
VALIDATION REPORT

Sri Ramrupai Balaji Steels Limited

SRBSL – WASTE HEAT RECOVERY BASED CAPTIVE POWER PROJECT

SGS Climate Change Programme

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Date of issue:	Project No.:
01-03-2007	CDM.Val0111
Project title	Organisational unit:
SRBSL – Waste Heat Recovery based Captive Power Project	SGS Climate Change Programme
Revision number	Client:
0	Sri Ramrupai Balaji Steels Limited

Summary

SGS India Pvt. Ltd., an affiliate of SGS United Kingdom Ltd. has made a validation of the CDM project activity “SRBSL – Waste Heat Recovery based Captive Power Project” by Sri Ramrupai Balaji Steels Limited, on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The scope of validation is the independent and objective review of the project design document, baseline study and monitoring plan and other relevant document of the project. The information in this document is reviewed against the criteria defined in the Marrakech Accords (Decision 17) and the Kyoto Protocol (Article 12) and subsequent guidance from the CDM Executive Board.

The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications plan and/or corrective actions may provide input for improvement of the project design document (PDD).

The overall validation process, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (UK.PP.12 issue 3 dated 19/01/2007).

The first output of the validation process is a list of Corrective Actions Requests and New Information Requests (CAR and NIR), presented in Annex 2 of this document. Taking into account this output, the project proponent revised its project design document.

In summary, it is SGS's opinion that the proposed CDM project activity correctly applies the baseline and monitoring methodology as mentioned in approved methodology adopted for the proposed project activity and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Subject.:		
CDM validation		Indexing terms
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Date of final decision: 13-04-2007	Number of pages: 39	<input type="checkbox"/> Unrestricted distribution

Abbreviations

ABC	After Burning Chamber
BAU	Business as Usual
BM	Built Margin
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CM	Combined Margin
CO₂	Carbon di-oxide
CPP	Captive Power Plant
DCS	Distributed Control System
DPL	Durgapur Projects Limited
DRI	Direct Reduced Iron
DVC	Damodar Valley Corporation
EF	Emission Factor
EIA	Environmental Impact Assessment
ESP	Electro Static Precipitator
FBC	Fluidized Bed Combustion
FO	Furnace Oil
GHG	Greenhouse Gas
GWh	Giga Watt hour
IOB	Indian Overseas Bank
IPCC	Intra-governmental Panel for Climate Change
IREDA	Indian Renewable Energy Development Agency
kCal	Kilo Calories
km	Kilo metres
KV	Kilo Voltage
KW	Kilo Watt
kWh	Kilo Watt hour
LDO	Light Diesel Oil
M&V	Monitoring and Verification
MkWh	Million Kilo Watt hour
MNES	Ministry of Non-conventional Energy Sources
MT	Metric Tonne
MTPA	Metric Tonne Per Annum
MTPD	Metric Tonnes Per Day
MW	Mega Watt
MWh	Mega Watt hour
NOC	No Objection Certificate
OM	Operating Margin
PLF	Plant Load Factor
SEB	State Electricity Board
SI	Sponge Iron
SPM	Suspended Particulate Matter
SRBSL	Sri Ramrupai Balaji Steels Limited
STG	Steam Turbine Generator
T & D	Transmission and Distribution
TJ	Tera Joules
tph	Tonnes Per Hour
UNFCCC	United Nations Framework Convention on Climate Change

WBPCB	West Bengal Pollution Control Board
WBSEB	West Bengal State Electricity Board
WHR	Waste Heat Recovery
WHRB	Waste Heat Recovery Boilers
WHRSGS	Waste Heat Recovery Steam Generation System

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Annex 1: Local assessment

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1. Introduction

1.1 Objective

Sri Ramrupai Balaji Steels Limited has assigned SGS to perform the validation of the project: “SRBSL – Waste Heat Recovery based Captive Power Project” with regard to the relevant requirements for CDM project activities. The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, the monitoring plan (MP) and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

1.2 Scope

The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation 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.

1.3 GHG Project Description

The primary purpose of the proposed project is to recover the sensible heat content of the waste gases generated from sponge iron kilns using Waste Heat Recovery Boilers (WHRBs) to generate power. The generated power will substitute grid power to meet the process requirement of SRBSL's steel plant.

Baseline Scenario:

Under the baseline scenario, the project activity thus displaces equivalent amount of electricity from grid which is predominantly generated from thermal (fossil fuel based) power plants.

With Project Scenario:

The project activity uses waste gas as fuel for generation of power, which in turn contributes to conservation of fossil fuel and reduces GHG emissions.

Leakage:

As per the methodology ACM0004; no leakage is to be considered.

Environmental & Social Impacts:

According to local assessor, there is no negative environmental and social impact expected due to the project activity.

The names and roles of the validation team members

<i>Name</i>	<i>Affiliate</i>	<i>Role</i>
Shivananda Shetty	SGS India	Team Leader / Lead Auditor
Sanjeev Kumar	SGS India	Assessor
Nikunj Agarwal	SGS India	Local Assessor
Martin Beckmann	SGS Germany	Technical reviewer

2. Methodology

2.1 Review of CDM-PDD and additional documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

A site visit is usually required to verify assumptions in the baseline. Additional information can be required to complete the validation, which may be obtained from public sources or through telephone and face-to-face interviews with key stakeholders (including the project developers and Government and NGO representatives in the host country). These may be undertaken by the local SGS affiliate. The results of this local assessment are summarized in Annex 1 to this report.

2.2 Use of the validation protocol

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

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

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
<i>The various requirements are linked to checklist questions the project should meet.</i>	<i>Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.</i>	<i>The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.</i>	<i>This is either acceptable based on evidence provided (Y), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.</i>

The completed validation protocol for this project is attached as Annex 2 to this report

2.3 Findings

As an outcome of the validation process, the team can raise different types of findings

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

Where a non-conformance arises the Assessor shall raise a **Corrective Action Request (CAR)**. A

CAR

is issued, where:

- I. mistakes have been made with a direct influence on project results;
- II. validation protocol requirements have not been met; or
- III. there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be verified.

The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a NIR may result in a CAR. Information or clarifications provided as a result of an NIR may also lead to a CAR.

Observations may be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex 3). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

2.4 Internal quality control

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

3. Determination Findings

3.1 Participation requirements

The host Party for this project is India. India has ratified the Kyoto protocol on 26th Aug 2002. A Letter of Approval was missing so CAR01 was raised. The project proponent provided the letter dated 2nd May 2005; issued by the Indian DNA (reference number 4/9/2005-CCC) has been provided by the client which was verified from the original copy. Hence CAR01 was closed out.

