ}):*** The source of the parameter is defined as Generation License in the Monitoring Report version 01, which is not in line with the validated VCS PD. The parameter could not be verified yet. Please refer to Section C.3.1 of this verification protocol. ***Area of the reservoir measured on the surface of the water, after the implementation of the project activity, when the reservoir is full (A_{PJ}):*** The parameter is monitored through the topographical surveys, maps, satellite pictures, etc. as per the validated VCS PD. PP is requested to provide objective evidence to confirm the reservoir area. The parameter could not be verified yet. Please refer to Section C.3.1 of this verification protocol.	~~**CAR 2**~~	**OK**
D.1.2	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	/1/ /2/ /6/ /8/	DR	The emission reduction calculations are based on the data measured using calibrated meters of adequate accuracy. Apart from the ex-ante emissions factor, no other assumption is used in these calculations in line with the ACM0002 version		**OK**

Checklist Question		Reference	MoV[1]	Comments	Draft Conclusion	Final Conclusion
	or has a request for deviation been approved?			12.1.0 of 26/11/2010 /6/ and validated VCS PD /1/.		
D.1.3	Emission reductions reported	/2/ /8/	DR	The emission reduction reported in the Monitoring Report is not correct since there is an error in the emission reduction excels sheet /8/.	~~CAR 2~~	OK
D.1.4	Difference between the emission reductions estimated in the registered registered VCS PD and the emission reductions reported for the monitoring period.	/2/ /8/	DR	The emission reduction reported in the Monitoring Report is not correct since there is an error in the emission reduction excels sheet /8/.	~~CAR 2~~	OK

TABLE 2 RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
CAR 1 The following issues do not comply with the VCS Monitoring Report Template /9/. - The contact presented at the cover page does not include website - The project description should be reviewed considering that the project is in operation (e.g., Sanibey Baraji Elektrik Uretim ve Ticaret A.S., a subsidiary of Sanko Enerji A.S. *plans to install* a hydro power plant in Adana, Turkey.). - Section 1.2 shall indicate whether the project is a grouped project. - Section 1.3 does not include roles/responsibilities for the project proponent(s).	A.3	- websites of contacts have been added - Corrected accordingly. - The following explanation has been added under Section 1.2: "*Sanibey Dam & HEPP is not a grouped project*" - Roles and responsibilities of the project proponent has been added to the Section 1.3 of the Monitoring Report, v2. In addition, contact information and roles/responsibilities of GAIA Carbon Finance have been added under "**Section 1.4 Other Entities involved in the project**" of the MR.	- The web sites of contacts have been inserted. - Please clarify the following issues: • In the Monitoring Report, the chancing of the name has been explained and it is stated that the Turkish Trade Registry Gazette related with this issue has been submitted to verification DOE. The related Turkish Trade Registry Gazette has not been submitted to RINA. Also, this issue is covered by the validation stage and has not been realized during this monitoring period. • Please clarify following statement given in the project description: "*It shall be registered as a VCS project in order to facilitate the project implementation by means of financial inflows coming from the credits sale.*" • It is stated in the Monitoring Report as

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
			follows: "*Sanibey Dam & HEPP, which is planned to be constructed ….*" The Monitoring Report includes lots of statement such as. The Monitoring Report shall be reviewed considering that the project is in operation. - It is mentioned under Section 1.2 of the Monitoring Report version 02 /2/ that the project is not a grouped project. - The roles and responsibilities are defined under Section 1.3 of the Monitoring Report version 02 /2/. - The monitoring period given at the cover page is not correct. - The page number presented at the "Table of Contents" section must be revised. The revision of the monitoring report and the explanations provided by the PP can not be considered satisfactory, thus the CAR 1 is not closed. **2nd review:** - The statement has been removed. - The statement has been removed. - The Monitoring Report has been revised accordingly. - The monitoring period given at the cover page is corrected. - The page number presented at the "Table of Contents" was revised. The revision of the monitoring report and the explanations provided by the PP can be considered satisfactory, thus the CAR 1 is closed.

