DETERMINATION REPORT

Bulgaria: Wood Industries,
Svilosa Biomass Boiler Project

REPORT NO. 67962

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TÜV SÜDDEUTSCHLAND

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Client:	Prototype Carbon Fund (PCF), Washington DC and Energy for Sustainable Development Ltd (ESD), UK
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Summary:

The "Certification Body for Emission Trading and Climate Change Projects" has been ordered by Prototype Carbon Fund (PCF), Washington DC to determinate the above mentioned project, which has been developed with assistance of Energy for Sustainable Development Ltd (ESD), based in UK.

The determination of this project has been performed by document reviews, interviews by email and on-site inspection and audits at the location of the project. As result of this procedure it can be confirmed, now, that the submitted Project Design Document and the integrated Baseline Study and Monitoring Plan are in line with the requirements set by the Marrakech Accords and Kyoto Protocol

The conservative estimation of projected emission reduction leads to an amount of 897 kto CO2e during the intended crediting period from 2004 to 2012.

Work carried out by:	Werner Betzenbichler (project manager) Alexander Horst (auditor, expert) Hans Chr. Schröder (expert) Kiril Baharev (auditor)	**Internal Quality Control by:** Bernhard Grimm

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Abbreviations

AOE	Applicant Operational Entity
CDM	Clean Development Mechanism
CDM-EB	CDM Executive Board
CER	Certified Emission Reduction
CO2	Carbon Dioxide
CO2e	CO2 equivalent
CP7	Conference of Parties No. 7 (held in Marrakech)
ESD	Energy for Sustainable Development Ltd
IEA	International Energy Agency
JI	Joint Implementation
KP	Kyoto Protocol
kto	Kilo tonnes = 1000 tonnes
MVP	Monitoring and Verification Protocol
PCF	Prototype Carbon Fund
PDP	Project Determination Protocol
PP	Project participants
UNFCCC	United Nations Framework Convention on Climate Change
VP	Validation Protocol

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1 CONCLUSIVE SUMMARY

The “Certification Body for Emission Trading and Climate Change Projects” in collaboration with gfa terra systems have been ordered by Prototype Carbon Fund (PCF), Washington DC to determinate the above mentioned project, which has been developed with assistance of Energy for Sustainable Development Ltd (ESD), based in UK.

Both, TÜV SÜDDEUTSCHLAND and GFA TERRASYSTEMS, are Applicant Operational Entities (AOE) having developed new services due to the requirements on validation, verification and certification of CDM projects due to Art. 12 of the Kyoto Protocol and due to the determination of JI projects due to Art. 6 of the Kyoto Protocol. As long as neither the accreditation of certifiers is feasible nor the guidelines concerning the technical realisation of such projects are developed to an end, the applied process is verifying that this particular project is developed in compliance with existing rules (Marrakech Accords) and should be eligible to deliver “emission reductions unit” (ERUs) in an amount as stated by the submitted documents.

The determination of the **Svilosa Biomass Boiler Project** has been performed by document reviews, interviews by email, on-site inspection and audits at the location of the already installed project. As result of this procedure it can be confirmed that the project is developed as required the Marrakech Accords and all regulations, which are foreseeable and expected in this context. There are some remaining formal issues (see following list), which have to be finalized e.g. as soon as official approval procedures for JI will be published.

Outstanding issues:

- Letter of approval by the Bulgarian Designated Focal Point
- Eventually, a public stakeholder process for CDM projects on a platform which has to be installed by UNFCCC
- Approval procedure for new baseline methodology
- Approval procedure for new monitoring methodology
- Submission of the “Environmental Impact Assessment” to the validator

The given conservative estimation of projected emission reduction leads to an amount of 897 kto CO2e during the crediting period from 2004 to 2012. This real amount has to be certified in an ex-post annual or biannual verification process due to the procedures described in the Monitoring Plan.

2 INTRODUCTION

Regarding the unfinished negotiations concerning the implementation of the Buenos Aires Action Plan, in particular the ratification of the Kyoto Protocol, it is obvious, that several rules, guidelines and institutions are not developed, yet, which were necessary in order to have an unhindered start for CDM or JI projects.

The managers of Svilosa Pulp Factory AD (SAD) decided to switch their fuel from coal to wood residues. As a result of the switch, the company provides substantial environmental benefits through reduced GHG emissions. In addition the biomass boiler used for this project will be fired by using already stockpiled biomass waste accumulated during the last years. Thus, the project would reduce methane emission from the stockpile and avoid future emissions from fresh wood waste, which has not to be disposed any longer. PCF is going to sign a contract to purchase the emission reduction generated by this triple approach of the prospective JI project.

The purpose of determination is an independent third party assessment of the project design. In particular, the project baseline and its compliance with relevant UNFCCC, host country and further relevant criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the identified criteria.

It should be a small step only to complete such a determination, once the procedure is defined legally binding and the validator will be accredited by the expected JI Supervisory Board. By ordering an expected OE for performing the determination there will be only a slight or even no raise of overall transaction costs once this conditional determination should be upgraded to a regular determination.

The determination team was consisting of four experts.

➢ Werner Betzenbichler	(project manager, ghg auditor)	TÜV Süddeutschland
➢ Hans Chr. Schröder	(Auditor)	TÜV Süddeutschland
➢ Kiril Baharev	(local expert)	TÜV Süddeutschland/Bulgaria
➢ Alexander Horst	(expert)	GFA Terra Systems GmbH

Mr. Werner Betzenbichler is member and manager of the certification body for emission trading and climate change projects and expert for conventional energy generation, renewable energy, energy expansion planning and familiar with the recent version of CDM and JI criteria as necessary for the implementation of Art. 6 and Art. 12 of the KP.

This determination report is based on the Project Design Document (May, 2002) and on the Baseline Study and the Monitoring Plan submitted in September 2002. The two later mentioned documents are revisions of drafts which have been submitted in May 2002. A first interim report indicated several findings in a draft study on “Methane and Nitrous Oxide Emissions from Biomass Waste Stockpiles” (btg, May 2002), which was used as base of emission reduction calculations. Therefore the project participants have revised their documents after receiving the final report from btg in August 2002.

2.1 Objective

In order to fulfil all tasks necessary to determination a prospective JI-project TÜV SÜDDEUTSCHLAND was ordered to perform the following services:

I. Adoption or revision of existing validation protocols with regard to the new outcome of the Bonn conference and COP7 in Marrakech as well as specific aspects of the technology used in this project

II. Review and assessment of project design documents and other existing documents (e.g. approvals by authorities) relevant for the determination of the project's eligibility as future JI-project

III. Preparation of a question list for a first interview phase performed via email containing significant issues to be clarified first before organizing the on-site-inspection

IV. Preparation of audits and inspections

V. Audits, inspections on site and interviews at
   a. Wood facilities on 5. June 2002 in Svilosa
   b. municipal administration on 6. June 2002 in Svishtov
   c. disposal, port and further facilities on 6. June 2002 in Svilosa
   d. Ministry of Environment and Water in Sofia on 7. June 2002

VI. Development of a draft report indicating all audit

VII. Development and issue of a final report and expert opinion

2.2 Terms of Reference

The validator has to complete the following tasks in line with the description of the validation process, the (emerging) JI Rules and any additional guidance received from the Parties to the UNFCCC and/or the PCF.

