### DET NORSKE VERITAS



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Att: CDM Executive Board

Your ref.: CDM Ref 0896 Our ref.: MRSA/ETEL Date: 20 June 2007

Response to request for review "Cervecería Hondureña Methane Capture Project" (0896)

Dear Members of the CDM Executive Board,

We refer to the requests for review raised by three Board members concerning DNV's request for registration of the "Cervecería Hondureña Methane Capture Project" (0896), and we would like to provide the following response to the issues raised by the requests for review.

#### Comment 1:

"While the IRR calculated for the project activity is not financially attractive, the analysis does not demonstrate that it is less financially attractive than the only legally possible alternative (expansion of the open lagoon). To be considered additional, it should be demonstrated that the project activity is not the most favorable method of compliance with local wastewater treatment regulations."

#### **DNV Response:**

The validation report section 3.4 "a) Investment barriers" will in our view provide sufficient information to conclude that the project activity is financially less attractive than the alternative of simply building a larger lagoon:

"Investment barriers. The alternative to the project activity is the implementation of an additional open lagoon deeper than the existing one (thus complying with the legal limits for wastewater residues) and the use of the fossil fuel based technology for heating up the liquids in boiler #4 of the beer factory. The investment needed for the construction of the additional lagoon is of the order of 100 000 USD and the investment required for the project activity has been demonstrated to be above 1 000 000 USD. In the case of the project scenario, the there is a cost reduction between 83 000USD to 219 000USD due to the residual fuel oil not used. Both alternatives allow the company to comply with the wastewater regulations in the country and thus, the project activity is a less attractive alternative. Furthermore, the IRR for the project has been assessed to be 0.1%"

The details of the IRR calculations were submitted as an appendix for the registration of the project. For the IRR analysis, the investment needed for the construction of a larger lagoon was deduced from the project activity's investment and the bunker oil savings were accounted as revenue, which is deemed appropriate. This IRR value of 0.1% is obviously below any applicable benchmark ratio. As a reference the active interest rate in Honduras in 2000 (for foreign currencies) was in the range of 12% (http://www.bch.hn/esteco/monetaria/tasapondme.pdf)

As an appendix to the project developer's answer to this request for review ("0896\_Cerveceria NPV\_2007 06 11.xls" and "0896\_annex.Cerveceria Hondureña\_larger lagoon NPV.xls"), a detailed NPV analysis for both options, the project activity and the alternative of constructing a larger lagoon, is included. The data sources have been confirmed by DNV. The investment cost for the construction of the larger lagoon is from the document "Cerveceria Hondureña\_larger lagoon cost.xls" made available to DNV during the validation. The calculations are considered correct and show that the NPV for the project activity is -840 063USD and -153 731USD for the alternative option. Thus, it is our opinion, that the option of the construction of a larger lagoon for complying with the legislation was a more financially attractive option.

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### Comment 2:

"The explanation in A.4.3. of the PDD (page 7) is not appropriate: It does not give explanation "why the emission reductions would not occur in the absence of the proposed small-scale activity taking into account national and/or sectoral policies and circumstances"

#### **DNV Response:**

Section A.4.3 of the PDD states:

"The proposed small-scale project activity reduces emissions in two stages by avoiding the emissions of methane to the atmosphere and by the substitution of thermal energy that would have been produced otherwise with the use of the highly contaminant Bunker C (residual fuel oil). In the absence of the project, the methane from the decomposition of wastewater from the beer factory would have found its way to the atmosphere. Without the capture of the methane, one boiler in the production of beer would have continued to be powered with the use of a residual fuel oil burner, thus creating emissions as a result of the burning of the fossil fuel".

As above stated, in the absence of the project, a larger lagoon would have been constructed to comply with the Honduran legislation. In this case, the emissions reduction due to the two components of the project would have not occurred, i.e. the methane from the decomposition of the wastewater would have been released to the atmosphere and the boiler would have used residual fuel oil.

#### Comment 3:

"No data on the existing lagoon has been given. The default value for Methane Correction Factor (MCF) may differ depends upon the depth of the anaerobic lagoon according to the table III.1 of AMS-III.H. In section B.3. of the PDD, the PP/DOE should provide the detailed specification of the existing lagoons"

### **DNV Response:**

We acknowledge this information was not included in the PDD or validation report, even when it was confirmed during the validation process. A specific plan for the existing lagoon (4 meters deep) is included as annex to the project developer answer (*"0896.annex.lagoon plan.PDF"*) and thus the value of 0.8 for the methane correction factor (MCF) is confirmed to be correct.