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
CAR 2 ***Quantity of net electricity generation supplied by the project to the grid in year y ($EG_{facility,y}$):*** It is stated in the monitoring report that the meter reading records are used for crosschecking. However, the meter reading records are not provided. The net electricity generation could not be crosschecked. There is an error in the emission reduction excel sheet /8/ since the April 2012 electricity generation is not correct for second unit. The April 2012 electricity generation is given same for both units. ***Installed capacity of the hydro power plant after the implementation of the project activity (Cap_{PJ}):*** The source of the parameter is defined as Generation License in the Monitoring Report version 01, which is not in line with the validated VCS PD. The PP is requested to provide supplier information. ***Area of the reservoir measured on the surface of the water, after the implementation of the project activity, when the reservoir is full (A_{PJ}):*** The parameter is measured in m^2. The reservoir area after implementation of project activity when reservoir area is full is defined 14.299.205.54 m^2. The parameter is monitored through the topographical surveys, maps, satellite pictures, etc. as per the validated VCS PD. PP is requested to provide objective evidence to confirm the reservoir area.	C.3.1	**$EG_{facility,y}$:** Please find attached the meter reading records. For December 2010 and January 2011, signed meter reading records are provided. For the rest of the months, OSF forms are provided at the attachment. Electricity generation figure of second unit for April 2012 has been corrected. The Monitoring Report has been revised accordingly. ***Cap_{PJ}:*** In line with the validated VCS PD, the installed capacity is monitored from the supplier information. The statement in the Monitoring Table has been corrected as: "The data is monitored from the information on the equipment on site and from the Provisional Acceptance Letter which was approved and signed by the representative of the supplier company, Alstom Power Ltd. Şti. In addition, the installed capacity was checked with the electricity generation license which was granted by Energy Market Regulatory Authority." Please see the relavant pages of the Provisional Acceptance Letter which was approved and signed by Mr. Kıvan Arifioğlu from ALSTOM. ***(A_{PJ}):*** Calculation method, QA/QC procedures for the parameter has been revised and it is explained in Section 2.2 of the MR, v2.	***Quantity of net electricity generation supplied by the project to the grid in year y ($EG_{facility,y}$):*** The OSF forms have been requested by PP from TEIAS on 14/09/2012 as confirmed through the request letter /19/. Based on PP's request, TEIAS have submitted OSF forms /19/. However, OSF forms from October 2011 to May 2012 do not include electricity consumption of the project activity. Therefore, the electricity consumption of the project activity could not be crosschecked. The electricity generation of April 2012 has been corrected. The net electricity generation during monitoring period is 1,572,741.64 MWh. ***Installed capacity of the hydro power plant after the implementation of the project activity (Cap_{PJ}):*** The source of the parameter is corrected in line with the validated VCS PD. The equipment label has been seen during on-site visit. Also, the installed capacity is confirmed through the Temporary Acceptance Protocol /14/ /15/ and crosschecked with Generation License /13/. ***Area of the reservoir measured on the surface of the water, after the implementation of the project activity, when the reservoir is full (A_{PJ}):*** The parameter shall be monitored through the topographical surveys, maps, satellite pictures, etc. as per the validated VCS PD /1/ and applied methodology /6/. However, in the Monitoring Report version 02 /2/, the reservoir area is calculated based on

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
			the expropriation document (Reservoir Area Calculation Table). The provided expropriation document /21/ is a table, which has been prepared by the PP. The document is not an official document or approved by an authority. Also, it shall be demonstrated that reservoir area has been calculated when reservoir area is full. The electricity generation could not be crosschecked and the reservoir area based topographical surveys, maps, satellite pictures, etc. when reservoir area is full could not be justified, thus the CAR 2 is not closed. **2nd review:** ***Quantity of net electricity generation supplied by the project to the grid in year y ($EG_{facility,y}$):*** The electricity generation has been crosschecked with SCADA records /22/ from March 2011 to May 2012. The deviation is explained in the Monitoring Report. ***Area of the reservoir measured on the surface of the water, after the implementation of the project activity, when the reservoir is full (A_{PJ}):*** The reservoir area is based on the topographical drawings which is based on the maximum water level as confirmed through the technical drawing /24/. The revision of the monitoring report and the explanations provided by the PP can be considered satisfactory, thus the CAR 2 is closed.
CAR 3	C.3.2	Please find attached the meter test reports for	The meter information of both units have been

