



Industrie Service

Verification Report

Aqua Power Limited

Initial Verification and 1st Periodic Verification

of the

“Lohgarh, Chakbhai and Sidhana Mini Hydroelectric Projects”

Report No. 812601, Version 01

3 May 2006

**TÜV Industrie Service GmbH TÜV SÜD Group
Carbon Management Service
Westendstr. 199 - 80686 Munich - GERMANY**

Initial Verification and First Periodic Verification of the “Lohgarh, Chakbhai and Sidhana Mini Hydroelectric Projects”

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Report No.	Date of first issue	Version:	Date of this revision	Certificate No.
812601	18 th April 2006	01	3 rd May 2006	-
Subject:	Initial and First Periodic Verification of a CDM Project			
Executing Operational Unit:	TÜV Industrie Service GmbH TÜV SÜD Group Carbon Management Service Westendstr. 199 – 80686 Munich, Federal Republic of Germany			
Client:	M/s Aqua Power Limited B-37, Sector 1, Noida - 201301 Gautam Budh Nagar Uttar Pradesh India			
Contract approved by:	Michael Rumberg			
Report Title:	Initial Verification and 1 st Periodic Verification of the “Lohgarh, Chakbhai and Sidhana Mini Hydroelectric Projects” by Aqua Power Limited			
Number of pages	18 (excluding cover page and annexes)			
Summary: <p>TÜV Industrie Service GmbH TÜV SÜD Group has performed a verification of the CDM project: “Lohgarh, Chakbhai and Sidhana Mini Hydroelectric Projects”. The verification is based on the currently valid documentation of the UN Framework Convention on Climate Change (UNFCCC). In this context, the relevant documents are the "Marrakech Accords".</p> <p>The management of Aqua Power Limited is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the “Lohgarh, Chakbhai and Sidhana Mini Hydroelectric Projects” on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version dated March 2006. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project is the responsibility of the management of the project.</p> <p>The verifier confirms that the project is implemented as planned and described in validated and registered project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is ready to generate GHG emission reductions.</p> <p>The verifier can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project’s GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated we confirm the following statement:</p> <p><u>Reporting period:</u> From 20-11-2004 to 31-03-2006</p> <p><u>Verified emission in the above reporting period:</u></p> <p>Baseline emissions: 17.430 t CO₂ equivalents Project emissions: 0 t CO₂ equivalents Emission reductions: 17.430 t CO₂ equivalents</p>				
Work carried out by: <ul style="list-style-type: none">Michael Rumberg (Project manager, GHG lead auditor)Sunil Kathuria (Lead Auditor Environmental Management Systems (ISO 14001), Local expert, GHG auditor)Dr. Sven Kolmetz (Lead auditor emission inventory verification, Technical expert, GHG auditor - trainee)Prabhat Kumar (Lead Auditor Environmental Management Systems (ISO 14001), Local expert, GHG auditor - trainee)			Internal Quality Control by: <ul style="list-style-type: none">Werner Betzenbichler (Project manager, GHG lead auditor)	



Abbreviations

APL	Aqua Power Limited
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
ER	Emission reduction
FAR	Forward Action Request
GHG	Greenhouse gas(es)
JI	Joint Implementation
KP	Kyoto Protocol
MP	Monitoring Plan
MW	Megawatts
NGO	Non Governmental Organization
PDD	Project Design Document
PSEB	Punjab State Electricity Board
TÜV SÜD	TÜV Industrie Service GmbH TÜV SÜD Group
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual



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1 INTRODUCTION

1.1 Objective

Aqua Power Limited has commissioned an independent verification by TÜV Industrie Service GmbH TÜV SÜD Group (TÜV SÜD) of its CDM project: “Lohgarh, Chakbhai and Sidhana Mini Hydroelectric Projects”. Verification is the periodic independent review and ex post determination by the Designated Operational Entity / Independent Entity of the monitored reductions in GHG emissions during the defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification:

- **Initial Verification:** The objective of an initial verification is to verify that the project is implemented as planned, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate verifiable emission reductions. A separate initial verification prior to the project entering into regular operations is not a mandatory requirement.
- **Periodic Verification:** The objective of the periodic verification is to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan; further more the periodic verification evaluates the GHG emission reduction data and express a conclusion with a high, but not absolute, level of assurance about whether the reported GHG emission reduction data is “free” of material misstatements; and verifies that the reported GHG emission data is sufficiently supported by evidence, i.e. monitoring records. If no prior initial verification has been carried out, the objective of the first periodic verification also includes the objectives of the initial verification.

The verification shall consider both quantitative and qualitative information on emission reductions. Quantitative data comprises the monitoring reports submitted to the verifier by the project entity. Qualitative data comprises information on internal management controls, calculation procedures, and procedures for transfer, frequency of emissions reports, review and internal audit of calculations/data transfers.

The verification follows UNFCCC criteria, refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed in the Bonn Agreement and the Marrakech Accords.

1.2 Scope

Verification scope is defined as an independent and objective review and ex post determination by the Designated Operational Entity of the monitored reductions in GHG emissions. The verification is based on validated project design document including baseline. These documents are reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. TÜV SÜD has, based on the recommendations in the Validation and Verification Manual, employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of CERs.

The verification is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

The audit team has been provided with a Draft Monitoring Report in the beginning of April 2006, covering the period November 20, 2004 – March 31, 2006. A fact finding mission in form of an



on-site audit and - based on the documentation received - a document review has taken place. Afterwards the client decided to revise the Monitoring Report according to the CAR and CR indicated in the audit process. The final Monitoring Report version submitted in the end of April 2006 has been made publicly available on the UNFCCC website (see the following link: <http://cdm.unfccc.int/Issuance/MonitoringReports>) and serves as the basis for the assessment presented herewith.