No Annex I Party has been identified in the PDD and therefore no further Letter of Approval was available. It is observed that the CDM EB has agreed that the registration of a CDM project activity can take place without an Annex I Party being involved at the stage of registration although it should be noted that before CER can be transferred to an Annex I Party, a Letter of Approval will need to be submitted.

3.2 Baseline selection and additionality

The project has applied the Approved Consolidated baseline methodology for waste gas and/or heat and/or pressure for power generation" ACM0004 version 2 dated 3rd March 2006. The baseline selected by the project proponent was the likely baseline scenario because of economically attractiveness. The plant is producing the electricity for captive use and would have purchased the same from the grid in absence of project activity.

The project additionality was determined on the basis of technological barriers followed by investment and other barriers. The main technological barriers are

- The equipments used for project activity were specially designed for handling dirty waste gases which was corrosive in nature.
- The project was going to be a stand-alone system and any variation in flue gas quality and availability could affect the plant production.
- The plant core business was not power generation and special training was taken by plant personnel to run the plant. Thus, the project faced problems due to lack of infrastructure to implement the technology.
- The area is facing problem due to water shortage and hence using air cooled condenser which itself is costlier and inefficient in comparison to water-cooled condenser.

In order to get all the related documents on which basis the project was shown additional, NIR 4 was raised. The project proponent fixed the debt equity ratio for funding the project activity at 70:30. The funding for the project activity was made available from the term loans obtained from the Indian Overseas Bank, SBI and IREDA. Indian Overseas Bank had initially agreed to provide the loan at a lending rate of 12.75% by putting the condition that the loan shall be released after the company ties up the residual portion of Term Loan with SBI & IREDA or with some other bank/financial Institutions. SBI agreed to release the Loan of Rs. 40 crores at a rate of 10.25 % p.a at monthly rests. IREDA agreed to lend a part of project capital (Rs. 27.61 crores) at a competitive lending rate of 10% (prevailing prime lending rate was around 10.25% – 11.00%) and also with the condition that in case the project proponent enters into any arrangement for selling Carbon Credit/ CERs/ VERs IREDA will be given first charge on the cash flow from such sale and the project proponent shall execute such deeds in favour of IREDA. After getting the Loan sanction from IREDA, IOB reduces their Interest rate from 12.75% to 9.25%. The Loan sanction letter was also seen and this can be uploaded as proof of additionality.

This was asked by the Project Proponent that there are three SI plants having WHRB running in the state, are they also claiming for CDM and are they also facing the same barriers. The project proponent provides the UNFCCC number for rest of SI plants. All the plants having WHRB system have been verified and found already sought for CDM benefits. Based on the information it was concluded that there were risks associated with project operation and hence this was not a common practice in Sponge Iron plants and hence the NIR 4 was closed out.

The board minutes dated 4th October 2004 were also provided for the CDM consideration in going ahead with the project activity and used as start date of the project activity. This was also cross verified by interviewing the director of the industry.

The project proponent is claiming credits for fixed ten years and the crediting period will start from the date of registration.

Based on the findings above, it was concluded that the project activity was not a likely baseline scenario and hence additional to any that would occur in absence of project activity.

3.3 Application of Baseline methodology and calculation of emission factors

The proposed CDM project activity is the power generation using sensible heat content of the waste gases generated from sponge iron kilns to generate power and uses baseline methodology as described under Type ACM0004 version 02 dated 3rd March 2006 as per large scale CDM project activities.

The emission factor calculation sheet was provided with the PDD but the BM calculation was not cleared hence the NIR03 was raised. Responding to NIR03 project proponent provided the calculations for BM and also give the clarification required. It was checked by the local assessor and found that the emission factors are calculated in accordance with the methodology. The local assessor checked the background information used for calculating the emission factor and found it OK. The NIR03 is closed out.

The baseline grid emission factor was 822.748 tCO₂/GWh and was fixed ex-anti for the entire crediting period.

3.4 Application of Monitoring methodology and Monitoring Plan

The present CDM project activity uses monitoring methodology as described in ACM0004 version 02 dated 3rd March 2006 as per CDM project activities.

NIR5 to NIR16 were raised as the PDD was not clear on monitoring plan of the parameters measured and nothing was mentioned about Authority and responsibility of project management, Registration, Monitoring, Measurement, Reporting, Training, Internal Audit, Emergency preparedness, Calibration, Maintenance, day to day record handling and corrective actions. The project proponent in his response made all necessary corrections required and all the necessary parameters have been included in the monitoring plan given in the rephrased PDD. This was accepted and hence NIR5 to NIR16 were closed out.

3.5 Project design

The Project Design Document (PDD) was designed as per version 2 of guidelines laid for preparing PDD of large scale CDM project activity, but the new version 03.1 of PDD comes into force from 28th July 2006, so the PDD was rephrased in the revised version on date 21st March 2007, hence the new format of the present PDD i.e. version 03 dated 21st March 2007 was checked against it and found consistent.

CAR 18 was raised because the location of the project activity was not written and abbreviations detail was missing, same is now reflecting in the revised PDD, so the CAR 18 can be closed out.

The project boundary given in the PDD was not clear and hence NIR02 was raised for the same. The project proponent made required corrections in the project boundary and same are included in the revised PDD, this was also verified during site visit by the local assessor and hence NIR02 was closed out.

3.6 Environmental Impacts

The compliance with local environmental regulations in that EIA requirement for the project activity was checked and also project proponent did not submitted consent to establish and operate from West Bengal Pollution Control Board (WBPCB), (a local authority responsible for giving Environmental clearance) so the NIR 17 was raised, the project proponent then submitted the same to the validator, and hence this NIR can be closed out.. The project proponent in table under section F in the PDD mentions in details regarding the Environmental Impacts on various parameters like Air quality, Water, Land, Noise generation and ecology and benefits to these parameters due to project activity. This was also checked from the copy of report which was given by the project proponent to the local assessor. These were in compliance and even during local stakeholder consultation carried out by local assessor no negative comment was reported.

3.7 Local stakeholder comments

Comments from local stakeholders on the project activity had been invited by the project participant. No negative comment was appeared during consultation process. To ensure that the stakeholder process was conducted properly, the local stakeholder consultation was carried out by local assessor during site visit and no negative comment was reported. The copies of NOCs from West Bengal State Electricity Board were obtained and verified. This ensures that the LSC process was transparent and no adverse comment was raised on project activity.

4. Comments by Parties, Stakeholders and NGOs

In accordance with sub-paragraphs 40 (b) and (c) of the CDM modalities and procedures, the project design document of a proposed CDM project activity shall be made publicly available and the DOE shall invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. This chapter describes this process for this project.