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Quantity of net electricity generation supplied by the project to the grid in year y ($EG_{facility,y}$): Two unit electricity meters (two main meters and two backup meters) are installed at the project site. However, the Monitoring Report version 01 /2/ includes only the information of one unit meter.		all meters. (2 main meters and 2 backup meters for 2 units.) Information regarding the meters of the power plant has been revised accordingly in the Monitoring Report, v2.	included in Monitoring Report version 02 /2/. The revision of the monitoring report and the explanations provided by the PP can be considered satisfactory, thus the CAR 3 is closed.
CL 1 The title of the project activity is "Sanibey Dam and Hydroelectric Power Plant" which is enable the reader to identify the unique VCS activity. The title is also in line with the validated VCS PD /1/ and Validation Report /7/. However, the title of the project activity is given as "Sanibey Dam and Hydroelectric Power Plant (Sanibey Dam&HEPP)" at the cover page of Monitoring Report version 01 dated 25/06/2012 /2/. The project ID is not available at the cover page of the Monitoring Report version 01 dated 25/06/2012 /2/ since the project is not registered to the VCS Project Database yet.	A.1 C.1.1	Since the project has not been registered to VCSD database yet, no project ID is available. The company is planning to register project to the VCS after the 1st verification is completed. VCS does not have a rule for the registration before the verification. Please see Section 4 of the VCS Version 3 Procedural Document: Registration and Issuance Process (http://v-c-s.org/sites/v-c-s.org/files/Registration%20and%20Issuance%20Process%2C%20v3.3.pdf)	The explanations provided by the PP can be considered satisfactory. The title of the project activity is "Sanibey Dam and Hydroelectric Power Plant", however it is given as "Sanibey Dam and Hydroelectric Power Plant (Sanibey Dam&HEPP)" at the cover page of Monitoring Report version 02 /2/. The title presented at the cover page is not correct, thus CL 1 is not closed. **2nd review:** The title has been corrected and and the explanations provided by the PP can be considered satisfactory, thus the CL 1 is closed.
CL 2 The project activity applies the approved baseline and monitoring methodology ACM0002 version 12.1.0 of 26/11/2010 /6/ as per the validated VCS PD /1/. However, the project activity is not registered yet. Also, as per the Validation Report /7/ which is submitted to verification team, the applied methodology is ACM0002 version 12.2.0.	A.3 B.2 B.4 C.1.1	The company prefers to register project under VCS database after the completion of the initial verification of the project, as also done in its previous projects (Cevizlik and Kalkandere HEPP projects) Cevizlik HEPP was first verified and then registered to VCS database. (Initial verification of Kalkandere was completed in July 2012 by Bureau Veritas Turkey and has not been registered yet.) The approved methodology ACM0002 /	The referred other projects of the project owner has been developed under VCS Version 2007.1 and the both validation and verification has been performed by same DOE. Therefore, comparing "Sanibey Dam and Hydroelectric Power Plant" with other project is not reasonable. It is not clear that the provided VCS PD version 08 of 03/05/2012 /1/ is the basis of the provided Validation Report version 06 of

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
		Version 12.1.0 was applied in this project and validation report was granted to the company in line with this version of the methodology. However, there is a mistake in the Validation Report on page 2 of the report which refers to ACM0002/Version 12.2.0. In the rest, the report refers to ACM0002 / Version 12.1.0.	03/05/2012 /7/ since there are discrepancies. At the cover page of Validation Report /7/, VCS PD version 06 of 15/02/2012 is referred, even VCS PD version 08 of 03/05/2012 /1/ is provided to RINA as a validated VCS PD. Also, the validation representation, which is the deed issued by the validation body containing a unilateral representation that it has validated the project's compliance with the applicable VCS rules is not provided to RINA. The explanations provided by the PP can be considered satisfactory, thus the CL 2 is not closed. **2nd review:** The Deed of Representation of 03/05/2012 /23/ has been provided. The explanations provided by the PP can be considered satisfactory, thus the CL 2 is closed.
CL 3 The following methodological tools are applied for the registered project activity: "Tool to calculate the emission factor for an electricity system, Version 01.1 of 29/07/2008 /10/" The additionality tool applied in the validated VCS PD is not given in the Monitoring Report version 01 dated 25/06/2012 /2/.	B.4	Additionality tool, v05.2 has been mentioned under Section 1.8 of the revised Monitoring Report.	Additionality tool is included to the Monitoring Report version 02 /2/. The revision of the monitoring report can be considered satisfactory, thus the CL 3 is closed.
CL 4 The electricity generation supplied to the grid and electricity consumption from the grid is read remotely from the electricity meters by	C.6.2	Please find attached the OSF Forms.	The OSF forms have been requested by PP from TEIAS on 14/09/2012 as confirmed through the request letter /19/. Based on PP's request, TEIAS have submitted OSF forms

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
Automatic Meter Reading System (OSOS) by the TEIAS. TEIAS informs the plant manager by e-mail, the OSF Form is sent to plant manager. The plant manager checks the records and reports to Operation Manager who is VER coordinator. However, the OSF forms are not available during the site visit. The plant manager has mentioned that the OSF forms are sent by the TEIAS recently.			/19/. However, OSF forms from October 2011 to May 2012 do not include electricity consumption of the project activity. AS per the QA/QC procedures explained in the Monitoring Report /2/, the plant manager checks the records and reports to Operation Manager who is VER coordinator. It is not clear how in-house checking has been performed during the monitoring period. The in-house crosschecking could not be justified, thus the CL 4 is not closed. **2nd review:** The electricity generation has been crosschecked with SCADA records /22/ from March 2011 to May 2012. The deviation is explained in the Monitoring Report. The revision of the monitoring report can be considered satisfactory, thus the CL 4 is closed.