Studying the existing documentation belonging to this project, it was obvious that the competence and capability of the audit team performing the verification have to cover at least the following aspects:

- Knowledge of Kyoto Protocol and the Marrakech Accords
- Environmental and Social Impact Assessment
- Skills in environmental auditing (ISO 14000, EMAS)
- Quality assurance
- Technical aspects of hydro power
- Monitoring concepts
- Political, economical and technical random conditions in host country

According to these requirements TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV certification body “climate and energy”:

Michael Rumberg is head of the division CDM/JI at TÜV Industrie Service GmbH TÜV SÜD Group. In his position he is responsible for the implementation of validation, verification and certifications processes for greenhouse gas mitigation projects in the context of the Kyoto Protocol. Before entering this company he worked as an expert for renewable energy, forestry, environmental issues, climate change and sustainability within the environmental branch of an insurance company. His competences are covering risk assessments, quality and environmental auditing (EMS auditor), baseline setting, monitoring and verification due to the requirements of the Kyoto Protocol.

Sunil Kathuria is a lead auditor for quality and environmental management systems (according to ISO 9001 and ISO 14001) at TÜV South Asia Pvt. Ltd. He is based in New Delhi. In his position he is implementing validation, verification and certifications audits for management systems. He has received extensive training in the CDM validation process, is an appointed lead auditor for CDM projects and participated already in several CDM project assessments.

Dr. Sven Kolmetz is a lead auditor for GHG inventory verification (being an officially designated expert for verifications under the EU-ETS trading scheme). He holds a Master Degree in physics from the University of Karlsruhe, Germany. Dr. Kolmetz worked for 9 years as a consultant with concepts for reliable and efficient energy supply and has comprehensive experience with all types of energy generation equipment especially biomass and solar energy. He has received extensive training in the CDM and JI validation processes and participated already in several CDM and JI project assessments.

Prabhat Kumar is an auditor for environmental management systems (according to ISO 14001) at TÜV South Asia Pvt. Ltd. He is based in New Delhi. He has received extensive training in the CDM validation process and participated as a auditor in the audit team.

The audit team covers the above mentioned requirements as follows:

- Knowledge of Kyoto Protocol and the Marrakech Accords (ALL)
- Environmental and Social Impact Assessment (RUMBERG / KATHURIA / KUMAR)



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- Skills in environmental auditing (ALL)
- Quality assurance (ALL)
- Technical aspects of biomass plants (KATHURIA / RUMBERG / KOLMETZ)
- Monitoring concepts (KATHURIA / RUMBERG / KOLMETZ)
- Political, economical and technical random conditions in host country (KATHURIA / KUMAR)

In order to have an internal quality control of the project, a team of the following persons has been composed by the certification body “climate and energy”:

- Werner Betzenbichler (head of the certification body “climate and energy”)

1.3 GHG Project Description

The project involves the implementation of three mini hydroelectric power plants aggregating to 5.2 MW at Lohgarh (2 MW), Chakbhai (2 MW) and Sidhana (1.2 MW). The electricity generated will be sold primarily to the state grid.

Project participants are Aqua Power Limited, India.

The project starting date is 09/07/2003 and the 10 year non renewable crediting period starts 20/11/2004.



2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual (for further information see www.vvmanual.info), an initiative of all Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a verification protocol was customized for the project, according to the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM/JI project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been proved and the result of the verification.

The verification protocol consists of four tables. The different columns in these tables are described in Figure 1.

The completed protocol is enclosed in Annex 1 to this report.

Initial Verification Checklist – table 1			
OBJECTIVE	Ref.	COMMENTS	Concl.(incl FARs/CARs)
<i>The requirements the project must meet.</i>	<i>Gives reference to the legislation or agreement where the requirement is found.</i>	<i>Description of circumstances and further commendation to the conclusion.</i>	<i>This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the Verification report. The Initial Verification has additional Forward Action Requests (FAR). FAR indicates essential risks for further periodic verifications</i>



Periodic Verification Checklist		
Table 1: Data Management System/Controls		
Expectations for GHG data management system/controls	Score	Verifiers Comments (including <i>Forward Action Requests</i>)
The project operator's data management system/controls are assessed to identify reporting risks and to assess the data management system's/control's ability to mitigate reporting risks. The GHG data management system/controls are assessed against the expectations detailed in the table.	<p>A score is assigned as follows:</p> <p>Full all best-practice expectations are implemented.</p> <p>Partial a proportion of the best practice expectations is implemented</p> <p>Limited this should be given if little or none of the system component is in place.</p>	<p><i>Description of circumstances and further commendation to the conclusion. This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the Verification report. The Initial Verification has additional Forward Action Requests (FAR). FAR indicates essential risks for further periodic verifications</i></p>

Periodic Verification Checklist		
Table 2: GHG calculation procedures and management control testing		
Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
<p>Identification of potential reporting risks based on an assessment of the emission estimation procedures.</p> <p>Identification of key source data. Focus on those risks that impact the accuracy, completeness and consistency of the reported data.</p>	<p>Identification of the key controls for each area with potential reporting risks. Assessment of adequacy of the key controls and eventually test that the key controls are actually in operation.</p> <p>Internal controls include, Understanding of responsibilities and roles, Reporting, reviewing and formal management approval of data; Procedures for ensuring data completeness, conformance with reporting guidelines, maintenance of data trails etc.</p>	<p><i>Identification of areas of residual risks, i.e. areas of potential reporting risks where there are no adequate management controls to mitigate potential reporting risks</i></p> <p><i>Areas where data accuracy, completeness and consistency could be improved are highlighted.</i></p>



Periodic Verification Checklist		
Table 3: Detailed audit testing of residual risk areas and random testing		
Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including FARs)
<p><i>List of residual areas of risks of Periodic Verification Checklist Table 2 where detailed audit testing is necessary.</i></p> <p><i>In addition, other material areas may be selected for detailed audit testing.</i></p>	<p><i>The additional verification testing performed is described. Testing may include:</i></p> <ul style="list-style-type: none"> ▪ <i>Sample cross checking of manual transfers of data</i> ▪ <i>Recalculation</i> ▪ <i>Spreadsheet ‘walk throughs’ to check links and equations</i> ▪ <i>Inspection of calibration and maintenance records for key equipment</i> ▪ <i>Check sampling analysis results</i> <p><i>Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.</i></p>	<p><i>Having investigated the residual risks, the conclusions are noted here. Errors and uncertainties are highlighted.</i></p>

Figure 1 Verification Protocol Tables

2.1 Review of Documents

The monitoring report submitted by the client and additional background documents related to the project performance were reviewed. A complete list of all documents reviewed is attached as annex 2 to this report.