4.1 Description of how and when the PDD was made publicly available

The PDD and the monitoring plan for this project were made available on the UNFCCC website <http://cdm.unfccc.int/Projects/Validation/DB/EBVKS9UCMHDK9EHYKDJUQJONJ4NYJ/view.html> and were open for comments from 8th March 2006 to 6th April 2006. Comments were invited through the UNFCCC CDM homepage.

4.2 Compilation of all comments received

The project was up loaded for International stakeholder consultation (ISHC) for a period of 30 days and received one comments.

Comment number	Date received	Submitter	Comment
1	10/3/06	Name: Phillip City: Chengannur Organisation: Steel Instt Country: India	<p>1.1. Since the project activity entails burning of char in the boiler, there will be considerable CO2 emissions in project activity depending on percentage of combustibles in char</p> <p>1.2. The financial barriers arise when the balance sheet of the company is weak. All other factors, like acceptance of Banks to finance the Unit, are dependent on this one factor. The question to be answered here is whether without CDM the Unit would have been able to install the WHRB_STG to avail of the benefits of almost free power.</p> <p>1.3. Why dispatch data analysis was not considered for calculation of baseline emission operating margin as specified in ACM 0002?</p>

4.3 Explanation of how comments have been taken into account

Date: 10/3/06

Raised by: Phillip

Comment	Issue	Ref
1.1	Since the project activity entails burning of char in the boiler, there will be considerable CO2 emissions in project activity depending on percentage of combustibles in char	3.2
<p>Date: 28th July 2006 [Response from project developer]</p> <p>As described in Section A.2 of the PDD, the proposed project activity involves generation of only around 9.6 MW power in the 50 MW CPP. Under the project activity, steam will be generated in the individual WHRBs utilizing the sensible heat content of waste gases from four sponge iron kilns. This steam will be fed into turbo-generator sets of the CPP to generate power. The remaining power of the 50 MW CPP will be generated by burning coal char (a waste from sponge iron process) and washery rejects in FBC boilers which do not come under the scope of the project activity.</p> <p>Accounting for the WHR power generated will be done transparently on the basis of total enthalpy (steam enthalpy per unit x steam flow) of WHR steam fed as a percentage of total enthalpy of steam fed into the common steam header from both WHRBs and FBC as explained in Annex 4 of the PDD.</p> <p>Hence, as the project activity does not involve burning of char in the FBC boiler, there are no associated project emissions.</p>		
<p>Date: 15/12/2006[Sanjeev Kumar] The project proponent reply that he is not using char in WHRB and the project activity is claiming only for Char, so this comment can be closed out. [Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]</p>		

Date: 10/3/06

Raised by: Phillip

Comment	Issue	Ref
1.2	The financial barriers arise when the balance sheet of the company is weak. All other factors, like acceptance of Banks to finance the Unit, are dependent on this one factor. The question to be answered here is whether without CDM the Unit would have been able to install the WHRB_STG to avail of the benefits of almost free power.	3.2

<p>Date: 28th July 2006</p> <p>[Response from project developer] SRBSL started the commercial operation of its iron and steel plant in 2003-04 by investing heavily in core production facilities like sponge iron kilns, mini blast furnaces, steel ingot facilities and rolling mills. Hence, the balance sheet of the company was weak during the initial years of operation.</p> <p>At this juncture, SRBSL management planned to invest in a non core activity - Waste Heat Recovery Captive Power Plant (CPP) in early 2004 despite being aware of the financial and technological constraints the project could face.</p> <p>When SRBSL approached a number of banks for funding the waste heat recovery CPP, banks were apprehensive to advance loans to SRBSL. As per general practice, banks demand for security while providing term loans only for the assets created/unit financed by them. In this case, State Bank of India agreed to sanction the credit facilities for the CPP, but stipulated a securitization condition for equitable mortgage of land, building and plant & machinery of the company (i.e all fixed assets which includes entire steel production facilities, the CPP, among others) of the company¹. Such heavy securitization is only stipulated in cases where the financial institutions are not sure about the viability/ revenue stream of the unit financed (i.e. in this case the CPP). Besides, as mentioned in the PDD, only after IREDA considered the potential benefits under CDM and provided loans at lower interest rate, the Indian Overseas Bank agreed to lower its lending rate.</p> <p>Thus, the above mentioned barriers show that SRBSL faced investment barriers during project inception and CDM played a key role in helping overcome the barriers to debt funding for the project.</p>		
<p>Date: 15 December 2006</p> <p>Please provide balance sheet</p> <p>[Acceptance and close out] Open</p>		
<p>Date: 28th December 2006</p> <p>[Response from project developer]</p> <p>Balance sheet is attached. IREDA Loan sanction letter is also been provided to the validator which shows that CDM played a key role in helping overcome the barriers.</p>		
<p>Date: 15 February 2007</p> <p>The same has been received, so this comment can be closed out.</p> <p>[Acceptance and close out] OK, closed out.[S Kumar] 25 February 2007 [Shiva]</p>		

Date:	10/3/06	Raised by: Phillip
Comment	Issue	Ref
1.3	Why dispatch data analysis was not considered for calculation of baseline emission operating margin as specified in ACM 0002?	3.2

¹ Letter from SBI to SRBSL, dated 26th October 2004.

<p>Date: 28th July 2006</p> <p>[Response from project developer]</p> <p>As per ACM0002 methodology, to determine set of plants (n) falling within the top 10% of system dispatch. Data required from the national dispatch centre includes: a) the grid system dispatch order of operation for each power plant of the system; and b) the amount of power (MWh) that is dispatched from all plants in the system during each hour that the project activity is operating (GENh)].</p> <p>As mentioned in Step1: Calculation of Operating Margin (OM) in Annex 3 of the PDD, the dispatch data to determine set of plants (n) for the chosen grid is not available in public domain in India. Hence, dispatch data analysis (1c) could not be used to determine OM. However, as shown in the PDD, OM was determined in a conservative manner using the Simple OM (1a) method of ACM0002 methodology.</p>		
<p>Date: 15 December 2006[Sanjeev Kumar]</p> <p>This has been verified that O.M. was determined in a conservative manner.</p> <p>[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]</p>		

5. Validation opinion

SGS has performed a validation of the project: “SRBSL – Waste Heat Recovery based Captive Power Project”, at Burdwan District, West Bengal by Sri Ramrupai Balaji Steels Limited. The Validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

Using a risk based approach, the review of the project design documentation and the subsequent follow-up interviews have provided SGS with sufficient evidence to determine the fulfilment of the stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by SGS for registration with the UNFCCC.