Preparation, project design and documentation:

- Planing of the validation process, preparing a concept for validation of the Project and draft a validation protocol that is based on the PCF PVM and which appropriately reflects the (emerging) body of JI/CDM Rules as they appear to exist at the current stage of negotiations as per the validator's expert knowledge and professional judgment regarding the KP process;
- Analyzing the Project design documents and obtaining additional information from background documents and reports, through interviews with Project participants and other experts and through other suitable and cost-effective means;
- Assessing whether the Project documents are complete and appropriate for a successful completion of the determination process, in particular whether the documents address all relevant (emerging) JI/CDM Rules and related issues;
- Confirming that the Project design and documentation covers emissions of all GHGs and from all sectors and sources listed in Annex B KP if and as relevant for this Project;

- Confirming that, in the opinion of the host country, the Project contributes to sustainable development in the host country, a satisfactory environmental impact assessment has been undertaken for the Project in accordance with host country procedures, and that stakeholders have been consulted in the course of Project development;
- Assessing whether the Project's design, in particular with respect to the Project's response to the (emerging) body of JI/CDM Rules, mitigates regulatory risks;

Project baseline:

- Assessing whether the Project BLS, including the projected development of the baseline over time, is sound and credible and meets all relevant JI/CDM Rules using conservative assumptions and interpretations of the (emerging) body of JI/CDM Rules;
- Assessing whether the ERs calculated using the Project baseline and the Project's design would be additional in the sense of Art. 6 and 12 KP taking possible indirect emission effects (leakage) into account and using conservative assumptions and interpretations of (emerging) body of JI/CDM Rules;

Monitoring Plan:

- Assessing whether the Project MP is good practice for this kind of project, can easily be used by the Project operator and meets all relevant JI/CDM Rules using conservative assumptions and interpretations of the (emerging) body of JI/CDM Rules;
- Assessing whether the indicators and assumptions specified in the MP to measure and/or observe baseline and project data as well as the Project's compliance with JI/CDM Rules are suitable for this purpose;
- Assessing whether the MP's instructions, procedures, record keeping system, assumptions, technical equations, models, etc., used to monitor Project performance with respect to ERs and sustainable development, to perform calculation of ERs, to provide for quality control, and to prepare for auditing and verification are good practice, sound and credible and provide an adequate and low-risk basis for a successful completion of the periodic verification process and the certification of the ERs the Project is expected to achieve;

Emission reduction projections:

- Reviewing the basis and methods used to project ERs over the assumed lifetime of the Project and assessing whether the expected ERs (given PCF assumptions) are realistic. (Note that expected ERs themselves are note validated);
- Evaluating, in a qualitative manner, the risks for Project performance and achievable ERs related to the BLS and MP and in regard of the evolving JI/CDM Rules;

Reporting and quality control:

- Preparing a draft Validation Report that lists and explains validation findings and, if need be, points out areas where the Project documents would have to be amended and/or where the Project design would need to be modified in order to obtain a positive validation outcome;
- Preparing a final Validation Report and a Validation Opinion that indicates whether the Project, as designed and documented, meets all (emerging) JI/CDM Rules that are relevant for this type of project;

- Presenting the Report to the PCF in a publishable format and keep the Report and Opinion confidential until officially released by the PCF;
- Synthesizing comments from the Parties, stakeholders and UNFCCC accredited observers on the BLS, MP and emission reductions projections (presented as the Project Design Document) received on the PCF's website;
- Make the determination publicly available through the UNFCCC Secretariat or, if not yet possible, through the PCF, together with an explanation of its reasons, including a summary of comments received and a report of how due account was taken of these, in accordance with paragraphs 34-35 of Annex "Guidelines for the implementation of Article 6 of the Kyoto Protocol" to FCCC/CP/2001/13/Add.2;
- Ensuring of proper quality control at all stages of the validation process. The validation team leader must sign off on draft and final Validation Report and Opinion and on the experience note, before these documents are sent to the PCF;

2.3 GHG Project Description

Svilosa is located in northern Bulgaria near the town of Svishtov, on the banks of the river Danube. The Danube provides transportation access for the import of raw materials (wood, coal, etc.) and for the export of Svilosa's production.

The site was designed and constructed during the late-1960s to be Bulgaria's largest pulp plant for the production of synthetic fibers. After 1989, Svilosa managed to continue operations, although production and sales dropped until 1997. Svilosa was privatized successfully in 1999, and since that time exports have increased, and the factory has turned a profit every year.

Svilosa employs 2,200 persons and has an annual turnover of 85.5 million BGL (US$ 37 million). The company is 100% Bulgarian owned, with all but a minority shareholding owned by Svilosa AD (its holding company Arus Ltd). Over 85% of the company's production is currently exported. These exports account for approximately 25% of all cellulose exported from Central and Eastern Europe.

Svilosa is a wood processing company which manufactures three products, which are bleached sulfate pulp[1], viscose centrifugal yarn[2] and Carboxymethylencellulose (cellulose).

Svilosa 's energy supply is mainly based on coal and black liquor generated from the cellulose extraction process. All black liquor is currently consumed as energy input into the system, this will continue into the future and therefore the proposed project will have no impact on the emissions arising from the liquor. Presently, 480,650 MWh per year of black liquor are fired in the recovery boiler at an efficiency of 52% to provide heat for the cellulose line.

The project will use the wood wastes produced at the plant to partially replace coal use, thereby substantially reducing the greenhouse gas (GHG) emissions from coal burning, and the methane emissions from decomposition of the waste material.

[1] Bleached Sulphate Pulp is produced by cooking wood chips in pressure vessels in the presence of sodium hydroxide (soda) liquor. Bleached pulp is particularly used for graphic papers, tissue and carton boards.

[2] Viscose Rayon Filament Yarn is a cellulosic regenerated fiber, which has very similar properties to cotton (water retention, shrinkage and heat resistance) and can be used on almost every type of fabric. Its main applications are in weaving, embroidery and knitting.

Using this waste for energy should:

- reduce the company's direct energy costs, using biomass to replace the coal currently consumed;
- reduce CO_2 as well as other harmful emissions (SO_2, NOx, particulates) by switching from coal to biomass;
- reduce N_20 emissions caused by the spontaneous combustion of the stockpiled wood waste and;
- reduce CH_4 emissions from decomposition of the waste material.

The current coal boilers are operated at a very high pressure level (100 bar) and because of this it is difficult to integrate a biomass boiler into the supply system. The project proposes to supply heat for the cellulose part of the production process with biomass waste, as this part is operated at a lower pressure level (up to 12.7 bar). All of the available wood waste (from the production process and from stock) will be used in a separate boiler to supply heat to the cellulose plant at Svilosa.

The biomass boiler is forecast to generate 117 GWh of process heat per year. This will consume the equivalent of 157 GWh of biomass material. The 117 GWh of heat will directly displace the heat currently generated in the existing coal fired unit. One biomass boiler will be installed, with a capacity of 14 MW (18 tonnes per hour saturated steam at a pressure of between 12 and 15 bar). The planned energy input is 157,000 MWh per year, with an anticipated output 117,000 MWh per year, and thus the boiler efficiency is 75%.

