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Att: CDM Executive Board

Your ref.:  
 CDM Ref 0139

Our ref.:  
 MLEH/RRama

Date:  
 10 June 2008

**Response to requests to review  
 “Biogas Support Program- Nepal (BSP-Nepal) Activity 2 (0139)**

Dear Members of the CDM Executive Board,

We refer to the issue raised by the requests for review by three Board members regarding our request of issuance for project activity 0139 “Biogas Support Program - Nepal (BSP-Nepal) Activity 2” and would like to provide our responses to the issue raised.

***Comment***

***The applied methodology AMS I-C version 06 (paragraph 8(c).(i) requires recording of number of systems operating manually. The DOE is requested to clarify how this requirement was met.***

**DNV Response**

The project involved the installation of 9688 digesters spread over 55 districts of Nepal. Considering the inaccessible terrain and remote location of the digesters, the project proponents had envisaged representative sampling to monitor the performance of the digesters. The monitoring plan of the registered PDD has provision for determining the total number of operating systems based on monitoring of a statistically significant sample of bio-digesters. The project proponents have been following the principles embedded into the registered monitoring plan.

Two methods viz., the annual biogas user survey (carried out by an independent agency) and the quality control inspections as part of the ISO 9000 Quality management systems, have been adopted. The systematics of the sampling procedures were according to a specialised Oracle program and database.

The monitoring methodology of AMS-I.C allows for sampling if the energy produced is metered. Moreover, for the monitoring option selected by the project activity, i.e. option (c), AMS-I.C allows on-going rental/lease payments as substitute for evidence of continuing operation and using survey methods to estimate the annual hours of operation. In the case of the project activity, there are sales records for the installation of digesters and the ratio of the number of digesters working to the number of digesters installed is calculated from the after sales survey (ASS 1 and 2) feed back received by BSP from the individual companies and also from the biogas users survey (BUS) conducted by an independent agency for BSP.

DNV had, prior to the verification visit, planned for physical onsite verification of 100 digesters in the hill and terai regions in a week. However, due to the inaccessible terrain and remote location of the digesters it proved difficult to cover the planned physical inspection of 100 digesters within the given timeframe. During the period of 5 days, 51 digesters were visually inspected to check the existence and working of the digesters. In addition, the owners were interviewed to get first hand information. The visit to these digesters also clearly indicated that the digesters were working as envisaged, were fairly well maintained and that the minimum saving in firewood was in the order of around 10 kg/day. The project's contribution to sustainable development was very well demonstrated during interactions with the biogas users as the project impact on socio economic conditions, health and sanitation was pronounced.

Already during the design of this CDM project, the project participants were aware of the difficulty of monitoring by inspecting all systems, and the monitoring plan was developed accordingly to meet the requirements of AMS I-C. In addition, a conservative emission factor of 4.99 tCO<sub>2</sub>e/year is being applied, which compensates for the uncertainty of not monitoring the operation status of all digesters included in the project activity.

We sincerely hope that the Board find our elaboration on the above satisfactory and look forward to the issuance of CERs for this project activity.

Yours faithfully  
for **Det Norske Veritas Certification AS**



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