SGS has received confirmation by the host Party that the project activity assists it in achieving sustainable development.

By utilizing waste heat for generation of electricity, the project results in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change. A review of the Investment barrier and technological barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. The project is already implemented and is likely to achieve the estimated amount of emission reductions.

The validation is based on the information made available to SGS and the engagement conditions detailed in the report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence SGS can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

The DOE declares herewith that in undertaking the validation of this proposed CDM project activity it has no financial interest related to the proposed CDM project activity and that undertaking such a validation does not constitute a conflict of interest which is incompatible with the role of a DOE under the CDM.

6. List of persons interviewed

Organization	Person interviewed
Sri Ramrupai Balaji Steels Limited	Mr. A. K. Gulati – Director (Technical)
Ernst and Young Private Ltd	Mr. Uma Shankar - Consultant
Ernst and Young Private Ltd	Mr. Saunak Saha - Consultant
	Mr. D.C. Sahoo – Local Resident

7 Document references

Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

- /1/ Letter of Approval
- /2/ Modalities of communication
- /3/ PDD version 1 dated 3rd March 2006 (web hosted)
- /4/ PDD version 2 dated 28th July 2006
- /5/ PDD version 3 dated 21st March 2007 (Present)

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

- /1/ ER Calculation sheet
- /2/ Loan Information(supporting documents)
- /3/ Local Stake holder comments
- /4/ Other documents
- /5/ Pollution control board certificates
- /6/ Proof of starting date
- /7/ Supporting document ISHC
- /8/ ACM0004 version 2 dated 3rd March 2006

Annex 1

TABLE 12 ADDITIONAL INFORMATION TO BE VERIFIED BY LOCAL ASSESSORS / SITE VISIT

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Invitation for LSC meeting was sent to participate and communicate suggestions regarding the project activity. Documents are required to verify the same.	PDD G.1		Letter written to Gram Panchayat for NOC on project activity have been obtained to verify the transparency in consultation process.	Y	Y
2. The regulatory approval (consent to establish and operate the project) from the Pollution Control Board is required to verify that local/legal requirements have been met.			The consent to operate letter has been obtained and checked with original consent. It was found to be OK	Y	Y
3. Local stakeholders' comments are required to be verified for any adverse comment.	PDD G.1 and G.2		There is no adverse comment found. MOM also received.	Y	Y
4. MoM of stakeholder consultation meeting.					
5. Project design engineering documents from the technology supplier are required to be checked.	PDD A.4		A copy of detailed offer made by technology supplier is obtained and verified with original copy.	Y	Y
6. It is required to be checked whether the project technology used is likely to be substituted by other or more efficient technologies within the project period.			Project proponent submitted an undertaking that the project activity will not be substituted by other or more efficient technologies within the project period.	Y	Y
7. MoM of board meeting in which CDM was considered for the project activity. To be verified during site visit.	PDD		Project proponent submitted the MOM of board meeting which were also verified by seeing the original copy and also interviewing the Managing Director.	Y	Y

Annex 2

TABLE 1 PARTICIPATION REQUIREMENTS FOR CLEAN DEVELOPMENT MECHANISM (CDM) PROJECT ACTIVITIES (REF PDD, LETTERS OF APPROVAL AND UNFCCC WEBSITE)

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
1.1 The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3 and be entered into voluntarily.	DR	PDD Annex2 page 51	The project is unilateral and no annex I participant has been identified. But the project will assist Parties included in Annex I in achieving compliance with part of their emission reduction.	Y	Y
1.2 The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof, and be entered into voluntarily	DR	PDD	No letter of approval from Indian DNA till date	CAR 1	Y
1.3 All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	DR	PDD	Project is unilateral and India has ratified the protocol on 26 th August 2002 and is allowed to participate. http://unfccc.int/parties_and_observers/parties/items/2109.php	Y	Y
1.4 The project results in reductions of GHG emissions or increases in sequestration when compared to the baseline; and the project can be reasonably shown to be different from the baseline scenario	DR	PDD /AC M00 04	The project has applied ACM0004 version 02; approved consolidated methodology and will reduce GHG emissions by generating the energy from waste heat and replace equivalent amount of electricity from eastern regional grid.	Y	Y

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
1.5 Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days (45 days for AR projects), and the project design document and comments have been made publicly available	DR	UNFCCC & SGS web site	ISCs have been invited for the period 8 th March to 6 th April 2006. http://cdm.unfccc.int/Projects/Validation/DB/EBVK/S9UCMHDK9EHYKDJ/UQJONJ4NYJ/view.html Number of comments received - 1	Y	Y
1.6 The project has correctly completed a Project Design Document, using the current version and exactly following the guidance	DR	PDD /UNFCCC web site	The project completed PDD using current version and following guidance. Some points were identified as explained in table 8 below.	Y	Y
1.7 The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA	DR/I	PDD	No Official Development Assistance (ODA) was identified from Annex 2	Y	Y
1.8 For AR projects, the host country shall have issued a communication providing a single definition of minimum tree cover, minimum land area value and minimum tree height. Has such a letter been issued and are the definitions consistently applied throughout the PDD?	DR	PDD	Not relevant as this is not an AR project.	Y	Y
1.9 Does the project meet the additional requirements detailed in: Table 9 for SSC projects Table 10 for AR projects Table 11 for AR SSC projects	DR	PDD	Not relevant as this is not an AR/SSC project.	Y	Y
1.10 Is the current version of the PDD complete and does it clearly reflect all the information presented during the validation assessment.	DR	PDD	The PDD reflects all the information required for the validation assessment.	Y	Y
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner?	DR	PDD	The PDD uses reliable information and can be verified in an objective manner.	Y	Y

TABLE 2 BASELINE METHODOLOGY(IES) (REF: PDD SECTION B AND E AND ANNEX 3 AND AM)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.1 Does the project meet all the applicability criteria listed in the methodology	ACM 0004 /PD D	DR	Yes, the project meets all the applicability criterion listed in ACM0004.	Y	Y
2.2 Is the project boundary consistent with the approved methodology	ACM 0004 /PD D	DR	No, the project boundary is not consistent with the approved methodology. Section B 2. Page 11 the Spatial extent of the project boundary comprises the waste heat or gas sources are non-explained term in PDD.	NIR 2	Y NIR2 close d
2.3 Are the baseline emissions determined in accordance with the methodology described	ACM 0002 /4/P DD	DR	Section B 5 in BM calculation, energy generation from the plant added is not clear.	NIR 3	Y NIR3 close d
2.4 Are the project emissions determined in accordance with the methodology described	ACM 0002 /4/P DD	DR	The project activity doesn't use any auxiliary fuel during start up the project and during the operation. Hence no project emissions are considered.	Site Visit	Y
2.5 Is the leakage on the project activity determined in accordance with the methodology described	ACM 0004 /PD D	DR	No leakage has been considered as per ACM0004 version 2.	Y	Y
2.6 Are the emission reductions determined in accordance with the methodology described	ACM 0002 /4/P DD	DR	Yes, the emission reductions are determined in accordance with the methodology described.	Y	Y