2.2 Follow-up Interviews

On April 10, 2006 TÜV SÜD performed interviews with project stakeholders to confirm selected information. Representatives of Aqua Power Limited were interviewed. The main topics of the interviews are summarized in Table 1.



Table 1 Interview topics

Interviewed organization	Interview topics
Aqua Power Limited	<ul style="list-style-type: none"> ➤ Project design and implementation ➤ Technical equipment and operation ➤ Monitoring plan ➤ Monitored data ➤ Data uncertainty and residual risks ➤ GHG calculation ➤ Environmental impacts ➤ Stakeholder process ➤ Compliance with national laws and regulations

2.3 Resolution of Corrective and Forward Action Requests

The objective of this phase of the verification was to resolve the requests for corrective actions and any other outstanding issues which needed to be clarified for TÜV SÜD's positive conclusion on the GHG emission reduction calculation. The Corrective Action Request, raised by TÜV SÜD was resolved during communication between the client and TÜV SÜD. Forward Action Requests are indicated issues which do not effect the generation of emission reduction in the verified period, but shall be improved in order to ensure the reliability of future data. To guarantee the transparency of the verification process, the concerns raised and responses that have been given are summarized in chapter 3 below and documented in more detail in the verification protocol in annex 1.

3 VERIFICATION FINDINGS

In the following sections the findings of the verification are stated. The verification findings for each verification subject are presented as follows:

The findings from the desk review of the final monitoring report and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Verification Protocol in annex 1.

- 1) Where TÜV SÜD had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Corrective or Forward Action Request, respectively, have been issued. The Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in annex 1. The verification of the project resulted in one Corrective Action Request and one Clarification Request.
- 2) Where Corrective Action Requests have been issued, the exchanges between the Client and TÜV SÜD to resolve these Corrective Action Requests are summarized.
- 3) In the context of Forward Action Requests, risks have been identified, which may endanger the delivery of high quality CERs in the future, i.e. by deviations from standard procedures as defined by the MP. As a consequence, such aspects should receive a special focus during the next consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions. Forward Action Requests are understood as recommendation for future project monitoring; they are stated, where applicable, in the following sections and are further documented in the Verification Protocol in annex 1.
- 4) The final conclusions for verification subject are presented.

The verification findings relate to the project implementation as documented and described in the final monitoring report.

Initial Verification Findings

3.1 Remaining issues, CARs, FARs from previous validation

3.1.1 Discussion

Based on the validation report the verification team identified no missing steps. The project has been registered under the CDM by April 30, 2006 under the reference number UNFCCC00000327.

3.1.2 Findings

None

3.1.3 Conclusion

The project complies with the requirements.

3.2 Project Implementation

3.2.1 Discussion

Project has been implemented as defined in the PDD and there is no change in the major equipments.

The turbine and its accessories, induction Generator for site Lohgarh, Chakbhai and Sidhana is from M/s Boving Fouress Limited, Bangalore. The project has been fully implemented as defined in the PDD. The plant 11 KV feeder was connected to the 66 KV grid substation for the first time on 14th November 2004 for purpose of synchronization. Real power export started taking place with 14th November 2004.

The Sidhana site is just now in construction stage.

The projects are based on low head canal drop base located on the Bhatinda Branch Canal District Sangrur, Punjab, India.

There are two sealed meters (L & T, Electronic Trivector meter as per Punjab State Electricity Board specification), one primary and one secondary as a backup for the primary meter.

The meters are installed in the substation premises “L&T , Electronic Trivector meter” and this is a restricted area. The metering panel for the main meters and the check meters are sealed sheet metal enclosures.

Power purchase agreement clearly states that payment shall be made through main meter

In the event of main meter failure the recording shall be done on check meters and will switch back to main meter after the meter is repaired, calibrated, tested and sealed by the Punjab State Electricity Board (PSEB).



Every month at 12 am, on 1st of every month, a joint reading is taken by representative of M/s Aqua Hydro Power (P) Ltd. and Punjab State Electricity Board and the a joint reading record is developed and signed by both parties. The chances of misstatement are not present.

The Power purchase agreement states the responsibility of calibration for two meters lies with Punjab State Electricity Board (PSEB). The calibrations are done only when the plant is under shut down or in the case of discrepancy.

The company has a documented procedure for monitoring and measurement of process parameters which defines responsibilities and authorities and it was observed following log books are maintained to monitor the operation controls:

- Turbine Log Book

The records were verified for the monitoring period. Regarding electricity production figures responsibilities are clear and procedures are formulated.

The overall authority of the project is personally supervised by Mr Jindal (vice president). Mr Jindal has further selected Mr. Ranjeet Singh (Project Manager), an electrical engineer to carry out this activity. Mr. Ranjeet Singh has assigned Mr Anil Jagga (Maintenance Executive) and one shift supervisor and one technical assistant (at each site – Lohgarh and Chakbhai)

Mr Anil Jagga is an engineer for initiating the report and the same is countersigned. Mr Anil Jagga is a graduate electrical engineer (BE Electrical) trained in operation and maintenance of the plant and academically qualified to carry out the task.