#### Comment 4:

"Investment analysis: The PDD does not give convincible explanation with the result of the investment analysis. It simply states that "...The financial viability of the project is limited by the fact that its net contribution from operation is not enough to cover the initial investment done by Cerveceria Hondurena."

#### **DNV Response:**

The PDD provides the project's IRR value of 0.1% and elaborates on some key points of this financial ratio:

"If it is true that the project activity implies a reduction on the consumption of fossil fuels, it is estimated that the maximum reduction in a 10 year period will be 123,000 gallons of Bunker C per year. Under current market conditions, that amount of fuel is equivalent to US\$ 154,000. When we subtract from that amount the operational costs of the system, the resulting revenue is very small, especially when compared to the initial investment done by Cervecería Hondureña. As seen in Annex 3 in this document, the Internal Rate of Return of this project is 0.1%. The investment required for the project was compared to the alternative, which would be the construction of bigger open lagoon, which would be enough to comply with the legislation. The value of the investment for this alternative lagoon was discounted from the project's investment (see annexed file "Cerveceria IRR\_2007 03 14.xls")".

The detailed calculations of the above requested value were included as annex 3 to the PDD and submitted as an appendix when requesting the registration of the project. Together with the additional information outlined in our answer to comment 1 above, it is our opinion that the project activity was not financially attractive and that it was less attractive than the alternative option of constructing a larger lagoon for complying with the regulations.

#### Comment 5:

a) "Retroactive crediting highly questionable.: The PDD states (Section B.3. page 10) that "This project requires retroactive crediting. (The reason why has not been given). Evidence that it was thought to receive those credits is a report prepared by Cerveceria Hondurena's management in March 2000, considering the implementation of a Waste Water Treatment Project. It mentions protection of the ozone layer and carbon credits as a possible benefit. "It is highly questionable if the company really thought about the ozone layer at that time. If so, the reason given for that should be submitted/demonstrated in documentation by the DOE.

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#### **DNV Response:**

The validation report, section 3.4 confirms the project complies with the requirement to be considered a prompt start project:

"(1) The starting date of the CDM project activity, i.e. January 2002, falls between 1 January 2000 and the date of the registration of the first CDM project activity (November 2004).

(2) The projects participants have requested validation prior to 31 December 2005 (version 01 of the PDD was published for comments in November 2005), the project thus may claim retroactive credits.

(3) Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity is a report by Cervecería Hondureña's management in 8 March 2000/18/ considering the implementation of a waste water treatment project. This report mentions carbon credits as a possible finance source"

The report referred to in the PDD and the validation report (reference /18/) was assessed during validation and was found appropriate. The report is submitted as annex 1 to this response.

**b)** The PDD (page 10) states that "...This corresponds to the fact that, besides CDM, there are almost no incentives for companies to invest in the more expensive, more complicated bio-digester system..." If this is the case, without being approved as a CDM project/ without the CERs revenue, the project is totally not feasible. What was the management plan for the worst case which might be the rejection of the CDM registration? The above mentioned report prepared by Cerveceria Honduran's management in 2000 should have the counter measurement plan in it., Furthermore the project was started in the year 2000 when they did not have any confidence whether they would be successful in CDM registration. The DOE shall be requested to introduce what kind of measures was planned in the said report (the expansion of the existing lagoon?) and shall be requested to demonstrate why the DOE verified it appropriate."

#### **DNV Response:**

Please refer to the project developer answer. The alternative to the project activity was the construction of a larger lagoon for complying with the regulations. The additionality of the project has been demonstrated in line with the *Attachment A to Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities"*. The alternative to the project activity has been demonstrated to be a more financially attractive option (refer to points 1 and 4 above). Furthermore, it was confirmed that the project faces other barriers as stated in the validation report. The CERs revenues would alleviate the financial, technological and common practices barriers faced by the project.

We sincerely hope that the Board accepts our above explanations.

Yours faithfully. for DET NORSKE VERITAS CERTIFICATION AS

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