Table 3 Additionality (Ref: PDD Section B3 and AM)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
3.1 Does the PDD follow all the steps required in the methodology to determine the additionality	PDD	DR	Yes, the PDD follows all the steps required in the methodology to determine the additionality.	Y	Y
3.2 Is the discussion on the additionality clear and have all assumptions been supported by transparent and documented evidence	PDD	DR	<p>The discussion on the additionality is not clear and this needs to provide some supporting documents.</p> <p>- CDM was seriously considered in the decision to proceed with the project activity</p> <p>Common practice analysis</p> <p>- three SI plants have WHRB running in the state. Please provide name too and why these didn't face the same barriers</p>	<p>Site Visit</p> <p>NIR4</p>	<p>Y</p> <p>Y</p> <p>NIR4 closed</p>
3.3 Does the selected baseline represent the most likely scenario among other possible and/or discussed scenarios?	PDD	DR	Yes, the selected baseline to consume electricity from the grid is the most likely scenario.	Y	Y
3.4 Is it demonstrated/justified that the project activity itself is not a likely baseline scenario	PDD	DR	Barriers justifies that the project activity itself is not a likely baseline scenario provided that NIR4 is closed.	Pending	Y

Table 4 Monitoring methodology (PDD Section D and AM)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
4.1 Does the project meet all the applicability criteria listed in the monitoring methodology	PDD /AC M00 04	DR	Yes, the project meets all the applicability criteria	Y	Y
4.2 Does the PDD provide for the monitoring of the baseline emissions as required in the monitoring methodology	PDD /AC M00 02	DR	Yes, the monitoring of baseline emissions provided in PDD is as per the approved methodology.	Y	Y
4.3 Does the PDD provide for the monitoring of the project emissions as required in the monitoring methodology	PDD /AC M00 02/4	DR	There is no project emissions associated with project activity. To be checked on site visit.	Site visit	Y
4.4 Does the PDD provide for the monitoring of the leakage as required in the monitoring methodology	PDD /AC M00 04	DR	There is no leakage considered as per monitoring methodology ACM0004 version 2.	Y	Y
4.5 Does the PDD provide for Quality Control (QC) and Quality Assurance (QA) Procedures as required in the monitoring methodology	PDD /AC M00 02/4	DR	Yes, Quality Control (QC) and Quality Assurance (QA) Procedures are provided in PDD as required in the monitoring methodology.	Y	Y

Table 5 Monitoring plan (PDD Annex 4)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
5.1 Monitoring of Sustainable Development Indicators/ Environmental Impacts	PDD	DR	The PP claims project leads SD. The Environmental Impacts are minimal. The EIA is not mandatory for the project activity, there are no specific monitoring requirements	Y	Y
5.1.1 Does the monitoring plan provide the collection and archiving of relevant data concerning environmental, social and economic impacts?	PDD	DR	Not applicable	Y	Y

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
5.1.2 Is the choice of indicators for sustainability development (social, environmental, economic) reasonable?	PDD	DR	Not applicable	Y	Y
5.1.3 Will it be possible to monitor the specified sustainable development indicators?	PDD	DR	Not applicable	Y	Y
5.1.4 Are the sustainable development indicators in line with stated national priorities in the Host Country?	PDD	DR	Not applicable	Y	Y
5.2 Project Management Planning					
5.2.1 Is the authority and responsibility of project management clearly described?	PDD	DR	The authority and responsibility of project management is needed to be clearly described.	NIR 5	Y
5.2.2 Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	PDD	DR	The manager in-charge is responsible for registration, monitoring, measurement and reporting.	Y	Y
5.2.3 Are procedures identified for training of monitoring personnel?	PDD	DR	No training procedure of monitoring personnel has been identified.	NIR 6	Y
5.2.4 Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	PDD	DR	No specific procedure is identified.	NIR7	Y
5.2.5 Are procedures identified for calibration of monitoring equipment?	PDD	DR	No specific procedure is identified.	NIR 8	Y
5.2.6 Are procedures identified for maintenance of monitoring equipment and installations?	PDD	DR	No specific procedure is identified	NIR 9	Y

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
5.2.7 Are procedures identified for monitoring, measurements and reporting?	PDD	DR	No specific procedure is identified	NIR 10	Y
5.2.8 Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	PDD	DR	No process performance evaluation procedure is identified	NIR 11	Y
5.2.9 Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	PDD	DR	No specific procedure for dealing with monitoring data	NIR 12	Y
5.2.10 Are procedures identified for review of reported results/data?	PDD	DR	No specific procedure to review of reported results/data.	NIR 13	Y
5.2.11 Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	PDD	DR	No specific procedure identified	NIR 14	Y
5.2.12 Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	PDD	DR	No specific procedure identified	NIR 15	Y
5.2.13 Are procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting?	PDD	DR	Corrective actions can be taken in future for more accurate monitoring and reporting such as change in process or no. of parameters. No specific procedure identified.	NIR 16	Y

Table 6 Environmental Impacts (Ref PDD Section F and relevant local legislation)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8. 6.1 Has an analysis of the environmental impacts of the project activity been sufficiently described?	PDD	DR	Yes, PDD contain sufficient information.	Y	Y
6.2 Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	PDD	DR	No EIA is mandatory in host country for such a project. However the consent to establish and operate the project activity is required from State Pollution Control Board. No consent letter is provided.	NIR 17	Y
6.3 Will the project create any adverse environmental effects?	PDD	DR	No adverse environmental effect is identified during project operation. The effect during project construction phase was temporary and negligible.	Y	Y
6.4 Are transboundary environmental impacts considered in the analysis?	PDD	DR	No transboundary environmental impact identified from the project activity. To be verified during site visit.	Site Visit.	Y
6.5 Have identified environmental impacts been addressed in the project design?	PDD	DR	Yes, environmental impacts have been addressed.	Y	Y
6.6 Does the project comply with environmental legislation in the host country?	PDD	DR	The project activity is complied with all environmental legislation in the host country India.	Y	Y