In addition to the CO_2 mitigation effect from fuel switching, there will also be substantial reductions in methane emissions from the wood waste, which is stockpiled at the site and releasing significant quantities of methane each year.

3 METHODOLOGY

Validation or Determination is done through a review and assessment of the assumptions and plans relevant for the successful implementation and operation of the project. The assessment is based on a review of the project documents provided by ESD and appropriate fact finding audits by the validator. This includes expert interviews and a review of supporting records, documents and reports.

The validation process draws on existing environmental auditing schemes and industry practice, but also involve steps that go beyond established practices; in particular, the review of the baseline and the project's environmental additionality. Validation, therefore, not only requires traditional auditing skills, but also significant in-sights into the project's technology, economic modelling, risks and incentive, host country conditions and policies, development issues and the KP process.

The validation process includes a review of the methodology, assumptions, calculations, and claims made or proposed in the baseline study and MVP and an assessment of whether these are correctly applied, plausible, conservative and supported by facts. Conservative in this context means that, when in doubt about factors that impact the emission reductions that can be claimed by the project, the project design, and in particular the assumptions made, should more likely lead to an underestimation than an overestimation of the "true" amount of emission reductions generated and claimed by the Project.

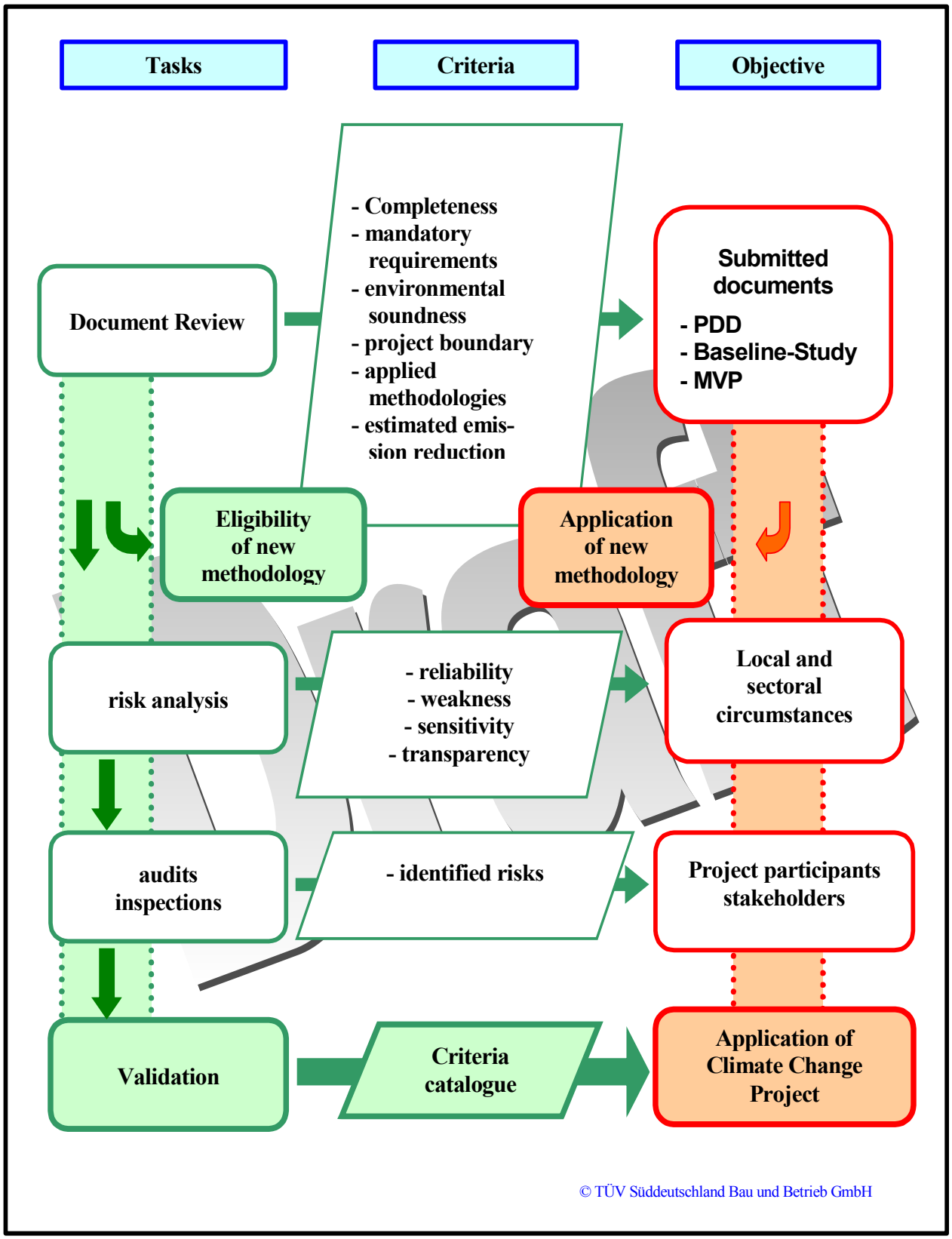
The validation process leads to a judgment on whether the project, as designed and documented, reflects good practice, has a credible baseline, is likely to generate additional emission reductions in the sense of Art. 12 KP and in compliance with all relevant JI / CDM Rules and whether the MVP is likely to determine the achieved emission reductions accurately, yet conservatively. The submitted amount of predicted emission reductions has been scrutinized in detail.

The validation process covers the following areas and related qualitative risks:

- Baseline and leakage,
- MVP (monitoring and determination for emission reductions, social and environmental indicators, quality management, verification provisions),
- Environmental additionality (i.e. whether net emission reductions will be achieved),
- The project's contribution to sustainable development in the host country,
- Other relevant JI Rules such as coverage of all GHGs, Environmental Impact Assessment, stakeholder processes, crediting period, etc.
- Any other project design features that may have impacts on successful implementation and operation of the project as a JI project and on the achievement of the expected certified emission reductions.

Graph 1 as given on the next page is a comprehensive presentation of tasks and objectives of the validation process for climate change projects.

Graph 1: Schematic diagram of the validation procedure



During this specific project we have performed on-site inspections and audits at:

- Svilosa Pulp Factory
- Svishtov municipality
- Bulgarian Ministry of Environment and Water, Sofia

A Preliminary Determination Protocol (PDP) has been developed as part of this determination. It is based on the public available PCF Preliminary Validation Protocol taking into account the results of the Marrakech Accord. Therefore the layout has been redesigned indicate clear references to the resulting criterions. The PDP serves the following purposes:

- It organises, details and clarifies the requirements the project is expected to meet; and
- It documents how a particular requirement has been validated and the result of the validation;

Within this determination we have described the full criteria catalogue for the complete determination. By that we have indicated the outstanding issues, which have to be resolved before submitting the project for registration at a future body at UNFCCC.