Although we do not have such an official requirement the verification team would appreciate to receive future reports having a legally binding signature either by the manager of Aqua Power Limited or a person authorized to sign such reports. As the certifier takes over liability for all verified emission reductions it is required to have an indication of a person to be contacted in case of any disputes. For the first report it can be accepted that the possibility to trace back the email transfer of the report to Mr. Jindal. This could be considered as being equivalent to such a signature.

3.2.2 Findings

Clarification Request No. 1:

The EB decided in its 23rd meeting (para 24 of the report) that the monitoring plan as well as the monitoring report must contain statements regarding the following items:

- uncertainty levels
- accuracy levels
- calibration procedures

Statements regarding the mentioned parameters should be added to the monitoring report in a quantified manner.

Forward Action Request No. 1:

Future monitoring reports should include a legally binding signature.

3.2.3 Conclusion

Statements regarding the mentioned parameters have been added to the monitoring report in a quantified manner.

The project complies with the requirements.

3.3 Internal and External data

3.3.1 Discussion

The following internal parameters need to be obtained according to the monitoring plan:

- Electricity generation continuously measured by calibrated meters
- Electricity used for auxiliary purposes continuously measured by calibrated meters

Every month at 12 am on 1st of every month a joint reading is taken by APL and PSEB and the partners sign a joint reading record.

The electricity exported is multiplied with the pre-determined carbon emission factor (from the PDD) to result in the actual emission reductions obtained.

Quality assurance procedures are in place as for example the joint meter reports and respective billings are reviewed for accuracy and correctness by a staff member before submission. Staff is made aware of the quality assurance procedures.

No use is made of external data during monitoring.

3.3.2 Findings

None

3.3.3 Conclusion

The project complies with the requirements.

3.4 Environmental and Social Indicators

3.4.1 Discussion

No environmental and social indicators are defined in the monitoring plan.

The auditor team on site met local farmers around the Hydro Plant. They expressed their deep appreciations for the project. As per them this project has improved the main-tenance of the canal and the bank erosions have been controlled.

3.4.2 Findings

None

3.4.3 Conclusion

The project complies with the requirements.



3.5 Management and Operational System

3.5.1 Discussion

The necessary procedures have been defined in the power purchase agreement and in additional internal documents relevant for the determination of the electricity exported to the grid. The allocation of responsibilities is documented in a written form as described above. Routines for the archiving of data are defined and documented. The supporting statement for the power generation data is available and verified.

No CDM specific internal audits are required because the monitoring and measurement of power exports and imports are done diligently every month as core business of the company and hence a permanent control of the figures in joint meter readings as well as invoices raised takes place.

3.5.2 Findings

None

3.5.3 Conclusion

The project complies with the requirements.

Periodic Verification Findings

3.6 Completeness of Monitoring

The reporting procedures reflect the monitoring plan. Export and import readings are jointly recorded in the joint metering report and net electrical energy content exported to the grid is invoiced. No changes to the monitoring plan are required. The necessary procedures for the information flow, data transfer and data trails have been defined in the power purchase agreement and additional internal documents relevant for the determination of the electricity exported to the grid.

3.7 Accuracy of Emission Reduction Calculations

The reporting procedures reflect the monitoring plan content. There is no greenhouse gas emission from the project. The critical parameters for the determination of GHG emissions are the produced amount of electricity, which is measured by a set of calibrated meters. The Power purchase agreement states the responsibility of calibration for two meters lies with Punjab State Electricity Board (PSEB). The calibrations are done only when the plant is under shut down or in the case of discrepancy.

3.7.1 Findings

Corrective Action Request No. 1:

The emission factor applied is not 942 g CO₂ / kWh as approved in the validation process. This has to be corrected.

Response:

The emission factor has been corrected.

3.7.2 Conclusion

After correction of the emission factor no further action has to be applied. The project complies with the requirements.

3.8 Quality of Evidence to Determine Emission Reductions

No CDM specific internal audits are required as such because the monitoring and measurement of power exports and imports are done diligently every month as core business of the company and hence a permanent control of the figures in joint meter readings as well as invoices raised takes place.

Quality assurance procedures are in place as for example the joint meter reports and respective billings are reviewed for accuracy and correctness by a staff member before sub-mission. Staff is made aware of the quality assurance procedures.

The audit team did verify the following parameters:

- Joint meter recording sheets for each month,
- Monthly invoices,
- Account documents for the payment received.

All data is in compliance with the figures stated in the monitoring report.

3.9 Management System and Quality Assurance

Quality assurance procedures are in place as for example the joint meter reports and respective billings are reviewed for accuracy and correctness by a staff member before sub-mission. Staff is made aware of the quality assurance procedures. The key parameters are measured by a calibrated meter. All the data is transferred to the head office at Noida, India, on monthly basis and kept protected.

The IT system is based on standard PC and MS-office solutions. Hence the verification team feels confident about its use.



4 PROJECT SCORECARD

Risk Areas		Conclusions			Summary of findings and comments
		Baseline Emissions	Project Emissions	Emission Reductions	
Completeness	Source coverage/ boundary definition	✓	✓	✓	All relevant sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently.
Accuracy	Physical Measurement and Analysis	✓	✓	✓	The indicated CR1 has been resolved.
	Data calculations	✓	✓	✓	After resolving CAR1, it can be stated that emission reductions are calculated correctly.
	Data management & reporting	✓	✓	✓	A data management system is in place.
Consistency	Changes in the project	-	-	-	There are no changes in the project to date.



5 VERIFICATION STATEMENT

TÜV Industrie Service GmbH TÜV SÜD Group has performed a verification of the CDM project: “Lohgarh, Chakbhai and Sidhana Mini Hydroelectric Projects”. The verification is based on the currently valid documentation of the UN Framework Convention on Climate Change (UNFCCC). In this context, the relevant documents are the “Marrakech Accords”.

The management of Aqua Power Limited is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the “Lohgarh, Chakbhai and Sidhana Mini Hydroelectric Projects” on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version dated March 2006. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project is the responsibility of the management of the project.