Table 7 Comments by local stakeholders (Ref PDD Section G)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
7.1 Have relevant stakeholders been consulted?	PDD	DR	Yes, relevant stakeholders have been consulted.	Y	Y

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
7.2 Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	No, the comments were not invited through newspapers but public hearing was made. Proof to be submitted during site visit for the local stake holder comments	Site visit	Y
7.3 If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	PDD	DR	No, the stakeholder consultation process is not required by regulation/laws in the host country by the project participant.	Y	Y
7.4 Is a summary of the stakeholder comments received provided?	PDD	DR	Yes, the summary of the stakeholder comments is provided in PDD. But no sporting docs porovided	Site Visit	Y
7.5 Has due account been taken of any stakeholder comments received?	PDD	DR	No adverse comment identified in the PDD and the same to be verified during site visit.	Site Visit	Y

TABLE 8 OTHER REQUIREMENTS

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
9. 8.1 Project Design Document					
8.1.1 Editorial issues: does the project correctly apply the PDD template and has the document been completed without modifying/adding headings or logo, format or font.	PDD	DR	Yes, the template has been applied correctly.	Y	Y
8.1.2 Substantive issues: does the PDD address all the specific requirements under each header. If requirements are not applicable / not relevant, this must be stated and justified	PDD	DR	Several changes have been found as follows: A.4.1. Location of the project activity – not written Abbreviation details are missing	CAR 18	Y
10. 8.2 Technology to be employed					

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.2.1 Does the project design engineering reflect current good practices?	PDD	DR	Yes, the projects reflects current good practice through generation of power from waste heat using Sponge Iron plant flue gas	Y	Y
8.2.2 Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	PDD	DR	The recent available technology is being used for the project.	Y	Y
8.3 Is the project technology likely to be substituted by other or more efficient technologies within the project period?	PDD	DR	The technology is not likely to be replaced with a new one within crediting period.	Y	Y
8.2.4 Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	PDD	DR	No, specific initial extensive training is required.	Y	Y
8.3 Duration of the Project/ Crediting Period					
8.3.1 Are the project's starting date and operational lifetime clearly defined and reasonable?	PDD	DR	Yes, the project's starting date is 4 th Oct 2004 and operational lifetime is 20 years which is reasonable.	Y	Y
8.3.2 Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max. two x 7 years or fixed crediting period of max. 10 years)?	PDD	DR	Yes, the crediting time is 10 years(fixed), which is reasonable	Y	Y
8.3.3 Does the project's operational lifetime exceed the crediting period	PDD	DR	Yes, the project's operational lifetime exceed the crediting period.	Y	Y

Annex 3 FINDINGS OVERVIEW

Findings from validation of “SRBSL – Waste heat recovery based captive power project”

Each Table below represents a finding from the validation assessment. The findings are numbered consecutively, approximately in the order that they have been identified.

Description of table:

Type	Findings are either New Information Requests (NIR) or Corrective Action Requests (CAR). CARs are items that must be addressed before a project can receive a recommendation for registration. NIRs may lead to the raising of CARs. Observations are included at the end and may or may not be addressed. They are primarily to act as signposts for the verifying DOE.
Issue	Details the content of the finding
Ref	refers to the item number in the Validation Protocol
Response	Please insert response to finding, starting with the Date of entry

Rows for comments and further response will be appended to the table until the Findings has been addressed to the satisfaction of the Lead Assessor.

Please note that this is an open list and more findings may be added as validation progresses.

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
1	CAR	No letter of approval from Indian DNA till Date	1.2
<p>Date:28 July 2006 [Response from Project Developer] The Host Country Approval letter from Indian DNA for the project activity was shown to validator during site visit. Scanned copy of the same will be sent to validator.</p>			
<p>Date:12 Sep 2006 [Sanjeev Kumar] The copy of the HCA letter has been received.</p>			
<p>[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]</p>			

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
2	NIR	Section B 2. Page 11 The Spatial extent of the project boundary comprises the waste heat or gas sources non-explained term in PDD	2.2
<p>Date:28 July 2006 [Response from Project Developer] The waste heat sources indicate the point of supply of waste flue gases at the exit of individual sponge iron kilns for the project activity. Changes have been made in the revised version of the PDD to reflect the same.</p>			
<p>Date: 12 Sep 2006 [Sanjeev Kumar] The PDD mentions the plant capacity 9.6 MW while LSC letter mentions 9.0 and 9.5 MW. Please provide turbine and boiler specifications and give these details under section A.4. in the PDD.</p>			
<p>[Acceptance and close out] Open</p>			
<p>Date 31 October 2006 [Response from Project Developer] The minor difference in the value of the generation capacity in the LSC letters is because of some mistake (possibly omission of very specific minor technical details) on the part of the respective stakeholders. In principle support awareness and support for</p>			

the project is evident.

The turbine and boiler capacities have already been provided under section A.4. in the PDD.

Date : 29 December 2006 [Sanjeev Kumar]

The boiler and turbine specifications have been checked and found accordingly, hence this NIR can be closed out.

[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
3	NIR	Section B 5 in BM calculation, energy generation from the plant added is not clear.	2.3

Date: 28 July 2006:

[Response from Project Developer] For an entirely new power plant added, the energy generation from the plant is the net power generation supplied by the new plant for the year under consideration. However, in case of additional capacity added by the existing power plants, the energy generation value in BM calculation is equal to proportion of power generated by the added capacity for the year under consideration. These points have been clarified to the validator during site visit.

Date: 12 Sep 2006 [Sanjeev Kumar]

The BM calculation is clear now. The grid emission factor calculation has been checked and source of information was verified.

[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
4	NIR	Common practice analysis - three SI plants have WHRB running in the state. Please provide name too and why these didn't face the same barriers	3.2

Date: 28 July 2006:

[Response from Project Developer] The loan related documents have been shown to the validator during site visit. Copies of the same will be submitted to the validator.

Regarding common practice analysis as mentioned in the Step 4 of Section B.3. of the PDD, at the project inception stage in 2004, three out of 27 sponge iron plants in West Bengal State (including SRBSL) were setting up the Waste Heat Recovery Power Project. The two other plants were Jai Balaji Sponge Limited (JBSL), Raniganj and Electrosteel Castings Ltd (ECL), Haldia. Both these projects have considered CDM and the barriers faced by them are mentioned in the respective Project Design Documents available on the UNFCCC website. Hence, as per guidelines of 'Tool for demonstration and assessment of additionality', both these plants have been excluded from the common practice analysis.

The above analysis shows that there is poor penetration of WHR power projects among similar plants of the state without CDM and hence the SRBSL project is not a common practice.