The Preliminary Determination Protocol of the following columns:

Requirement or Question	Worded criterion or question including a reference number per each item
Criterion	Indication of the correlated paragraph of the Marrakech Accords
Comments / Corrective Action Request	Conclusions of the assessment process giving transparency on the validators opinion
MoV	Means of Verification
Ref. No.	Reference to the source of information as given by the "Information Reference List"
Ref. No.	Cross Reference other items of the column "requirement or questions" to be included when evaluating the fulfilment of a requirement
Evaluation	Result of the evaluation giving a symbol for ☑: Compliant with criterion; AI: Additional Information request; CAR: Corrective Action Request; O: Out of Relevance (for this report)

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

Annex 2 consists of the "Information Reference List" allocating a specific number to each type of information or document.

The validation team distinguishes between two different types of findings identified during the verification process. A "**Corrective Action Request**" in the verification context would be where;

- there are clear deviations concerning the fulfillment of requirements as set by the applied standard
- there is essential errors in used input data or calculations
- there is a risk that the project will not earn the amount of CERs as indicated by the given estimations
- there is a risk that the project would not be able to deliver high quality CERs

The validation team has also used the term "**Additional Information Request**", whenever

- information is missing in order to decide on the final evaluation of the issue concerned
- information is missing in order to satisfy the required transparency on the presentation of PDD of a CDM-project

Before awarding a positive validation opinion it is necessary to resolve all findings indicated by this validation report.

4 GLOBAL STAKEHOLDER PROCESS

4.1 Annotation

The global stakeholder process for JI projects is an requirement set by the Marrakech Accords, which should be done via a special website maintained under the responsibility of JI Supervisory Board. As this process did not start until now, it was conducted by the website of the PCF. On www.prototypecarbonfund.com there is a list of projects with download possibilities in order to acquire comments from stakeholders. The projects are listed at least for 30 days. The validator has to decide and document, how such comments has to be taken into account during the validation process.

4.2 Recieved Comments

The global stakeholder process for this project was performed from June 20th,. 2002 to July 20th, 2002.

The following table contains a summary of received comments.

Date of received comment	Addressor	Annex
-	-	-

4.3 Discussion

Within the 30 days, no comments have been sent to the indicated addressee.

5 CONCLUSIONS

This paragraph summarises conclusions as presented by the PDP regarding the main corrective action requests if any and further recommendations requiring clarifications. Additionally outstanding issues necessary for later final validation are indicated.

5.1 Compliance with Mandatory Requirements

5.1.1 Discussion

The Marrakech Accords are giving several requirements concerning formal aspects and the indication of information necessary for the approval process. This refers especially to:

- Participation requirements
- A local stakeholder process
- An assessment of environmental impacts
- Special requirements for JI activities

5.1.2 Clarifications / Corrective Action Requests and Outstanding Issues

Item (PDP)	Comment	Evaluation
1.1, 1.2, 1.3,	Participation requirement: It is necessary to acquire a "letter of approval" from the Brazilian government as soon as required administrative structures are developed.	Outstanding issue
1.4	Global stakeholder process: Actually the website from UNFCCC streamlining such a global process is not developed. This process is necessary at later formal application as JI project	Outstanding issue
1.11	Environmental Impact Assessment: An EIA has been submitted to the national authority in the context of the approval process. It has not been submitted to the validator. This should be done before getting the project registered at UNFCCC. No serious impact have been considered to hinder the project.	Additional Information requested

5.1.3 Conclusion

As this step of determination for PCF does not require the fulfilment of criterion concerning to issues of JI, which are still under development, the project is in compliance with all applicable criteria.

The EIA should be submitted for completion of files as soon as it will be available.

5.2 Reductions in Anthropogenic Emissions of Sources of GHG

5.2.1 Discussion

The project shows a threefold emission reduction effect by

- replacing coal for energy generation by biomass
- reducing methane emissions from the biomass stockpiles, which has been accumulated over several years
- avoiding future methane emissions by impede the creation of new deposed mass

The Marrakech Accords are requiring a conservative estimation of reductions in anthropogenic emissions of sources of GHG. Conservative in this context means that, when in doubt about factors that impact the emission reductions that can be claimed by the project, the project design, and in particular the assumptions made, should more likely lead to an underestimation than an overestimation of the of the "true" amount of emission reductions generated and claimed by the Project.

The project as developed uses conservative approaches wherever applicable. In particular it uses the lower end of a 90 % confidential interval to determine the emission factors of fresh and deposed biomass. This means that the probability for an underestimation of emission reduction at that point is 95%. Furthermore it does not claim for additional reduction effects (transport of coal, nitrous oxide emissions from disposal).

5.2.2 Findings

Item (PDP)	Comment	Evaluation
2.1	Project boundary: There is an inconsistency concerning the temporary boundary of the project (calculated 9 years indicated 10 years).	Corrective Action Request

5.2.3 Conclusion

If the indicated inconsistency will be resolved, the Svilosa biomass project would be in compliance with all criteria. The given conservative estimation of projected emission reduction leads to an amount of 897 kto CO2e during the crediting period from 2004 to 2012.

5.3 Baseline Study

5.3.1 Discussion

Due to the Marrakech Accords a baseline should be established in a transparent and conservative manner. It should allow to calculate / estimate the emissions of GHG that would occur in the absence of the emission reduction project. Furthermore a project should either apply using an approved methodology or apply for approval for a new methodology, first.

5.3.2 Findings

No findings have been identified concerning the revised project documents

5.3.3 Conclusion

The Svilosa project is in compliance with the criteria related to baseline setting.

5.4 Monitoring Plan

The project development should include a Monitoring and Verification Protocol, which gives advice how to gather all data required for the calculation of emissions of GHG by the project and by leakage effects as well as all data necessary for the determination of baseline emissions. All data acquisition procedures should be based on a reliable quality management system.

5.4.1 Findings

No findings have been identified concerning the revised project documents

5.4.2 Conclusion

The Svilosa project is in compliance with the criteria related to monitoring.

5.5 Project Design Documents

5.5.1 Discussion

The submitted documents should cover all relevant information necessary to evaluate the project. The PDD should reflect current best practices. Temporal, spatial, and financial boundaries should be defined and predicted project GHG emissions should be calculated in a complete, accurate, transparent manner and possible uncertainties encapsulated.

5.5.2 Findings

Item (PDP)	Comment	Evaluation
2.1	Crediting Period: There is an inconsistency concerning the temporary boundary of the project (calculated 9 years indicated 10 years). It furthermore exceeds the first commitment period of the KP. This exceeding falls still under the negotiation process	Corrective Action Request and Outstanding issue

5.5.3 Conclusion

If the indicated inconsistency will be resolved, the Svilosa biomass project would be in compliance with all criteria for PCF.

6 VALIDATION OPINION

TÜV Süddeutschland Bau und Betrieb GmbH has performed an validation of the prospective JI project: "**Svilosa Biomass Boiler Project**" due to currently valid documentation of the UN Framework Convention on Climate Change (UNFCCC). In this context, the relevant documents are the "Marrakech Accords".

This report documents that in the context of the submitted baseline approach almost all requirements of the applied standard are fulfilled by this specific projects.

We are of the opinion that the issues identified and indicted in chapter 5 of this report need further elaboration to completely sustain a determination process necessary for later approval as JI project.

If these conditions are sufficiently rectified, it is expected that the project can earn ERUs in accordance with article 6 in the KP. Thus the project should be eligible to generate verified emissions reductions in an amount of 897 kto CO2e between 2004 and 2012.

The determination of the project is based on the information made available to us and the engagement conditions detailed in this report. TÜV Süddeutschland Bau und Betrieb GmbH cannot guarantee the accuracy or correctness of this information. Hence, TÜV Süddeutschland Bau und Betrieb GmbH cannot be held liable by any party for decisions made or not made based on this report.

Munich, 2002-10-04

Bernhard Grimm **Certification body for emission trading and climate protection projects**	Werner Betzenbichler **Project Manager**

TÜV SÜDDEUTSCHLAND

Preliminary Validation Protocol

Requirement or Question	Crite-rion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Con-clu-sion[3]
1. Mandatory Requirements						
1.1. Did the parties involved indicate their designated focal point (DFP) for the approving projects to Art. 6?	**16 G § 20 (a)**	**Not available yet**	**DR**	**9**	**1.1.1, 1.1.2, 1.1.3**	**O**
1.1.1. Are the relevant parties clearly identified?		See above	DR, I			
1.1.2. Has the host country indicated its DFP?		See above	DR			
1.1.3. Has the investing party indicated its DFP?		See above	DR			
1.2. Did the parties involved indicate their national guidelines and procedures (G&P) for the approving projects to Art. 6	**16 G § 20 (b)**	**Not available yet for Bulgaria**	**DR**	**9**	**1.2.1, 1.2.2**	**O**
1.2.1. Has the host country indicated its G&P?		See above				
1.2.2. Has the investing party indicated its G&P?		PCF has published its guidelines for projects on the website				
1.3. Does the host country's G&P include considerations of stockholders' comments, monitoring and verification ?	**16 G § 20 (b)**	**Not available yet for Bulgaria**	**DR**	**9**	**1.3.1, 1.3.2**	**O**
1.3.1. Have comments by stakeholders been invited within the host country?		Yes	DR	9		

[1] 16 G = decision 16/CP.7 , draft decision -/CMP.1, Annex: Guidelines for the implementation of Article 6 of the Kyoto Protocol
17 MP = decision 17/CP.7 , draft decision -/CMP.1, Annex: Modalities and procedures on a clean development mechanism

[2] Means of Verification: DR = Document Review, I = Interview

[3] ☑: Compliant ; CAR: Corrective Action Request; AI: Additional Information required; O: Outstanding Issue (due to missing institutions and guidelines)

Requirement or Question	Criterion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Conclusion[3]
1.3.2. Is information available how such comments have been taken into consideration?		No	DR	9		
1.4. Does the investor country's G&P include considerations of stockholders' comments, monitoring and verification ?	**16 G § 20 (b)**	**Yes, assuming that PCF could be treated as a Party. PCF has invited stakeholder comments on the PCF-website.**	**DR**	**15**	**1.4.1, 1.4.2**	☑
1.4.1. Have comments by stakeholders been invited by the investor party?		On the website of PCF for 30 months				
1.4.2. Is information available how such comments have been taken into consideration?		No comments have been received				
1.5. Is a "Verification procedure under the Art. 6 supervisory committee" required by the project participants ?	**16 G § 21 - § 26**	**Yes, but no supervisory committee is installed yet.**	**DR**	**9**		☑
1.6. Did the project participants submit an eligible project design document?	**16 G § 31**	**Yes**	**DR**	**10, 11**		☑
1.6.1. Does this document contain information on the approval of the parties concerned?		It refers to letter of endorsement received from the Bulgarian government			1.8	
1.6.2. Does this document contain information on the emission reduction or enhancement of removals?		See cross references			2.1, 2.2, 2.3, 2.4, 3.2, 3.3	
1.6.3. Does this document contain information whether the project has an appropriate baseline and monitoring plan?		See cross references			3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.13, 3.14, 3.15, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8	

Requirement or Question	Criterion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Conclusion[3]
1.7. Did the independent entity make the project design documents publicly available at least for 30 days through the secretariat in order to receive comments?	**16 G § 32**	**Not through the secretariat, as such procedures are not available yet. The procedure used at the PCF website could be considered as sufficient substitution.**	**DR**	**15**		**O**
1.8. Is written approval available from the designated national authorities of each Party involved	**16 G § 33 (a)**	**Bulgaria ratified the KP on August 15th, 2002. A formal "letter of approval" should be requested as soon as the DFP is installed.**	**DR, I**	**9, 4**		**O**
1.9. Would the project result in a reduction of anthropogenic emissions or an enhancement of removals?	**16 G § 33 (b)**	**Yes, see indicated cross references**	**DR, I**	**1, 3, 10, 11, 12**	**2.1, 2.2, 2.4, 2.3, 6.1, 6.2**	**☑**
1.10. Does the project have an appropriate baseline and monitoring plan?	**16 G § 33 (c)**	**Yes, see indicated cross references**	**DR**	**11, 12**	**3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.13, 3.14, 3.15, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8**	**☑**
1.11. Have project participants submitted a documentation on the analysis of the environmental impacts of the activity ?	**16 G § 33 (d)**	**The PDD contains the statement, that there are no negative environmental impacts. Due to the information, that an EIA has been prepared, it has not been submitted to the validator.**	**DR, I**	**2, 4, 10**	**5.6**	**AI**
1.11.1. Is an environmental impacts assessment submitted due to national laws / regulations accompanying the approval process ?		No				
1.11.2. If not necessary, is the analysis due to good practice for the evaluation of environmental impacts?		See above				

Requirement or Question	Criterion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Conclusion[3]
1.12. Does the analysis include transboundary impacts?	**16 G § 33 (d)**	**The PDD contains the statement, that there are no negative environmental impacts. Due to the information, that an EIA has been prepared, it has not been submitted to the validator.**	**DR**	**10**		**AI**
2. Reductions in Anthropogenic Emissions of Sources of Greenhouse Gases or Enhancement of Removal						
2.1. Does the project boundary encompass all anthropogenic emissions by source of greenhouse gases under the control of the project participants that are significantly and reasonable attributable ?	**17 MP § 52**	**There is an inconsistency concerning the temporal boundaries of the project (see 2.1.4)**	**DR**	**10, 11, 12**	**2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 2.1.6, 2.1.7, 2.1.8**	**CAR #1**
2.1.1. Is this question addressed in the project design documentation ?		Yes, the diverse project documents give a detailed description of the boundary.	DR	10, 11, 12		
2.1.2. Are the project's spatial (geographical) boundaries clearly defined?		Yes, the SAD facility in Svishtov.	DR	10		
2.1.3. Are the project's system (components and facilities used to mitigate GHGs) boundaries clearly defined?		Yes, facility as above. There are two different systems, the construction of a biomass boiler to replace coal and the prevention of methane emissions from the stockpile.	DR	10		
2.1.4. Are the project's temporal boundaries clearly defined?		They are indicated but there is an inconsistency with the documents. Whereas all projections are based on calculations for reductions between 2004 and 2012 (9 years), the PDD indicated a crediting period of 10 years. 2012 as end of the first Kyoto commitment period seems to be used as this project could be seen as JI-project, whereas the 10 year crediting period would fit to a CDM approach. CAR: Clarify the inconsistency and bring it in line with the requirements (either of JI or of purchase contract)	DR	10, 11, 12		