The verifier confirms that the project is implemented as planned and described in validated and registered project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is ready to generate GHG emission reductions.

The verifier can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project’s GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated we confirm the following statement:

Reporting period: From 20-11-2004 to 31-03-2006

Verified emission in the above reporting period:

Baseline emissions: 17.430 t CO₂ equivalents

Project emissions: 0 t CO₂ equivalents

Emission reductions: 17.430 t CO₂ equivalents

Munich, 2006-05-03

A handwritten signature in black ink, consisting of a large, stylized 'W' followed by a series of loops and a final flourish.

Werner Betzenbichler

**Head of certification body
“climate and energy”**

Munich, 2006-05-03


A handwritten signature in black ink, featuring a large, stylized 'M' followed by a series of loops and a final flourish.

Michael Rumberg

Project Manager




Annex 1: Verification Protocol


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1 INITIAL VERIFICATION CHECKLIST


OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
1. Opening Session			
1.1. Introduction to audits	1, 2, 3, 4, 12, 15	<p>The intention and the target of the audit were illustrated to the participants of the audit.</p> <p>Participants at the audit were the following persons:</p> <p>Prabhat Kumar TUV South Asia Pvt. Ltd.</p> <p>Interviewed persons:</p> <p>Mr. Piyush Jain Aqua Hydro Power Limited (AHPL)</p> <p>Mr. Ranjeet Singh Project Manager Aqua Hydro Power Limited (AHPL)</p> <p>Mr. Anil Jagga Maintenance Executive , Aqua Hydro Power Limited (AHPL)</p>	<input checked="" type="checkbox"/>
1.2. Clarification of access	3, 4,	The verification team got open access to all required plans, data, records, and draw-	<input checked="" type="checkbox"/>

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OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
to data archives, records, plans, drawings etc.	12, 13	ings and to all relevant facilities.	
1.3. Contractors for equipment and installation works	1, 2, 3, 4, 12, 13	<p>Project has been implemented as defined in the PDD and there is no change in the major equipments.</p> <p>The turbine and its accessories , induction Generator for site Lohgarh , Chakbhai and Sidhana is from M/s Boving Fouress Limited, Bangalore.</p>	<input checked="" type="checkbox"/>
1.4. Actual status of installation works	1, 2, 3, 4, 12, 13	<p>The project has been fully implemented as defined in the PDD. The plant 11 KV feeder was connected to the 66 KV grid substation for the first time on 14th November 2004 for purpose of synchronization. Real power export started taking place with 14th November 2004</p> <p>The Sidhana site is just now in construction stage.</p>	<input checked="" type="checkbox"/>
2. Open issues indicated in validation report			
2.1. Missing steps to final approval	1, 2, 3, 4, 11, 13	Based on the validation report the verification team identified no missing steps.	<input checked="" type="checkbox"/>

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OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
3. Implementation of the project			
3.1. Physical components	1, 3, 4, 15	<p>Project has been implemented as defined in the PDD and there is no change in the major equipments.</p> <p>The turbine and its accessories , induction Generator for site Lohgarh , Chakbhai and Sidhana is from M/s Boving Fouress Limited, Bangalore.</p> <p>The projects are based on low head canal drop base located on the Bhatinda Branch Canal District Sangrur , Punjab, India</p>	☑
3.2. Project boundaries	1, 3	Yes, the project boundaries are as defined in the PDD.	☑
3.3. Monitoring and metering systems	1, 3, 4, 5, 6, 7, 8,9	<p>The plant 11 KV feeder was connected to the 66 KV grid substation about 6KM away. There are two sealed meters (L & T , Electronic Trivector meter as per Punjab State Electricity Board specification) (one primary & other as a backup for the primary meter).</p> <p>The meters are installed in the substation premises "L&T , Electronic Trivector meter" and this is a restricted area. The metering panel for the main meters and the check meters are sealed sheet metal enclosures.</p>	☑

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OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
3.4. Data uncertainty	1, 3, 4, 10	<p>Power purchase agreement clearly states that payment shall be made through main meter</p> <p>In the event of main meter failure the recording shall be done on check meters and will switch back to main meter after the meter is repaired, calibrated, tested and sealed by the Punjab State Electricity Board (PSEB).</p> <p>Every month at 1200Hrs on 1st of every month a joint reading is taken by representative of M/s Aqua Hydro Power (P) Ltd., and Punjab State Electricity Board and the a joint reading record is developed and signed by both parties The chances of misstatement are not present.</p> <p><u>Clarification Request No. 1:</u></p> <p>The EB decided in its 23rd meeting (para 24 of the report) that the monitoring plan as well as the monitoring report must contains statements regarding the following items:</p> <ul style="list-style-type: none"> - uncertainty levels - accuracy levels - calibration procedures <p>Statements regarding the mentioned parameters should be added to the monitoring report in a quantified manner.</p>	CR 1
3.5. Calibration and quality assurance	1, 3, 4, 6,7,10	The Power purchase agreement state the responsibility of calibration for two meters lies with Punjab State Electricity Board (PSEB). The calibrations are done only when the plant is under shut down or in the case of discrepancy.	☑
3.6. Data acquisition and	1, 3, 4,	Every month at 1200Hrs on 1 st of every month a joint reading is taken by AHPL and	☑

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OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
data processing systems	5	PSEB and the partners sign a joint reading record.	
3.7. Reporting procedures	1, 3, 4, 5	Every month at 1200Hrs on 1 st of every month a joint reading is taken by AHPL and PSEB and the partners sign a joint reading record.	☑
3.8. Documented instructions	1, 3, 4, 11,12,13	<p>The company has a documented procedure for monitoring and measurement of process parameters which defines responsibilities and authorities and it was observed following log books are maintained to monitor the operation controls:</p> <ul style="list-style-type: none"> • Turbine Log Book <p>The records were verified for the monitoring period.</p> <p>Regarding electricity production figures responsibilities are clear and procedures are formulated.</p>	☑
3.9. Qualification and training	1, 3, 10	<p>The overall authority of the project is personally supervised by Mr. Jindal (Vice president). Mr. Jindal has further selected Mr. Ranjeet Singh (Project Manager), an electrical engineer to carry out this activity. Mr. Ranjeet Singh has assigned Mr. Anil Jagga (Maintenance Executive) and one shift supervisor and one technical assistant (at each site – Lohgarh and Chakbhai).</p> <p>Mr. Anil Jagga is an engineer for initiating the report and the same is countersigned.</p>	☑

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OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
		Mr. Anil Jagga is a graduate electrical engineer (BE Electrical) trained in operation and maintenance of the plant and academically qualified to carry out the task.	
3.10. Responsibilities	1, 3, 10	A matrix demonstrating the roles and responsibilities has been submitted to the audit team.	☑
3.11. Troubleshooting procedures	1, 3, 4, 8,9	In the event of main meter failure the recording shall be done on check meters and will switch back to main meter after the meter is repaired, calibrated, tested and sealed by the PSEB. The procedure is fixed in the power purchase agreement.	☑
4. Internal Data			
4.1. Type and sources of internal data	1, 3, 4,10, 11,12,13	<p>The following internal parameters need to be obtained according to the monitoring plan:</p> <ul style="list-style-type: none"> Electricity generation continuously measured by calibrated meters Electricity used for auxiliary purposes continuously measured by calibrated meters 	☑
4.2. Data collection	3, 4	<p>Every month at 1200 hrs on 1st of every month a joint reading is taken by APL and PSEB and the partners sign a joint reading record.</p> <p>The electricity exported is multiplied with the pre-determined carbon emission factor (from the PDD) to result in the actual emission reductions obtained</p>	☑

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OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
4.3. Quality assurance	3, 4	Quality assurance procedures are in place as for example the joint meter reports and respective billings are reviewed for accuracy and correctness by a staff member before submission. Staff is made aware of the quality assurance procedures.	<input checked="" type="checkbox"/>
4.4. Significance and reporting risks	3, 4	Since there is a system of joint metering by the PSEB and APL the risks associated with the reporting do not exist.	
5. External Data			
5.1. Type and sources of external data	1, 2, 3, 4	No use is made of external data during monitoring. Hence the question is not applicable.	<input checked="" type="checkbox"/>
5.2. Access to external data	1, 2, 3, 4	See chapter 5.1.	<input checked="" type="checkbox"/>
5.3. Quality assurance	1, 2, 3, 4	See chapter 5.1.	<input checked="" type="checkbox"/>
5.4. Data uncertainty	1, 2, 3, 4	See chapter 5.1.	<input checked="" type="checkbox"/>

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OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
5.5. Emergency procedures	1, 2, 3, 4	See chapter 5.1.	☑
6. Environmental and Social Indicators			
6.1. Implementation of measures	1, 2, 3,	<p>No environmental and social indicators are defined in the monitoring plan. Hence the question is not applicable.</p> <p>The auditor team on site met local farmers around the Hydro Plant. They expressed their deep appreciations for the project. As per them this project has improved the maintenance of the canal and the bank erosions have been controlled.</p>	☑
6.2. Monitoring equipment	1, 2, 3, 8, 9	See chapter 6.1.	☑
6.3. Quality assurance procedures	1, 2, 3, 4, 8, 9	See chapter 6.1.	☑
6.4. External data	1, 2, 3, 4, 5	See chapter 6.1.	☑

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OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
7. Management and Operational System			
7.1. Documentation	1, 2, 3, 4, 11, 12, 13	The necessary procedures have been defined in the power purchase agreement and additional internal documents relevant for the determination of the electricity exported to the grid.	<input checked="" type="checkbox"/>
7.2. Qualification and training	1, 3, 10	<p>The overall authority of the project is personally supervised by Mr. Jindal (Vice president). Mr. Jindal has further selected Mr. Ranjeet Singh (Project Manager), an electrical engineer to carry out this activity. Mr. Ranjeet Singh has assigned Mr. Anil Jagga (Maintenance Executive) and one shift supervisor and one technical assistant (at each site – Lohgarh and Chakbhai)</p> <p>Mr. Anil Jagga is an engineer for initiating the report and the same is countersigned. Mr. Anil Jagga is a graduate electrical engineer (BE Electrical) trained in operation and maintenance of the plant and academically qualified to carry out the task.</p>	<input checked="" type="checkbox"/>
7.3. Allocation of responsibilities	1, 3, 4, 5, 10	The allocation of responsibilities is documented in a written form.	<input checked="" type="checkbox"/>
7.4. Emergency procedures	1, 2, 3	The necessary procedures have been defined in the power purchase agreement and additional internal documents relevant for the determination of the electricity exported to the grid.	<input checked="" type="checkbox"/>

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OBJECTIVE	Ref.	COMMENTS	Conclusion.(incl FARs / CARs)
7.5. Data archiving	1, 2, 3, 4, 11, 12, 13	Routines for the archiving of data are defined and documented.	<input checked="" type="checkbox"/>
7.6. Monitoring report	1, 2, 3, 4, 5	The supporting statement for the Power Generation data is available and verified. <u>Forward Action Request No. 1:</u> Future monitoring reports should include a legally binding signature.	<input checked="" type="checkbox"/>
7.7. Internal audits and management review	1, 2, 3	No CDM specific internal audits are required as such because the monitoring and measurement of power exports and imports are done diligently every month as core business of the company and hence a permanent control of the figures in joint meter readings as well as invoices raised takes place.	<input checked="" type="checkbox"/>

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2 PERIODIC VERIFICATION CHECKLIST