Date: 12 Sep 2006 [Sanjeev Kumar]

Please provide UNFCCC no. for other CDM projects with evidence for only 3 similar projects were only running at the time of project conception.

[Acceptance and close out] Open
<p>Date 31 October 2006:</p> <p>[Response from Project Developer] Kindly refer to the PDD for clarification details. For your ready reference the relevant section of the PDD has been excerpted below:</p> <p>“The project proponent approached a number of banks/ FIs like West Bengal Industrial Development Corporation, Indian Overseas Bank (IOB), State Bank of India, UCO bank, West Bengal Financial Corporation and Indian Renewable Energy Development Agency (IREDA). Initially, IOB agreed to partially fund the project at a lending rate of 12.75% subject to SRBSL tying up the remaining portion of term loan with IREDA and other banks². IREDA, a government owned financial institution, conducted the financial appraisal of the project as an energy efficiency project and considered the potential revenue from CDM route. In its loan agreement³, IREDA put a condition that the borrower (SRBSL) shall agree and undertake that in case the borrower enters for any arrangement for selling Carbon Credit/ Certified Emission Reduction (CER) under CDM, IREDA shall be given/provided with first charge on the cash flow from sale such carbon credits and for such purpose the borrower shall execute such deeds in favour of IREDA as IREDA may require. With the potential benefits under CDM for the project as one of the conditions, IREDA agreed to partially fund the project at a competitive lending rate of 10% (prevailing Prime Lending Rate was around 10.25 – 11.00%⁴). Thereafter, IOB also lowered their interest rate to 9.75%.”</p> <p>Copies of the supportive for the above will be submitted to the validator. However, they are once more enclosed for ready reference.</p> <p>The number of the registered projects of similar type as obtained from UNFCCC website have been provided as below:</p> <p>Project – 12 MW Captive Power Project based on Waste Heat Recovery of Industrial Waste Gases UNFCCC number – 0556</p> <p>Project - JBSL–Waste Heat Recovery Based Captive Power Project UNFCCC number – 0433</p> <p>Date : 29 December 2006 [Sanjeev Kumar] Given UNFCCC Number is verified and detail given above is also verified, so this N IR can be closed out.</p> <p>[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]</p>

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
5	NIR	The authority and responsibility of project management need to be clearly described.	5.2.1

² Letter from Indian Overseas Bank to SRBSL dated 28 May 2004

³ Loan Sanction letter from IREDA dated 25th August 2005.

⁴ <http://indiabudget.nic.in/es2003-04/chapt2004/chap33.pdf>

<p>Date:28 July 2006: [Response from Project Developer] The final authority and responsibility for project management lies with the Director (Projects) of SRBSL. The data reporting structure has been clearly defined in the Procedure of GHG Performance Monitoring, Measurement and Reporting of data and the Procedure of GHG Internal Audit. These documents have been shown to validator during site visit. Copies of the same will be submitted to validator along with this document.</p>
<p>Date: 12 Sep 2006 [Sanjeev Kumar] The procedure has been received and found satisfactory. The same to be included in monitoring plan.</p> <p>[Acceptance and close out] Open</p>
<p>Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD</p>
<p>Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.</p> <p>[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]</p>

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
6	NIR	No training procedure of monitoring personnel has been identified.	5.2.3
<p>Date:28 July 2006: [Response from Project Developer] SRBSL proposes to recruit power plant professionals certified by Indian Boiler Regulation. Further, apart from providing regular on the job training, SRSBL will periodically conduct training sessions on technology development, operations, data monitoring and reporting for the shift operators. The procedure for training has been laid out in the Procedure of GHG Performance Monitoring, Measurement and Reporting of data. Copy of the same will be submitted to validator.</p>			
<p>Date: 12 Sep 2006 [Sanjeev Kumar] The GHG performance procedure which contains training procedure has been obtained and found satisfactory. The same to be included in monitoring plan</p> <p>[Acceptance and close out] Open.</p>			
<p>Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD</p>			
<p>Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.</p> <p>[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]</p>			

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
7	NIR	No procedure is identified for emergency preparedness for cases where emergencies can cause unintended emissions.	5.2.4
<p>Date:28 July 2006: [Response from Project Developer] The plan for emergency preparedness for SRBSL project activity has been spelt out in the Procedure of GHG Performance Monitoring, Measurement and Reporting of data, a copy of which will be submitted to validator.</p>			
<p>Date: 12 Sep 2006 [Sanjeev Kumar] The emergency preparedness procedure is included in the given document and satisfactory. The same to be included in monitoring plan.</p>			
[Acceptance and close out] Open			
<p>Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD</p>			
<p>Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.</p>			
[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]			

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
8	NIR	No procedure is identified for calibration of monitoring equipment.	5.2.5
<p>Date:28 July 2006: [Response from Project Developer] All the electricity metering devices are calibrated at regular intervals (as per statutory requirements and Electricity Act guidelines) so that the accuracy of measurement is ensured all the time. The steam property measurement meters are calibrated internally and externally as per equipment supplier's calibration schedule following the National standards of calibration. This has been mentioned in the Procedure of GHG Performance Monitoring, Measurement and Reporting of data, copy of which will be submitted to validator.</p>			
<p>Date: 12 Sep 2006 [Sanjeev Kumar] The calibration procedure is included in the GHG performance procedure and is satisfactory. The same to be included in monitoring plan.</p>			
[Acceptance and close out] Open.			
<p>Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD</p>			
<p>Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.</p>			
[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]			

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
9	NIR	No specific procedure is identified for maintenance of monitoring equipment and installations	5.2.6
<p>Date:28 July 2006: [Response from Project Developer] All the monitoring equipments and installations proposed to be installed under the project activity are of standard reputed make. Further, SRBSL will undertake regular maintenance of these equipments as per guidelines laid in Product Manuals, Indian Boiler Regulations and the Electricity Act. The maintenance procedure has been detailed in the Procedure of GHG Performance Monitoring, Measurement and Reporting of data.</p>			

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<p>Date: 12 Sep 2006 [Sanjeev Kumar] The Maintenance procedure is included in the GHG performance procedure and is satisfactory. The same to be included in monitoring plan.</p> <p>[Acceptance and close out] Open.</p>
<p>Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD</p>
<p>Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.</p> <p>[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]</p>

Date: 10 March 2006		Raised by: Shivananda Shetty	
No.	Type	Issue	Ref
10	NIR	No specific procedure is identified for monitoring, measurements and reporting	5.2.7
<p>Date:28 July 2006: [Response from Project Developer] Procedures are laid out in the 'Procedure of GHG Performance Monitoring, Measurement and Reporting of data', copy of which will be submitted to validator.</p>			
<p>Date: 12 Sep 2006 [Sanjeev Kumar] The monitoring, measurement and reporting procedure is included in the GHG performance procedure and is satisfactory. The same to be included in monitoring plan.</p> <p>[Acceptance and close out] Open</p>			
<p>Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD</p>			
<p>Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.</p> <p>[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]</p>			