Requirement or Question	Criterion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Conclusion[3]
2.1.5. Are there any existing host country laws that require the use of a particular technology related to the project?		No	I	2, 4		
2.1.6. Is the current political situation in the host country likely to change in a direction that will create stricter environmental legislation or better enforcement of existing laws and regulations?		The Bulgarian government will have a major interest to keep economical impacts of environmental law as small as possible during the next decade, even if this may not coincide with new obligation by the accession to the EU (expected in 2007)	I	4		
2.1.7. Will the macro-economic trends in the host country have an impact on project baseline or performance?		No macro-economic effects within the host country are expected to have serious impacts on the project.				
2.1.8. Will the political aspirations of the host country have any impact on project baseline or performance?		This issue is addressed by the BLS and MVP. The accession to the EC may cause a stricter regulation concerning the possibility to depose biomass on the stockpile or even the necessity for a remediation of the disposal. Nevertheless it seems to be quite improbably, that such regulation may impact the project until end of 2012.	DR	11, 12		
2.2. Is the project activity expected to result in a reduction of anthropogenic emissions by sources of greenhouse gases that are additional to any that would occur in the absence of the proposed project activity?	**16 G § 33 (b)**	**Yes for both cases:** ▪ **the substitution of emissions by combustion of biomass instead of coal and** ▪ **the avoidance of methane emissions from the biomass stockpile**	**DR, I**	**1, 3, 10, 11, 12, 13**	**2.2.1, 2.2.2, 2.2.3, 2.2.4**	☑
2.2.1. Is the project activity "business as usual" for the concerning sector in the host country?		There is no comparable competitor in the host country. The practice of forming biomass waste disposals has been for other sites and sectors, too. Due to the limited investment capacity in Bulgaria a project activity like this one can not be called "business as usual".	DR, I	1, 3, 14		

Requirement or Question	Crite-rion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Con-clu-sion[3]
2.2.2. Does the project activity result in an decrease of the use of fossil fuel for the purpose of energy generation		Yes, by replacing coal by using biomass.				
2.2.3. Does the project activity result in an decrease of the emission of other greenhouse gases?		Yes, by reducing the emissions of the whole stockpile by combusting deposed biomass waste and by avoiding the future deposition of fresh material.				
2.2.4. Does the project activity result in an additional increase of greenhouse gas emissions outside the project boundaries?		No				
2.3. *Does the baseline represents emissions that would occur in the absence of the project ?*	**17 MP § 44**	**Yes, see indicated cross references**	**DR**	**11**	**3.1, 3.2, 3.3, 3.5, 3.6, 3.7, 3.8, 3.9, 3.11, 3.13, 3.14**	☑
2.4. *Are all relevant emissions from greenhouse gases, sectors and source categories listed in Annex A covered within the project boundary ?*	**17 MP § 44**	**Yes**	**DR**	**11, 12**	**2.4.1, 2.4.2, 2.4.3, 2.4.4, 3.2.1**	☑
2.4.1. Are emissions of all greenhouse gases assessed by the baseline study ?		Yes, emissions of CO2, CH4 and N2O have been identified as relevant for the project.				
2.4.2. Are emissions of other gases than the assessed one of relevance for the project activity?		No				
2.4.3. Are emissions of other activities within the boundaries assessed by the baseline study?		No				
2.4.4. Are emissions of other activities than the assessed one of relevance?		No				

Requirement or Question	Crite-rion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Con-clu-sion[3]
3. Baseline Setting						
3.1. Is the baseline a scenario that reasonably represents anthropogenic emissions that would occur in the absence of the proposed project?	**16 G B § 1**	**Yes, see indicated cross references**	**DR**	**11**	**3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.15**	☑
3.2. Does the baseline cover all emissions from all relevant gases listed in Annex A (KP) within the project boundary?	**16 G B § 1**	**Yes**	**DR**	**11**	**3.2.1**	☑
3.2.1. What are the relevant gases? Are they covered by the BLS ?		CO2, CH4 and N2O	DR	11		
3.3. Does the baseline cover all emissions from all relevant sectors and source categories listed in Annex A (KP) within the project boundary?	**16 G B § 1**	**Yes**	DR	11		☑
3.3.1. What are the relevant sectors and source categories? Are they covered by the BLS ?		• Energy production • Emissions from (biomass) waste disposals	DR	11		

Requirement or Question	Crite-rion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Con-clu-sion[3]
3.4. Is the baseline established on a project-specific basis and/or using a multi-project emission factor?	**16 G B § 2 (a)**	**The baseline is established in a project specific way.** **Path 1 (replacement of coal) refers to specific efficiencies and carbon contents within the energy production at Svilosa.** **Path 2 (methane) refers to a study especially performed for the determination of methane emissions of Svilosa stockpile.** **The approach for emissions of fresh bark, which is also included in this study, is considered to be used in a multi-project manner.**	**DR**	**5, 6, 11**		☑
3.5. A baseline methodology should be selected among the following approaches: ***a) existing actual or historical data*** ***b) emissions from a technology that represents economically attractive course of action*** ***c) the average emissions of similar project activities***	**17 MP § 48**	**It uses emissions from actual and historical data. It furthermore shows, that no action, i.e. operating with the actual technology, would represent the economically most attractive course.**	**DR**	**5, 6, 11**		☑
3.6. Is the baseline established in a transparent manner regarding the choice of approaches?	**16 G B § 2 (b)**	**Yes, different approaches are presented and analyzed.**	**DR**	**11**		☑
3.7. Is the baseline established in a transparent manner regarding assumptions?	**16 G B § 2 (b)**	**Yes**	**DR**	**11**	**3.7.1,.3.7.2**	☑
3.7.1. Are given assumptions in accordance with public available studies, documents etc.?		Yes, all assumptions are based on public available studies. The most recent one (btg-study on stock-pile emission) is attached to the project design documents				

Requirement or Question	Crite-rion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Con-clu-sion[3]
3.7.2. Is it described reasonably why making use of each specific assumption?		Yes, the can be confirmed for the baseline study as well as for the btg-study on stockpile emissions.				
3.8. Is the baseline established in a transparent manner regarding applied methodologies?	**16 G B § 2 (b)**	**Yes**	**DR**	**5, 6, 11**	**3.8.1**	☑
3.8.1. Which methodology is applied ? Is application done in a proper manner?		Concerning the selection of the baseline the PPD submitted a “least cost analysis”. Concerning the baseline emission for CH4 the btg-study based on actual emissions has been used. The CO2 emissions of the CHP plant are based on historical data. All applications are done in a proper manner.				
3.8.2. Does the submitted documentation enable to reproduce the indicated results?		Yes				
3.9. Is the baseline established in a transparent manner regarding parameters, data sources and key factors?	**16 G B § 2 (b)**	**Yes**	**DR**	**11**	**3.9.1, 3.9.2, 3.9.3, 3.9.4**	☑
3.9.1. Are parameters identified in an appropriate manner?		Yes there is a clear evidence for all parameters to be used and the related sources.				
3.9.2. Is reference given to all data sources used for the determination of variables?		Yes	DR	11		