Table 1: Data Management System/Controls


Expectations for GHG data management system/controls	Score	Verifiers Comments (including <i>Forward Action Requests</i>)
8. Defined organizational structure, responsibilities and competencies		
8.1. Position and roles	Full	<p>The overall authority of the project is personally supervised by Mr. Jindal (Vice president). Mr. Jindal has further selected Mr. Ranjeet Singh (Project Manager), an electrical engineer to carry out this activity. Mr. Ranjeet Singh has assigned Mr. Anil Jagga (Maintenance Executive) and one shift supervisor and one technical assistant (each site – Lohgarh and Chakbhai).</p> <p>Mr. Anil Jagga is an engineer for initiating the report and the same is countersigned. Mr. Anil Jagga is a graduate electrical engineer (BE Electrical) trained in operation and maintenance of the plant and academically qualified to carry out the task.</p> <p>The allocation of responsibilities is documented in a written form.</p>

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Expectations for GHG data management system/controls	Score	Verifiers Comments (including <i>Forward Action Requests</i>)
8.2. Responsibilities	Full	The responsibilities are clearly defined.
8.3. Competencies needed	Full	The responsible team covers all competencies required.
9. Conformance with monitoring plan		
9.1. Reporting procedures	Full	The reporting procedures reflect the monitoring plan Export & import readings are jointly recorded in the joint metering report and net electrical energy content exported to the grid is invoiced.
9.2. Necessary Changes	Full	No change is required in the Monitoring Plan
10. Application of GHG determination methods		
10.1. Methods used	Full	The reporting procedures reflect the monitoring plan content.
10.2. Information/process flow	Full	The necessary procedures have been defined in the power purchase agreement and additional internal documents relevant for the determination of the electricity exported to the grid.

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Expectations for GHG data management system/controls	Score	Verifiers Comments (including <i>Forward Action Requests</i>)
10.3. Data transfer	Full	The necessary procedures have been defined in the power purchase agreement and additional internal documents relevant for the determination of the electricity exported to the grid.
10.4. Data trails	Full	The necessary procedures have been defined in the power purchase agreement and additional internal documents relevant for the determination of the electricity exported to the grid.
11. Identification and maintenance of key process parameters		
11.1. Identification of key parameters	Full	The critical parameters for the determination of GHG emissions are the produced amount of electricity, which is measured by a calibrated meters.
11.2. Calibration/maintenance	Full	The Power purchase agreement states that the responsibility of calibration for two meters lies with Punjab State Electricity Board (PSEB). The calibrations are done only when the plant is under shut down or in the case of discrepancy
12. GHG Calculations		

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Expectations for GHG data management system/controls	Score	Verifiers Comments (including <i>Forward Action Requests</i>)
12.1. Use of estimates and default data	Limited	<p>The carbon emission factor is used as a predetermined default value, which has been defined in the PDD and confirmed during validation of the project.</p> <p><u>Corrective Action Request No. 1:</u></p> <p>The emission factor applied is not 942 g CO₂ / kWh as approved in the validation process. To be corrected.</p>
12.2. Guidance on checks and reviews	Full	<p>No CDM specific internal audits are required as such because the monitoring and measurement of power exports and imports are done diligently every month as core business if the company and hence a permanent control of the figures in joint meter readings as well as invoices raised takes place.</p> <p>Quality assurance procedures are in place as for example the joint meter reports and respective billings are reviewed for accuracy and correctness by a staff member before submission. Staff is made aware of the quality assurance procedures.</p>

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Expectations for GHG data management system/controls	Score	Verifiers Comments (including <i>Forward Action Requests</i>)
12.3. Internal validation and verification	Full	<p>No CDM specific internal audits are required as such because the monitoring and measurement of power exports and imports are done diligently every month as core business of the company and hence a permanent control of the figures in joint meter readings as well as invoices raised takes place.</p> <p>Quality assurance procedures are in place as for example the joint meter reports and respective billings are reviewed for accuracy and correctness by a staff member before submission. Staff is made aware of the quality assurance procedures.</p> <p>The audit team did verify the following parameters:</p> <ul style="list-style-type: none"> • Joint meter recording sheets for each month • Invoices raised for the months, • Account documents for the payment received <p>All data is in compliance with the figures stated in the monitoring report.</p>
12.4. Data protection measures	Full	<p>The key parameters are measured by a calibrated meter.</p> <p>All the data is transferred to the head office at Noida, India, on monthly basis and kept protected.</p>

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Expectations for GHG data management system/controls	Score	Verifiers Comments (including <i>Forward Action Requests</i>)
12.5. IT systems	Full	The IT system is based on standard PC and MS-office solutions. The verification team feels confident about its use.



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Table 2: GHG calculation procedures and management control testing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
<p>Potential reporting risks based on an assessment of the emission estimation procedures can be expected to occur in the following fields of action:</p> <ol style="list-style-type: none"> 1. Availability of water in canal 2. Calculation methods, <p>Key source data applicable to the project assessed are hereby:</p> <ul style="list-style-type: none"> • Metering records (for electricity production) • Accounting records (from invoices raised for electricity export), • Correct use of data determined in validation <p>Appropriate calibration and maintenance of equipment resulting in a high accuracy of data supplied should be in place.</p> <p>It is hereby needed to focus on those risks that impact the accuracy, completeness and consistency of the reported data. Risks are weakness in the GHG calculation systems and may include:</p> <ul style="list-style-type: none"> ➤ manual transfer of data/manual calculations, ➤ position of metering equipment 	<p>Regarding the potential reporting risks identified in the left column the following mitigation measures have been observed during the document review and the on site mission:</p> <p>Raw data collection:</p> <p>As the project is hydro power based, the amount of electricity exported to the grid remains to be the only parameter to be obtained for the GHG calculation.</p> <p>Key source data for this parameter are:</p> <ul style="list-style-type: none"> • Joint meter readings • Invoices <p>The meters are installed in the substation premises “Larsen & Toubro , Electronic Trivector Meter ” and this is a restricted area. The metering panel for the main meters and the check meters are sealed sheet metal enclosures. The meters are of secure make and are of reputed make in India.</p> <p>The allocation of responsibilities is documented in a written form.</p> <p>The necessary procedures have been defined in the power purchase agreement and additional internal</p>	<p>The issue remaining is the way the data obtained is used to calculate the emission reduction in a conservative manner according to the approach prescribed in the PDD by consideration of the electricity imports.</p> <p>It has to be checked on site that the meter to determine export to the grid is installed at a position ensuring that auxiliary consumption during operation is excluded.</p>

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Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
<ul style="list-style-type: none"> ➤ unclear origins of data, ➤ accuracy due to technological limitations, 	documents relevant for the determination of the electricity exported to the grid. Calculation methods: The reporting procedures reflect the monitoring plan content.	



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Table 3: Detailed audit testing of residual risk areas and random testing

Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
<p>The issue remaining is the way the data obtained is used to calculate the emission reduction in a conservative manner according to the approach prescribed in the PDD by consideration of the electricity imports.</p> <p>It has to be checked on site that the meter to determine export to the grid is installed at a position ensuring that auxiliary consumption during operation is excluded.</p> <p>It is not clear by the monitoring report whether the internal consumption is deducted from the amount of electricity exported to the grid to obtain the right figure for the calculation of the emission reduction.</p>	<p>There has been a complete check of data transferred from readings and invoices to the calculation tool. There was no error in such transfer.</p> <p>The correct installation of the metering equipment can be confirmed at each installation.</p> <p>But as the data have been partly not transparent further investigation have taken place. Moreover data determined in validation have not been transferred correctly.</p>	<p>Having investigated the residual risks, the audit team comes to the following conclusion:</p> <p>The risk involved in the metering are very low as the joint meter reading taken jointly by Punjab State Electricity Board and Aqua Power Limited demonstrate mainly transparent recording and the maintenance of the records.</p> <p>The following open issues have been identified:</p> <p><u>Corrective Action Request No. 1:</u></p> <p>The emission factor applied is not 942 g CO₂ / kWh as approved in the validation process. To be corrected.</p> <p><u>Clarification Request No. 1:</u></p> <p>The EB decided in its 23rd meeting (para 24 of the report) that the monitoring plan as well as the monitoring report must contains statements regarding the following items:</p> <ul style="list-style-type: none"> - uncertainty levels - accuracy levels - calibration procedures <p>Statements regarding the mentioned parameters should be added to the monitoring report in a quantified manner.</p>

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Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
		<u>Forward Action Request No. 1:</u> Future monitoring reports should include a legally binding signature.



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Table 4: Compilation of open issues


Draft report corrective and forward action requests by audit team	Summary of project owner response	Audit team conclusion
<u>Corrective Action Request No. 1:</u> The emission factor applied is not 942 g CO ₂ / kWh as approved in the validation process. To be corrected.	Necessary correction has been made in the revised monitoring report	Under consideration of the corrections in the revised monitoring report the issue is resolved. <input checked="" type="checkbox"/>
<u>Clarification Request No. 1:</u> The EB decided in its 23 rd meeting (para 24 of the report) that the monitoring plan as well as the monitoring report must contains statements regarding the following items: <ul style="list-style-type: none"> - uncertainty levels - accuracy levels - calibration procedures Statements regarding the mentioned parameters should be added to the monitoring report in a quantified manner.	Necessary correction has been made in the revised monitoring report	Under consideration of the statements in the revised monitoring report the issue is resolved. <input checked="" type="checkbox"/>
<u>Forward Action Request No. 1:</u> Future monitoring reports should include a legally binding signature.		No action required yet. <input checked="" type="checkbox"/>



Annex 2: Information Reference List

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Reference No.	Document or Type of Information
1.	<p>On-site interviews at the offices of Aqua Hydro Power Limited and on site, conducted on 10.04.2006 , by auditing team of TÜV SÜD</p> <p>Validation team on site:</p> <p>Prabhat Kumar TÜV South Asia Pvt. Ltd.</p> <p>Interviewed persons:</p> <p>Mr. Piyush Jain Aqua Hydro Power Limited (AHPL) Mr. Ranjeet Singh Project Manager Aqua Hydro Power Limited (AHPL) Mr. Anil Jagga Maintenance Executive , Aqua Hydro Power Limited (AHPL)</p>
2.	UNFCCC homepage http://www.unfccc.int
3.	Project Design Document for CDM project, by Punjab Hydro Power Limited, submitted April 2006
4.	Monitoring Report for “Dolowal, Salar and Bhanubhura Mini Hydroelctric Projects” Aqua Hydro Power Limited (AHPL), project in Punjab, India by AHPL, submitted on 11.04.2006
5.	Joint meter readings and invoices raised, release of payment on account of purchase of power by (Punjab State Electricity Board) PSEB for respective month from November 14 th to March 2006, by AHPL, submitted on 11.04.2006
6.	Calibration of meters, dated 12.01.2004,by PSEB, submitted by AHPL on dated 11.04.2006

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Reference No.	Document or Type of Information
7.	Works test report for meters by Saraf Electricals Pvt. Ltd., dated 12.01.2004, submitted on 11.04.2006
8.	Test report for meter by Larsen & Toubro Limited, dated 08.05.2004, submitted on 11.04.2006
9.	Main meter calibration procedure record for Chakbhai and Lohgarh by AHPL, submitted on 11.04.2006
10.	Organisation chart, dated By AHPL, submitted on 12.04.2006
11.	Randomly sample of equipment maintenance record of electric and mechanical equipments by AHPL, submitted on 11.04.2006
12.	Sample copy of log book for turbine for Chaakbhai and Lohgarh by AHPL, submitted on 10.02.2006
13.	Samples log book generation record for Chakbhai and Lohgarh by AHPL, submitted on 10.02.2006
14.	Revised Monitoring Report for “Dolowal, Salar and Bhanubhura Mini Hydroelectric Projects” Aqua Hydro Power Limited (AHPL), project in Punjab, India by AHPL, submitted on 28.04.2006