Date: 10 March 2006		Raised by: Shivananda Shetty	
No.	Type	Issue	Ref
11	NIR	No procedure is identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	5.2.8
<p>Date:28 July 2006: [Response from Project Developer] The system of recording daily/monthly/annual parameters, maintenance of these records and performance assessment of the project activity has been discussed in Procedure of GHG Performance Monitoring, Measurement and Reporting of data'. Copy of the same will be submitted to validator.</p>			
<p>Date: 12 Sep 2006 [Sanjeev Kumar] The GHG performance procedure includes the records handling procedure and is satisfactory. The same to be included in monitoring plan.</p> <p>[Acceptance and close out] Open</p>			
<p>Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD</p>			
<p>Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.</p>			

[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
12	NIR	No specific procedure for dealing with possible monitoring data adjustments and uncertainties	5.2.9

Date:28 July 2006:

[Response from Project Developer] Adequate QA/QC procedures will be put in place for reporting the GHG parameters of the project activity. Any observations (like inconsistencies in reported parameters) and/or discrepancies in the operation of the power plant will be documented in the daily report prepared by the Manager (Power Plant) along with its time of occurrence, duration and possible reasons behind such operational disruptions. Necessary corrective actions will be undertaken at the earliest. These QA/QC procedures have been outlined in GHG performance procedure and GHG Internal Audit procedure of the project activity.

Date: 12 Sep 2006 [Sanjeev Kumar]

The same to be included in monitoring plan.

[Acceptance and close out] Open

Date 31 October 2006:

[Response from Project Developer] Has been addressed in the revised PDD

Date: 29 December 2006 [Sanjeev Kumar]

This has been addressed in the revised PDD.

[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
13	NIR	No specific procedure to review of reported results/data.	5.2.10

Date:28 July 2006:

[Response from Project Developer] The system for conducting regular internal audits and taking corrective actions for the project activity is detailed in the Procedure for GHG Internal Audit document, copy of which will be submitted to the validator.

Date: 12 Sep 2006 [Sanjeev Kumar]

The review procedure is included in the GHG internal audit procedure and is satisfactory. The same to be included in monitoring plan.

[Acceptance and close out] Open

Date 31 October 2006:

[Response from Project Developer] Has been addressed in the revised PDD

Date: 29 December 2006 [Sanjeev Kumar]

This has been addressed in the revised PDD.

[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
14	NIR	No specific procedure identified for internal audits of GHG project compliance with operational requirements.	5.2.11

Date:28 July 2006:

[Response from Project Developer] Same as NIR 13 above.	
Date: 12 Sep 2006 [Sanjeev Kumar] The GHG internal audit procedure has been obtained is found satisfactory. The same to be included in monitoring plan.	
[Acceptance and close out] Open	
Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD	
Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.	
[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]	

Date: 10 March 2006 Raised by: Shivananda Shetty

No.	Type	Issue	Ref
15	NIR	No specific procedure identified for project performance reviews before data is submitted for verification, internally or externally	5.2.12
Date:28 July 2006: [Response from Project Developer] Same as NIR 13 above.			
Date: 12 Sep 2006 [Sanjeev Kumar] The procedure is identified for project performance reviews before data is submitted for verification internally/externally in the GHG Internal audit document. The same to be included in the PDD.			
[Acceptance and close out] Open			
Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD			
Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.			
[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]			

Date: 10 March 2006 Raised by: Shivananda Shetty

No.	Type	Issue	Ref
16	NIR	No specific procedure identified for corrective actions in order to provide for more accurate future monitoring and reporting	5.2.13
Date:28 July 2006: [Response from Project Developer] Same as NIR 13 above.			
Date: 12 Sep 2006 [Sanjeev Kumar] The same has been included in GHG internal audit procedure and found satisfactory. The same to be included in the PDD.			
[Acceptance and close out] Open			
Date 31 October 2006: [Response from Project Developer] Has been addressed in the revised PDD			
Date: 29 December 2006 [Sanjeev Kumar] This has been addressed in the revised PDD.			
[Acceptance and close out] OK, closed out.[S Kumar] 15 Jan 2007 [Shiva]			

Date: 10 March 2006 Raised by: Shivananda Shetty

No.	Type	Issue	Ref
17	NIR	No EIA is mandatory in host country for such a project. However the consent to establish and operate the project activity is required from State Pollution Control Board. No consent letter is provided.	6.2
<p>Date: 28 July 2006:</p> <p>[Response from Project Developer] The West Bengal state Pollution Control Board has issued Consent to Establish (i.e. No Objection Certificate) to SRBSL project case in its letter dated 20th February 2004. Copy of this letter will be made available to the validator.</p> <p>Project is expected to be commissioned in November 2006. Once the project starts operation, SRBSL will periodically obtain the Consent to Operate as per the mandate of Pollution Control Board.</p>			
<p>Date: 12 Sep 2006 [Sanjeev Kumar]</p> <p>The 'Consent to establish' has been obtained.</p>			
<p>[Acceptance and close out] OK, closed out. [S Kumar] 12 Sep 2006 [Shiva]</p>			

Date: 10 March 2006

Raised by: Shivananda Shetty

No.	Type	Issue	Ref
18	CAR	The change has been found as follows: A.4.1. Location of the project activity – not written Abbreviation details are missing	8.1.2
<p>Date: 22 July 2006:</p> <p>[Response from Project Developer]</p> <p>A.4.1. Location of the project activity – not written → Location of project activity has already been mentioned in the existing version of the PDD.</p> <p>Abbreviation details are missing → Addressed in the revised version of the PDD.</p>			
<p>Date: 12 Sep 2006 [Sanjeev Kumar]</p> <p>A.4.1.2 included 'south Asia' has been removed now. The abbreviation has been added in the revised PDD.</p> <p>Under C.2.1 please mention the text 'date of registration' with expected date 01/11/06.</p>			
<p>[Acceptance and close out] Open</p>			
<p>Date 15 September 2006:</p> <p>[Response from Project Developer] Has been addressed in the revised PDD</p>			
<p>Date: 29 December 2006 [Sanjeev Kumar]</p> <p>This has been addressed in the revised PDD.</p>			
<p>[Acceptance and close out] OK, closed out. [S Kumar] 15 Jan 2007 [Shiva]</p>			

Observations: