From: Edward Someus
To: secretariat@v-c-s.org
Subject: Comments --- General Methodology for Quantifying the Greenhouse Gas Emission Reductions
Date: Saturday, August 01, 2009 10:39:26 AM

General Methodology for Quantifying the Greenhouse Gas Emission Reductions from the Production and Incorporation of Soil of Biochar in Agricultural and Forest Management Systems

To VCS

Opportunity has been provided to make comments on the above document.

My name is Edward Someus, a Swedish environmental engineer, with core competence on pyrolysis technology (development, design, engineering, manufacturing). I am coordinator and key technology designer for several large scale EU RTD projects, all related to pyrolysis technology and applications, including EU Authority permit procedures for application of biochar into soil.

RE: 3.2 This category is applicable to project activities that sequester carbon through pyrolysis of biomass .....Pyrolysis is defined as the thermo-chemical decomposition of organic materials into a carbon rich residue.....

COMMENTS:

- BIOCHAR PRODUCTION PERFORMANCE: pyrolysis/carbonization process, if no properly made or obsolete technology applied, can result high toxic environmental impacts. Modern pyrolysis/carbonization process must be ZERO EMISSION performance, otherwise it is no sense to produce an output substance for climate protection, but the production makes more contamination than the product improvement level. Total life cycle need to be evaluated for the feedstock management, transport, pyrolysis process, biochar product and its application scenarios. I could not find clear guide in the document for these issues.
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- BIOCHAR APPLICATION: when biochar applied to open ecological system, such as the soil is with direct interlink to subsurface water systems, than specific biochar must be applied, which does not harm the sensitive ecology. The energy purpose produced char is not equivalent with the true value biochar, as the energy purpose produced char is often overhighly containing toxic volatile residues. When secondary product is applied into open ecological system Authority ecotox analysis made. It is of high importance to make the Authority application permit tests of biochar, before large scale application provided, in which process the EU, US and Australian norms and standards should be guideline considered.
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- APPLIED STANDARDS: The local regulations for establishment of pyrolysis/thermal treatment plants and the use of biochar as a soil additive are

different from country to country, but these regulations in many developing countries are not even formulated properly. Therefore, when global climate and environmental protection is targeted, it is no sense to justify obsolete pyrolysis technologies in developing countries, which makes more harm than use. Please note, that while CO2 is targeted, the 20 years time horizon global warming potential GWP of the methane is 72 and the Nitrous oxide 289 versus CO2 GWP 1. While the EU, US, Canadian and Australian and other countries industrial norms and standards have strict formulation, it would be highly risky to generalize the pyrolysis process environmental performance, pyrolysis output toxic residual management and output biochar quality guided by the national level regulation in all the countries of the world, one by one.

Thank you

Sincerely yours: Edward Someus (environmental engineer)

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