Requirement or Question	Crite-rion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Con-clu-sion[3]
3.9.3. What are the key factors? Are they clearly identified?		Path 1, coal replacement: ➢ CO2 emissions factor of coal used ➢ Thermal efficiency of CHP plant ➢ capacity of biomass boiler ➢ power supply by biomass boiler Path 2, methane mitigation ➢ emission factors of stockpile waste ➢ emissions factors of fresh biomass ➢ energy demand by biomass boiler ➢ amount of processed wood Costs of different baseline approaches ➢ investment costs ➢ variable costs All factors are clearly identified	DR	11		
3.9.4. Is there a risk concerning the sensitivity of results concerning key factors?		No, conservative approaches have been used, whenever assumptions had to be selected.				
3.10. Is the baseline established taking into account national and / or sectoral policies and circumstances ?	**16 G B § 2 (c)**	**Yes**	**DR**	**11**	**3.10.1, 3.10.2, 3.10.3, 3.10.4, 3.10.5, 3.10.6**	☑

Requirement or Question	Crite-rion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Con-clu-sion[3]
3.10.1. Does the baseline study contain information about the market situation of the project participants?		Yes	DR	11		
3.10.2. Is this information taken into account?		Yes	DR	11		
3.10.3. Does the baseline study contain information concerning projected developments of the sectors concerned?		Yes, based on a financial assessment performed for the World Bank	DR	11		
3.10.4. Is this information taken into account?		Yes	DR	11		
3.10.5. Does the baseline study contain information possible changes in legislation and regulations which may affect the baseline?		Yes, in particular it refers to possible impacts by the accession to the EU	DR	11		
3.10.6. Is this information taken into account?		Yes, as a kind of "trigger function" for the determination of the methane emissions.	DR	11		
3.11. Is it possible to earn ERUs for decreases in activity levels outside the project activity ?	**16 G B § 2 (d)**	**No, because the emission reduction capacity is limited by the biomass boiler capacity**	**DR**	**11**		☑
3.11.1. Is this issue addressed in the baseline study?		Yes	DR	11		
3.11.2. Are there any thinkable cases of such illicit earnings of emission reductions?		No				
3.12. Is it possible to earn CERs due to force majeure ?	**16 G B § 2 (d)**	**No**			**3.12.1, 3.12.2**	☑
3.12.1. Is force majeure and the ability to overestimate emission reductions addressed in the baseline study		Not in the BLS, but there is a risk analysis in the PCN				

Requirement or Question	Criterion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Conclusion[3]
3.12.2. Are there any thinkable cases of force majeure which could lead to an overestimation of emission reductions?		A switch to wood not harvested from sustainable managed forests may be considered as such a case. However the economical attractiveness to sustain on Bulgarian wood during the project period make this case quite improbably.				
3.13. Is the baseline established taking into account uncertainty?	**16 G B § 2 (e)**	**The PP are considering that the conservative approach is overlapping all aspects of data uncertainty. Nevertheless uncertainty of data to be measured is considered as being low. This approach should be accepted as suitable.**	**DR**	**11**	**3.13.1, 3.13.2, 3.13.3,**	☑
3.13.1. Is the baseline study showing any figures or even more a detailed determination of uncertainty?		Uncertainty is addressed in a qualitative discussion.				
3.13.2. Does the baseline contain advice how data uncertainty has been determined?		No				
3.13.3. Is such an uncertainty taken into account, when calculation baseline emissions ?		The most sensitive assumption, the methane emission factors are based on values of the btg-study, using the lower level of a 90% confidential interval, i.e. the probability that these factors are underestimating the real emissions is more than 95%.				
3.14. Does the baseline use conservative assumptions?	**16 G B § 2 (e)**	**Yes**	**DR**	**11**		☑
3.15. Do project participants justify their choice of baseline?	**16 G B § 3**	**Yes**	**DR**	**11**		☑

Requirement or Question	Criterion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Conclusion[3]
4. Monitoring						
4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimating or measuring the greenhouse gas emissions or removals within the project boundary during the crediting period?	**16 G B § 4 (a)**	**Yes**	**DR**	**12**	**4.1.1, 4.1.2, 4.1.3**	☑
4.1.1. Are there any emissions by sources or removals of greenhouse gas emissions within the project boundary?		➢ CO2 emissions by the CHP plant ➢ Methane emission by the stockpile ➢ Methane emissions of fresh dumped bark	DR	12		
4.1.2. If yes, are these emissions reflected by the monitoring plan?		Yes	DR	12		
4.1.3. If yes, does the monitoring plan give advice on the archiving of data?		The MVP requires the use and storage of a spreadsheet and the additional development of a paer based system	DR	12		
4.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining the baseline within the project boundary during the crediting period?	**16 G B § 4 (b)**	**Yes**	**DR**	**12**	**4.1.3**	☑
4.2.1. Is guidance given how to monitor the required data?		Yes	DR	12		
4.2.2. Is guidance given how to archive the monitored data?		Yes, see above	DR	12	4.1.3	

Requirement or Question	Criterion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Conclusion[3]
4.3. Does the monitoring plan provide for the identification, collection and archiving of all relevant data necessary for estimating or measuring the greenhouse gas emissions that are measurable and significant attributable to the project outside the project boundary during the crediting period?	**16 G B § 4 (c)**	**Yes, by checking the use of wood from "sustainable managed forests"**	**DR**	**12**	**4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5**	☑
4.3.1. Does this guidance encompass all emissions/removals under the control of the project participants that are significant and reasonably attributable to the project?		Yes	DR	12		
4.3.2. Is guidance given how such emissions / removals could be identified?		Yes, by checking the wood supply	DR	12		
4.3.3. Does this guidance include emissions outside the project boundary that do not exist at the project implementation, but may occur in future? .		Not relevant				
4.3.4. Is guidance given how to monitor the relevant data?		Yes	DR	12		
4.3.5. Is guidance given how to archive the monitored data?		Yes	DR	12		
4.4. Does the monitoring plan provide for the collection and archiving of data relevant for information concerning environmental impacts, in accordance with the procedures required by the host country?	**16 G B § 4 (d)**	**Yes, by referring to emission factors for hazardous gases, which can be used in the context of replaced coal.**	**DR**	**12**		☑
4.4.1. Are there any legally binding procedures, which have to be applied?		No statements were made on this issue	DR	12		

Requirement or Question	Criterion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Conclusion[3]
4.4.2. Is the monitoring plan in compliance with those procedures?		See above	DR	12	4.4	
4.5. Does the monitoring plan provide for quality assurance and control procedures?	**16 G B § 4 (e)**	**Yes**	**DR**	**12**	**4.5.1, 4.5.2, 4.5.3, 4.5.4**	☑
4.5.1. Are quality assurance and control procedures for the monitoring of data relevant for the project's emissions or energy generation?		Yes, in regard to energy efficiency and energy generation of the CHP plant as well as steam supply by the biomass boiler.	DR	12		
4.5.2. Are quality assurance and control procedures for the monitoring of data relevant for the baseline emission?		Quality control procedures are required for the determination of pulp production, composition of wood, moisture factors and heat values	DR	12		
4.5.3. Are quality assurance and control procedures for the monitoring of data relevant for attributable emissions outside the project boundaries?		No				
4.5.4. Are quality assurance and control procedures for the monitoring of data relevant for environmental impacts?		No				
4.6. Does the monitoring plan provide procedures for the periodic calculation of the emission reductions and for leakage?	**16 G B § 4 (f)**	**Yes**	**DR**	**12**		☑
4.7. Does the monitoring plan adjust the emission reductions for leakage?	**16 G B § 4 (f)**	**Leakage is addressed, by no necessity for adjustments has been identified.**	**DR**	**12**		☑
4.7.1. Is leakage addressed in the MVP?		Yes	DR	12		
4.7.2. Are there any identifiable leakage processes?		No measurable leakage effects have been identifies.				

Requirement or Question	Crite-rion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Con-clu-sion[3]
4.8. Does the monitoring provide documentation of all steps involved in the calculations?	16 G B § 4 (g)	Yes	DR	12		
5. Completeness of Project Design Document						
5.1. Does project design document include a description of the project comprising a technical description, including how technology will be transferred, if any, and a description and justification of the project boundaries?	17 MP B § 2 (a)	Yes	DR	10		☑
5.2. Does the project design document include information concerning the baseline methodology?	17 MP B § 2 (b)	Yes	DR	10	3.4, 3.5, 3.8.1, 3.9, 3.14, 3.15	☑
5.3. Does the project design document include a statement of estimated operational lifetime and which crediting period was selected?	17 MP B § 2 (c)	Yes	DR	10		☑
5.4. Is the crediting period in compliance with the guidelines on article 6 projects?	16 G cover-page	Conditionally, as it does exceed the commitment period	DR	10	2.1, 2.1.4	CAR #1
5.5. Does the project design document include a description, how GHG emissions are reduced by the project?	17 MP B § 2 (d)	Yes	DR	10	Chapter: 3, 4, 2, 6	☑
5.6. Does the project design document include an evaluation of environmental impacts in an appropriate manner?	17 MP B § 2 (e)	Yes	DR	10		☑
5.7. Does the project design document include information on sources of public funding?	17 MP B § 2 (f)	Yes	DR	10		☑

Requirement or Question	Criterion[1]	Comments Corrective Action Request	MoV[2]	Ref. No.	Cross Ref.	Conclusion[3]
5.8. Does the project design document include the required information concerning a local stakeholder process?	17 MP B § 2 (g)	Yes	DR	10	1.3, 1.4	☑
5.9. Does the project design document include a monitoring plan?	17 MP B § 2 (h)	Yes	DR	10		☑
6. Estimated amount of emission reductions during crediting period						
6.1. Does the given estimation of emission reductions coincide with the recalculation of emission reductions by the assessment team?	PCF	Yes	DR	15		☑
6.2. Does the given estimation describe a conservative approach of expected emission reductions, including aspects of uncertainty?	PCF	Yes	DR	15		☑

TÜV SÜDDEUTSCHLAND

Information Reference List

Reference No.	Document or Type of Information
1.	On-site interviews and inspection at 5. June 2002 in Svilosa, by auditing team of TÜV Süddeutschland Validation team Alexander Horst — GFA Terra Systems GmbH Hans Christian Schröder — TÜV Süddeutschland Kiril Baharev — TÜV Süddeutschland/Bulgaria Interviewed persons: Matthew Clayton — Energy for Sustainable Development Ltd. Rumen Vitkov — Svilosa Company (main contact person) Desislava Nikolova — Svilosa Company (interpreter) Bojin Bojinov — Svilosa Company (Thermal Power Plant) Jordan Gajdarov — Svilosa Company (Pulp Mill plant) Atanas Gerov — Svilosa Company (Pulp Mill Plant)
2.	On-site interviews and inspection at municipal administration on 6. June 2002 in Svishtov, by auditing team of TÜV Süddeutschland Validation team Alexander Horst — GFA Terra Systems GmbH Hans Christian Schröder — TÜV Süddeutschland Kiril Baharev — TÜV Süddeutschland/Bulgaria Interviewed persons: Mr. Simenijov, Ecologist, — Svishtov Municipality Matthew Clayton — Energy for Sustainable Development Ltd. Rumen Vitkov — Svilosa Company (main contact person) Desislava Nikolova — Svilosa Company (interpreter)

Reference No.	Document or Type of Information
3.	On-site interviews and inspection at disposal, port and facilities on 6. June 2002 in Svilosa, by auditing team of TÜV Süddeutschland Validation team Alexander Horst — GFA Terra Systems GmbH Hans Christian Schröder — TÜV Süddeutschland Kiril Baharev — TÜV Süddeutschland/Bulgaria Interviewed persons: Matthew Clayton — Energy for Sustainable Development Ltd. Rumen Vitkov — Svilosa Company (main contact person) Desislava Nikolova — Svilosa Company (interpreter) Mrs. Bercheva, — Svilosa Company (wood supply)
4.	On-site interviews and inspection at Ministry of Environmental and Water in Sofia on 7. June 2002, by auditing team of TÜV Süddeutschland Validation team Alexander Horst — GFA Terra Systems GmbH Hans Christian Schröder — TÜV Süddeutschland Kiril Baharev — TÜV Süddeutschland/Bulgaria Interviewed persons: Matthew Clayton — Energy for Sustainable Development Ltd. Rumen Vitkov — Svilosa Company (main contact person) Desislava Nikolova — Svilosa Company (interpreter) Mrs. Rumiana Ilieva — Ministry of Environmental and Water Mr. Ivanov, — Ministry of Environmental and Water (Chief expert Air Protection Department)

Reference No.	Document or Type of Information
5.	"Emission Baseline, Estimating the unknown", OECD / EIA (2000), Paris, France, www.iea.org/public/studies/baselines.htm
6.	"Options for project emission baselines", OECD / EIA, Oct. 1999, www.oecd.org
7.	International Energy Agency (IEA), 2000. World Energy Outlook 2000.
8.	Martens, J.W., S.N.M. van Rooijen, V. Bovée, and H.J. Wijnants, 2001. A proposal for the CDM programme of the Netherlands
9.	www.unfccc.int - web-page of UNFCCC
10.	" Project Design Documents, Bulgaria: Wood Industries, Svilosa Biomass Boiler Project", Energy for Sustainable Development Ltd (ESD), UK, September 2002
11.	"Baseline Study, Bulgaria: Wood Industries, Svilosa Biomass Boiler Project", Energy for Sustainable Development Ltd (ESD), UK, September 2002
12.	"Monitoring Plan (MP), Bulgaria: Wood Industries, Svilosa Biomass Boiler Project", Energy for Sustainable Development Ltd (ESD), UK, September 2002
13.	"Methane and Nitrous Oxide Emissions from Biomass waste Stockpiles – Final report", btg, The Netherlands, August 2002
14.	"Evaluation on Svilosa", The World Bank, Economical Report prepared by Claude Devillers, Tenafly, July 2002
15.	www.prototypecarbonfund.com - web-page of PCF