

VALIDATION REPORT

Nalwa Sponge Iron Limited (NSIL)

POWER GENERATION FROM WASTE HEAT AT NSIL

SGS Climate Change Programme

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1	Nalwa Sponge Iron Limited (NSIL)

Summary

SGS India Pvt. Ltd., an affiliate of SGS United Kingdom Ltd. has made a validation of the CDM project activity "Power Generation from Waste Heat at NSIL" by Nalwa Sponge Iron Limited (NSIL), Village Taraimal, Tehsil Gharghoda, District Raigarh, Chhattisgarh State in India, 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 2 dated 01/07/2005).

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
Work carried out by		
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Ms. Irma Lubrecht	<input checked="" type="checkbox"/>	No distribution without permission from the Client or responsible organisational unit
Authorized signatory		
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Date of final decision:	Number of pages:	
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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority, Government of India
CER	Certified Emission Reductions
CO ₂	Carbon Dioxide
CSEB	Chhattisgarh State Electricity Board
DNA	Designated National Authority, Ministry of Environment & Forest, Government of India
DoE	Designated Operational Entity
DR	Document Review
EIA	Environment Impact Assessment
GHG	Green House Gas(es)
GWh	Giga watt hour
I	Interview
IPCC	Intergovernmental Panel on Climate Change
ISHC	International Stakeholder Consultation
kWh	Kilo watt hour
MNES	Ministry of Non Conventional Energy Sources, Government of India
MoEF	Ministry of Environment and Forest
MoV	Means of Verification
MP	Monitoring Plan
MPPCB	Madhya Pradesh Pollution Control Board
MT	Metric Tonne
NIR	New Information Request
NSIL	Nalwa Sponge Iron Limited
PDD	Project Design Document
PPA	Power Purchase Agreement
UNFCCC	United Nations Framework Convention for Climate Change
WHR	Waste Heat Recovery

Table of content

Table of content	4
1. Introduction.....	5
1.1 Objective	5
1.2 Scope	5
1.3 GHG Project Description	5
1.4 The names and roles of the validation team members.....	6
2. Methodology.....	7
2.1 Review of CDM-PDD and additional documentation.....	7
2.2 Use of the validation protocol	7
2.3 Findings.....	7
2.4 Internal quality control	8
3. Determination Findings	9
3.1 Participation requirements.....	9
3.2 Baseline selection and additionality	9
3.3 Application of Baseline methodology and calculation of emission factors	10
3.4 Application of Monitoring methodology and Monitoring Plan.....	10
3.5 Project design.....	11
3.6 Environmental Impacts.....	11
3.7 Local stakeholder comments.....	12
4. Comments by Parties, Stakeholders and NGOs	13
4.1 Description of how and when the PDD was made publicly available	13
4.2 Compilation of all comments received.....	13
4.3 Explanation of how comments have been taken into account.....	13
5. Validation opinion	14
6. List of persons interviewed.....	15
7. Document references	16

Annex 1: Local assessment

Annex 2: Validation Protocol

Annex 3: Overview of findings

1. Introduction

1.1 Objective

Nalwa Sponge Iron Limited (**NSIL**) has commissioned SGS to perform the validation of Power Generation from waste heat at NSIL 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

NSIL has commissioned WHR based power plant at their production site situated at Village Taraimal, Tehsil Gharghoda, District Raigarh, Chhattisgarh State in India. The plant has 6 Rotary Kilns, each of capacity 100 tons per day. Operation of these rotary kiln releases around 20,000 – 22,000 Nm³/hr of hot waste gases per kiln at high temperature of around 900-1000 °C. The project activity recovers sensible heat available from waste hot gases through putting 6 numbers of waste heat recovery boilers connected to the 6 rotary kilns. The sensible heat from the gas is extracted in the boilers and the exhaust gas is thereafter is released to the atmosphere through tall stacks at around 160 OC. The steam produced in the boilers is used to run the steam turbine generator to generate 2 x 8 MW electricity. In the absence of the project, NSIL would have purchased equivalent electricity from Jindal Steel & Power Limited or the grid.

The proposed CDM project activity is power generation from waste heat at NSIL, Village Taraimal, Tehsil Gharghoda, District Raigarh, Chhattisgarh State in India. The project activity utilises waste heat to generate electricity. The project activity was started on 03/10/2002 and was commissioned on 01/09/2006

Baseline Scenario:

Under the baseline scenario, the waste heat would have been allowed to escape unutilized and the electricity demand of the plant would have been met from the grid.

With Project Scenario:

The project utilizes waste heat to generate electricity which otherwise would have allowed to escape to

the atmosphere at higher temperatures.

Leakage:

As per the methodology ACM0004, No leakage is considered in the methodology. Hence no leakage is considered.

Environmental & Social Impacts:

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

1.4 The names and roles of the validation team members

Name	Affiliate	Role
Mr. Sanjeev Kumar	SGS India	Team Leader
Mr. Pankaj Mohan	SGS India	Assessor
Mr. Syed Khursheed Zaidi	SGS India	Local Assessor
Ms. Irma Lubrecht	SGS Netherlands	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. CAR01 was raised as no letter of approval from host country was provided to the Validator. A Letter of Approval dated 3rd November 2006; issued by the Indian DNA (reference number 4/16/2006-CCC) was made available to the SGS. This was verified by seeing the original copy and same is attached as scanned copy. This was accepted and hence CAR01 was closed out.

No Annex I Party has been identified in the PDD and therefore no further Letter of Approval was required. 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 uses Approved Consolidated Methodology, ACM0004 Version 02, dated 3rd March 2006, "Consolidated baseline methodology for waste gas and/or heat and/or pressure for power generation" to generate power using available waste heat at NSIL.

Before implementation of the project when only one kiln was operating in NSIL and they were getting power from JSPL. For the expansion of sponge iron plant if waste heat recovery boilers had not been in place, NSIL would have been purchasing electricity from the JSPL. The reasons were -

- The electricity price from the grid is more than INR 4.00 per unit
- The electricity price for JSPL if supplies to grid is INR 2.30 per unit
- The electricity price for JSPL if supplies to NSIL is INR 2.56 per unit

Hence the electricity supply from JSPL to NSIL was the best alternative for both of them in absence of project activity. This was confirmed from the power purchase agreement that JSPL has enough power to supply to the grid and to NSIL. In absence of project activity NSIL had taken power from JSPL and in that case JSPL would have exported less power to the grid. Hence the grid is the baseline for this project and the JSPL plant has been considered as the power plant connected to the grid and was used in the calculation of grid emission factor.

The CAR 04 was raised to ascertain that the incentives from the CDM project was seriously considered in the decision to proceed with the project activity. The proof of project start date, Technological barrier, barrier due to prevailing practice and common practice analysis were asked to provide from NSIL.

The project proponent provided the certified copy of the resolution passed by the board of directors in their meeting held on 03/10/2002. The CDM was found considered in going ahead with the project activity. The local assessor interviewed NSIL management during site visit and found the same OK. The project proponent revised the PDD and provided the supporting documents and the CAR 04 was closed out.

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

- 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.

Evidential proof showing NSIL project activity as “first of its kind in the region” was asked. NSIL provided the copy of executive summary of Joint Plant Committee (JPC) through a survey completed in 2005 stating that NSIL was the only plant having 100 tpd capacity kilns in the region having independent waste heat recovery boiler without any support from coal based fired system. The survey report shows, there were 16 sponge iron plants out of 147 have WHRB system and out of them 8 were in Chhattisgarh state. The same information was provided in the PDD. The detail information on 8 industries were asked to justify why those plant did not face similar barriers. The project participant justified the distinctions between the project activity and the other three similar activities which had not sought for CDM benefits. One plant (JSPL) started power generation in 1991 was among the world’s largest SIPs and could be said of different scale. The other (PIL) was a cogeneration plant and third one (HEGL) was similar kind as the project activity was, but this plant had power generation background and having grid connected power plants in other states too. 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.

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 project activity falls under Large scale CDM project activity and uses Approved Consolidated Methodology, ACM0004, Version 02, dated 3rd March 2006, “Consolidated baseline methodology for waste gas and/or heat and/or pressure for power generation”.

As the baseline emission calculations were not clear and Excel sheet could not be provided along with the PDD, NIR03 was raised. Excel sheet was made available to the local assessor during site visit and the build margin figures as depicted in the PDD under Table B6 of Annex 3 in the revised PDD Version 02 dated 21/09/2006 was corrected. The same has been checked and NIR 03 was closed out.

The baseline grid emission factor is 0.76667 tCO₂/MWh and is fixed ex-anti for the entire crediting period of ten years.

3.4 Application of Monitoring methodology and Monitoring Plan

The project uses Approved Consolidated Methodology, ACM0004 Version 02, dated 3rd March 2006, “Consolidated baseline methodology for waste gas and/or heat and/or pressure for power generation” to generate power using available waste heat at NSIL.

The authority & responsibility of project management team for CDM monitoring was not clearly defined in the PDD Version 01, dated 09/05/2006 and thus NIR 05 was raised. The project proponent has rephrased the PDD and made the changes in the monitoring plan elaborating the responsibilities of monitoring staff and the parameters under Annex 4 of rephrased PDD Version 02, dated 21/09/2006, the same was reviewed and found satisfactory, NIR 05 was closed out

NIR 06 was raised as authority & responsibility for registration; monitoring and measurement were not adequately defined in the PDD version 01. The authority and responsibility for monitoring GHG parameters were properly addressed in the rephrased PDD version 02 and through review of NSIL document on GHG performance monitoring, measurement and reporting of data and found OK, NIR 06 was closed out.

As the Training procedures were not provided in the PDD Version 01, NIR 07 was raised. Revised Version 02 of PDD was received from NSIL with modifications in Monitoring plan (Annex 4) and the same has been verified during site visit that qualified engineers and certified boiler operators from Indian Boiler regulations were operating the plant, thus NIR07 was closed out.

NIR 08 was raised as the PDD version 01 was not containing information on Emergency Preparedness. NSIL provided the revised PDD version 02 incorporating Emergency preparedness plan under Annex 4. The GHG Performance, Monitoring, Measurement & Reporting of data manual was also reviewed during site visit and NIR 08 was closed out.

NIR 09, NIR 10, NIR 11, NIR 12, NIR 13, NIR 14 and NIR 15 were raised as specific procedures for maintenance and monitoring; data uncertainties & adjustments; review & reported results; specific procedures for internal audits; project performance and specific procedures for corrective action were not clearly defined in the PDD Version 01. NSIL revised the PDD version 02 and incorporated detailed Monitoring Plan as Annex 4, the revised PDD reviewed along with GHG performance Monitoring, Measurement & reporting of data and GHG Internal audit procedures during site visit and found satisfactory, thus NIR 09, NIR 10, NIR 11, NIR 12, NIR 13, NIR 14 and NIR 15 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 hence the format of the present PDD was checked against it.

CAR 02 was raised as the project boundary was not clear (common header did not mention the number of boilers connected to the turbine) in the PDD Version 01; dated 09/05/2006. The project boundary was modified in the rephrased PDD Version 02; dated 21/09/2006 with clarity by specifying the number of boilers connected to the common steam header. This was checked and verified during the site visit and found OK, CAR 02 was closed out.

As the PDD did not clearly describe the training requirement for project, NIR 16 was raised. The project proponent replied by saying that the training will be provided by the supplier for operation and maintenance during installation and trial runs. The document for the same was also provided so NIR16 was closed out.

As the PDD did not clearly describe the start date of the project, NIR 17 was raised. The project proponent provided the date in the revised PDD along with the documentary proof of CDM consideration. This was reviewed by the local assessor and found to be OK so NIR17 was closed out.

3.6 Environmental Impacts

No CAR / NIR were raised as the PDD contained necessary information pertaining to the project. The project does not require Environmental Impact Assessment studies as per the requirement Indian Law, Ministry of Environment and Forest (MoEF), Government of India notification. The publication issued by MoEF "Environment Impact Assessment Notification Ministry Of Environment And Forests Environment Impact Assessment Notification S.O.60(E), Dated 27/01/1994 (Incorporating Amendments Vide S.O. 356(E) Dated 4/5/1994, S.O. 318(E) Dated 10/4/1997, S.O. 319 Dated 10/4/1997, S.O. 73(E) Dated 27/1/2000, S.O. 1119(E) Dated 13/12/2000, S.O. 737(E) Dated 1/8/2001, S.O. 1148(E) Dated 21/11/2001, S.O. 632(E) Dated 13/06/2002) was reviewed and found OK. The

However, NSIL has obtained the necessary consents to operate their plant issued by Chhattisgarh State Pollution Control Board and found OK.

3.7 Local stakeholder comments

No NIR / CAR were issued as the PDD contained necessary information, however, during the site visit the local assessor interviewed local people representing Village Panchayat and have seen the environmental consents and did not record any adverse comment / observation.

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 UNFCCC website <http://cdm.unfccc.int/Projects/Validation/DB/57M0ZKVMBZL6T2YBNJQ9KMGD1IOPCT/view.html> and were open for comments from 12th May 2006 to 10th June 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 no comment.

No adverse comment received during local stakeholder consultation.

4.3 Explanation of how comments have been taken into account

No comment was received for the project activity.

5. Validation Opinion

SGS has performed a validation of the project: Power Generation from waste heat at NSIL”, by Nalwa Sponge Iron Limited (NSIL), Village Taraimal, Tehsil Gharghoda, District Raigarh, Chhattisgarh State in India by NSIL. 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 using waste gas as fuel 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 Technological barrier followed by barrier due to prevailing practices demonstrates that the proposed project activity was 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 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

Meeting Date	Name	Position	Contact details	Short description on subject of interview
15/06/2006	Mr. Damodar Mittal	Director	Nalwa sponge Iron limited, Taraimal, Gharghoda Road, Raigarh – 496 001 Telefax: +91 – 7762 261 489-92, 240 471 Mobile: +91 – 98930 22233 Email: dmittal@nalwa.com	Introduction and Over all details of the project
15/06/2006	Mr. Alok Singhania	G. M. commercial	Nalwa sponge Iron limited, Taraimal, Gharghoda Road, Raigarh – 496 001 Telefax: +91 – 7762 261 489-92 Email: aloksinghania@nalwa.com	Financial closures, Official Development Assistance for the project. Project additionality.
15/06/2006	Mr. N. K. Sharma	Head Human Resorce Department	Nalwa sponge Iron limited, Taraimal, Gharghoda Road, Raigarh – 496 001 Telefax: +91 – 7762 261 489-92 Email: nksharma@nalwa.com	Stake Holder Consultations and local community welfare activities
15/06/2006	Mr. M. L. Sahu	Deputy Manager (Envi Manageme nt Dept)	Nalwa sponge Iron limited, Taraimal, Gharghoda Road, Raigarh – 496 001 Telefax: +91 – 7762 261 489-92 Email: mlsahu@nalwa.com	Environmental aspects of the project and regulatory clearances.
15/06/2006	Mr. Sandeep Kanda	Consultant	Ernst & Young Pvt. Ltd., Risk & Business Solutions, Ernst & Young Tower, B-26, Qutub Institutional Area, New Delhi – 110 016 Ph: 91 11 2661 1004-09 Fax: 91 11 2662 1012-13 Mobile: +91-93129 24976 Email: sandeep.kanda@in.ey.com	Project description, Additionality, monitoring plan, calculations, data authenticity for calculating the BM/OM and emission factor of the grid
15/06/2006	Mr. Sanjeev Garg	Manager Personnel Department	Nalwa sponge Iron limited, Taraimal, Gharghoda Road, Raigarh – 496 001	Stake Holder Consultations and local community welfare activities

			Telefax: +91 – 7762 261 489-92	
15/06/2006	Mr. Vijay Kumar	Up-Sarpanch	Village Gherwani, District Raigarh – 496 001 Phone: 07762 – 261411 Mobile: 98931 95312	Stake Holder Consultations and local community welfare activities
15/06/2006	Ms. Phool Bhai Jatwar	Sarpanch	Village Gherwani, District Raigarh – 496 001 Mobile: 98938 12148	Stake Holder Consultations and local community welfare activities
15/06/2006	Mr. Anant Ram Bhagat	Local	Village Taraimal, Tehsil Gharghoda, District Raigarh Phone: 07762 – 250 486	Stake Holder Consultations and local community welfare activities

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/ HCA letter given by MoEF, Government of India
- /2/ Modalities of communication

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):

List of Reviewed Documents:

S. No.	Title (full bibliographic reference if possible)	Brief note on content / significance	Hard copy (Y/N)
1.	Water Consent	To confirm that No Objection Certificate from Chhattisgarh State Pollution Control Board has been received to operate the plant, Confirming legal requirement that their effluent discharges are with in the stipulated norms.	Y
2.	Air Consent	To confirm that No Objection Certificate from Chhattisgarh State Pollution Control Board has been received to operate the plant, Confirming legal requirement that their Emissions are with in the stipulated norms.	Y
3.	Abstract of Minutes of Meeting of	To verify the project activity starting date and CDM consideration to go ahead with	Y

	board of Directors	project activity during project conception	
4.	Purchase Order copy for supply of turbines and boilers	To Confirm specification and training requirements	Y
5.	GHG Performance Monitoring, Measurement and Reporting of data	Description of authority & responsibility, training procedure, calibration procedure, monitoring equipments' maintenance, GHG performance evaluation, reporting, recording, data archiving and internal audit with corrective action plan	Y
6.	GHG Internal Audit Procedures	Description of procedures to be followed for carrying out the internal audit for reduction of GHG emissions	Y
7.	Executive Summary (Sponge Iron Industries)	Survey conducted by Joint Plant Committee (JPC) Sponge Iron Industries to support barriers	Y
8.	Barriers to WHR power generation	A case study conducted by Australian Government to show barriers	Y
9.	Barriers to boilers using WHR for power generation	A case study showing nitrates barriers to boilers for using WHR system	Y
10.	Site Snaps	Showing plant monitoring systems and local stake holder consultation	Y
11.	MoEF Notification	To ascertain that the project activity does not require Environmental Impact Assessment Studies	Y

Annex 1

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

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
No, Official Development Assistance (ODA) has identified in PDD. To be checked during site visit.	A.4.5	PDD	No public funding sought for the project	OK	OK
There is no project emissions associated with project activity. To be checked on site visit.	E.1	PDD	Not applicable as the waste heat recovery boilers are unfired type thus there will be no auxiliary fuel consumption. Verified during the site visit	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Yes, the comments were invited through by sending communication to stake holder. Proof to be submitted during site visit.	G.1	PDD	The project activity information was provided to the local village head "Sarpanch" and received No objection certificate was received subsequently and the same has been verified during the site visit.	OK	Ok
Yes, the summary of the stakeholder comments is provided in PDD. But no sporting docs provided	G.2	PDD	Supporting documents checked and scan copies received during site visit	OK	OK
No adverse comment identified in the PDD and the same to be verified during site visit.	G.3	PDD	During site visit the assessor met the local representative and did not receive any adverse comment about the project activity.	OK	OK
Monitoring Plan needs to be checked during site visit	D.4 & Annex 4	PDD	Monitoring plan checked during site visit and found satisfactory	OK	OK
Specification of the equipments installed needs to be checked and documentary proof to be collected during site visit.	A.4.3	PDD	During the site visit the specifications were cross checked with the name plates and suppliers specifications	OK	OK
Emission reduction Calculation needs to be checked during site visit. Excel sheet to be taken for checking.	E.4, E.6	PDD and Annex 3	Checked and found correct	OK	OK
Additionality proofs to be taken for starting date of project activity. Step 0; and section C.1.1 of PDD.	B.3, C.1.1	PDD	Proof of start date checked through Minutes of meeting and supporting documents collected for evidences of additionality through effects of nitrate stress causing corrosion and other technical and prevailing practice barriers associated with the project activity	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Environmental impacts mentioned needs to be verified during site visit.	F.1	PDD	No requirement of EIA studies as per the MoEF notification (http://envfor.nic.in/legis/eia/so-60(e).html). Copy collected and checked. However EIA was conducted voluntarily and no adverse effects were identified. The same has been verified during site visit	OK	OK

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 Annex 2 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.	OK	OK
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	Letter of approval from Indian DNA to be submitted by the project proponent	CAR 1	OK
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	The Project is unilateral and host country India has ratified Kyoto on 26 th Aug 2002. http://cdm.unfccc.int	OK	OK

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
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 used 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.	OK	OK
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	UNF CCC & SGS web site	ISCs have been invited for the period 12th May to 10 th June 2006. http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=104 NO Comments have been received	OK	OK
1.6 The project has correctly completed a Project Design Document, using the current version and exactly following the guidance	DR	PDD /UN FCC C web site	See table 8 below.	Pending	OK
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) has identified in PDD. To be checked during site visit.	Site visit	OK
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.	OK	OK
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.	OK	OK

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
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.	OK	OK
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.	OK	OK

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/ version 02	OK	OK
2.2 Is the project boundary consistent with the approved methodology	ACM 0004 /PD D	DR	No, the project boundary is not clear in PDD.	CAR2	OK
2.3 Are the baseline emissions determined in accordance with the methodology described	ACM 0002 /4/P DD	DR	Could not check as Excel sheet was not available. Excel sheet to be provided.	NIR 3	OK
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.	OK	OK
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 02	OK	OK
2.6 Are the emission reductions determined in accordance with the methodology described	ACM 0002 /4/P DD	DR	Pending closure of NIR3	Pending	OK

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.	OK	OK
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>- Starting date of CDM project activity</p> <p>Technological barrier is not clear</p> <p>Barrier due to prevailing practice states that NSIL project activity is first if its kind in the region – Provide evidence</p> <p>Common practice analysis</p> <p>- Name the plant having WHRB running in the state. Please provide name and why that plant did not faced the same barrier if gone for CDM.</p>	CAR4	OK
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.	OK	OK
3.4 Is it demonstrated/justified that the project activity itself is not a likely baseline scenario	PDD	DR	Pending closure of CAR4	Pending	OK

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 listed in the monitoring methodology ACM0004/ version 02	OK	OK
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 is provided in PDD as per ACM0004/ version 02	OK	OK
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	OK
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 02	OK	OK
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.	OK	OK

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			The Project Proponent (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	OK	OK
5.1.1 Does the monitoring plan provide the collection and archiving of relevant data concerning environmental, social and economic impacts?			Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
5.1.2 Is the choice of indicators for sustainability development (social, environmental, economic) reasonable?			Not applicable	OK	OK
5.1.3 Will it be possible to monitor the specified sustainable development indicators?			Not applicable	OK	OK
5.1.4 Are the sustainable development indicators in line with stated national priorities in the Host Country?	PDD	DR	No monitoring of sustainable development indicators is not mandatory in the Host Country. Pending CAR1	Pending	Pending
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	OK
5.2.2 Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	PDD	DR	Responsibility for registration, monitoring, measurement and reporting is not mentioned in the PDD	NIR6	OK
5.2.3 Are procedures identified for training of monitoring personnel?	PDD	DR	Training procedure of monitoring personnel has not been identified.	NIR 7	OK
5.2.4 Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	PDD	DR	Specific procedure is not identified for emergency preparedness in the PDD	NIR8	OK
5.2.5 Are procedures identified for calibration of monitoring equipment?	PDD	DR	Calibration of monitoring equipment will be carried out once a year to ensure reliability of system.	OK	OK
5.2.6 Are procedures identified for maintenance of monitoring equipment and installations?	PDD	DR	Specific procedure is not identified for maintenance of monitoring equipments	NIR 9	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
5.2.7 Are procedures identified for monitoring, measurements and reporting?	PDD	DR	Yes specific procedure is identified in section D of PDD. Missing in Annex4	NIR10	OK
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	Yes record handling procedure is identified	OK	OK
5.2.9 Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	PDD	DR	Specific procedure for dealing with monitoring data adjustments and uncertainties are not identified.	NIR 11	OK
5.2.10 Are procedures identified for review of reported results/data?	PDD	DR	Specific procedure to review of reported results/data is not identified.	NIR 12	OK
5.2.11 Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	PDD	DR	Specific procedure is not identified for internal audits.	NIR 13	OK
5.2.12 Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	PDD	DR	Specific procedure is not identified for project performance reviews.	NIR 14	OK
5.2.13 Are procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting?	PDD	DR	Specific procedure is not identified for corrective actions in order to provide more accurate data for future monitoring and reporting.	NIR 15	OK

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

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
6.1 Has an analysis of the environmental impacts of the project activity been sufficiently described?	PDD	DR	Yes, PDD contains sufficient information.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
6.2 Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	PDD	DR	EIA is not mandatory in host country for such a project.	OK	OK
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.	OK	OK
6.4 Are transboundary environmental impacts considered in the analysis?	PDD	DR	Transboundary environmental impacts are not there.	OK	OK
6.5 Have identified environmental impacts been addressed in the project design?	PDD	DR	Yes, environmental impacts have been addressed.	OK	OK
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.	OK	OK

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.	OK	OK
7.2 Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	Yes, the comments were invited through by sending communication to stake holder. Proof to be submitted during site visit.	Site visit	OK
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.	OK	OK
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 provided	Site Visit	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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	OK

TABLE 8 OTHER REQUIREMENTS

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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.	OK	OK
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	Pending closure of CARs / NIRs	Pendi ng	Pendi ng
8.2 Technology to be employed					
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	OK	OK
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.	OK	OK
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.	OK	OK
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	Training Requirement is not mentioned in the PDD clearly.	NIR16	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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	No, the project's starting date is not defined clearly and operational lifetime is 15 years which is reasonable.	CAR1 7	OK
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	OK	OK
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.	OK	OK

Annex 3 FINDINGS OVERVIEW

Date: 13-06-2006

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
1	CAR1	Letter of Approval to be submitted	1.2
Date: 16th November 2006 [Comments- CLIENT] The project design document (PDD) has been submitted to the Designated National Authority (DNA) and the Host Country Approval (HCA) letter is awaited.			
Date: 21 st December 2006 Pankaj Mohan [Comment Local Assessor] The original letter of approval was seen and copy of same was received so CAR1 could be closed out.			
Date: 24-12-2006 S Shetty [Acceptance and close out] OK CAR1 closed out.			

Date: 13-06-2006

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
2	CAR2	Project Boundary is not clear	2.2
Date: 16th November 2006 [Comment client] The project boundary has been modified please refer the revised PDD.			
Date: 21 st December 2006 Pankaj Mohan [Comment Local Assessor] The project boundary is clearly defined in modified PDD. CAR2 could be closed out.			
Date: 24-12-2006 S Shetty [Acceptance and close out] OK CAR2 closed out.			

Date: 13-06-2006

Raised by: Pankaj Mohan

28/33

No.	Type	Issue	Ref
3	NIR3	Baseline emission calculations not clear- Excel sheet to be provided	2.3
Date: 16th November 2006 [Comment client] Please find attached the Baseline emission calculation sheets (Excel sheets). The Build margin figure as depicted in Table No. B6, Annex 3 of the PDD has been corrected.			
Date: 21 st December 2006 Pankaj Mohan [Comment Local Assessor] The excel sheet provided was checked and found to be OK. This was accepted and hence NIR3 could be closed out.			
Date: 24-12-2006 S Shetty [Acceptance and close out] OK NIR3 closed out.			

Date: 13-06-2006

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
4	CAR4	Starting date of CDM project activity Technological barrier is not clear Barrier due to prevailing practice states that NSIL project activity is first if its kind in the region – Provide evidence Common practice analysis - Name the plant having WHRB running in the state. Please provide name and why that plant did not faced the same barrier if gone for CDM.	3.2
Date: 16 th November 2006 [Comment client] The start date of the project activity has been corrected as per the Minutes of Meeting conducted by NSIL for undertaking the project as a CDM project. Technological barrier: Please refer the revised PDD and attached case study. The WHRB are directly coupled to the DRI kilns. Due to the dirty waste gases there are boiler tube leakages which results in stoppage of the DRI kilns also, thereby hampering DRI production as well as power generation. Also due to the higher accretion rates in these smaller capacity kilns frequent cleaning after every 60-70 days is required this results in lower power plant load factor (as is evident from the emission reduction estimation). Prevailing practice barrier: Please refer the revised PDD and the attached Joint Plant Committee (JPC), Ministry of Steel report on “Survey of Indian Sponge Iron Industry”. As per the report there are only eight plants with WHRB based captive power generation in the region. The eight plants having waste heat recovery based power generation in Chhattisgarh state are (information obtained through various registered CDM projects): 1. JSPL - old 2. Prakash 3. HEG 4. Monnet 5. Ispat Godavari 6. Nalwa 7. Vandana Global 8. Raipur Alloys			

Of these plants only HEG and Nalwa are having only 100 tpd kilns. HEG also has coal based boiler to support the power plant, whereas at NSIL the power plant is solely dependent on the WHRBs thereby making it the first of its kind project activity being carried out in the region.

Common practice:

CDM revenues are the main driver for similar project activities in the region. As stated earlier there are eight plants having waste heat recovery based power generation in Chhattisgarh state.

Except for Jindal, Prakash and HEG which had WHRB prior to the year 2000 rest all the other units have undertaken waste heat recovery based power generation from the DRI kilns as a CDM project activity. Moreover, the upcoming sponge iron plants are also undertaking similar project as CDM projects, namely:

1. Rashmi Sponge
2. Ind Synergy
3. SKS Ispat
4. Shri Bajrang
5. Nakoda
6. JSPL –new

Thus, it is clear that CDM revenues are the main driver for such kind of project activity.

Date: 21st December 2006 Pankaj Mohan

[Comment Local Assessor] The documentary evidences provided were reviewed and found to be OK. The copies of all the documents seen were taken. This was accepted and hence CAR4 could be closed out.

Date: 24-12-2006 S Shetty

[Acceptance and close out] OK CAR4 closed out

Date: 13-06-2006

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
5	NIR5	The authority and responsibility of project management is needed to be clearly described.	5.2.1

Date: 16th November 2006

[Comments: CLIENT] Please refer to the Monitoring Plan (Annex 4) of the revised PDD and also the attached GHG monitoring and internal audit documents.

Date: 21st December 2006 Pankaj Mohan

[Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR5 could be closed out.

Date: 24-12-2006 S Shetty

[Acceptance and close out] OK NIR5 closed out.

Date: 13-06-2006

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
6	NIR6	Responsibility for registration, monitoring, measurement and reporting is not mentioned in the PDD	5.2.2

Date: 16th November 2006

[Comment client] Please refer Annex 1 of the PDD for registration responsibility. Responsibility for monitoring, measurement and reporting lies with the plant head, please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.

Date: 21st December 2006 Pankaj Mohan

[Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR6 could be

30/33

closed out.
Date:24-12-2006 S Shetty [Acceptance and close out] OK NIR6 closed out.

Date: 13-06-2006		Raised by: Pankaj Mohan	
No.	Type	Issue	Ref
7	NIR7	Training procedure of monitoring personnel has not been identified.	5.2.3
Date: 16th November 2006 [Comment client] Please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.			
Date: 21 st December 2006 Pankaj Mohan [Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR7 could be closed out.			
Date:24-12-2006 S Shetty [Acceptance and close out] OK NIR7 closed out.			

Date: 13-06-2006		Raised by: Pankaj Mohan	
No.	Type	Issue	Ref
8	NIR8	Specific procedure is not identified for emergency preparedness in the PDD	5.2.4
Date: 16th November 2006 [Comment client] Please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.			
Date: 21 st December 2006 Pankaj Mohan [Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR8 could be closed out.			
Date:24-12-2006 S Shetty [Acceptance and close out] OK NIR8 closed out.			

Date: 13-06-2006		Raised by: Pankaj Mohan	
No.	Type	Issue	Ref
9	NIR9	Specific procedure is not identified for maintenance of monitoring equipments	5.2.6
Date: 16th November 2006 [Comment client] Please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.			
Date: 21 st December 2006 Pankaj Mohan [Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR9 could be closed out.			
Date:24-12-2006 S Shetty [Acceptance and close out] OK NIR9 closed out.			

Date: 13-06-2006		Raised by: Pankaj Mohan	
No.	Type	Issue	Ref
10	NIR10	Yes specific procedure is identified in section D of PDD. Missing in Annex4	5.2.7
Date: 16th November 2006 [Comment client] Please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.			
Date: 21 st December 2006 Pankaj Mohan [Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR10 could be			

closed out.			
Date:24-12-2006 S Shetty			
[Acceptance and close out] OK NIR10 closed out.			

Date: 13-06-2006		Raised by: Pankaj Mohan	
No.	Type	Issue	Ref
11	NIR11	Specific procedure for dealing with monitoring data adjustments and uncertainties are not identified.	5.2.9
Date: 16th November 2006			
[Comment client] Please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.			
Date: 21 st December 2006 Pankaj Mohan			
[Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR11 could be closed out.			
Date:24-12-2006 S Shetty			
[Acceptance and close out] OK NIR11 closed out.			

Date: 13-06-2006		Raised by: Pankaj Mohan	
No.	Type	Issue	Ref
12	NIR12	Specific procedure to review of reported results/data is not identified.	5.2.10
Date: 16th November 2006			
[Comment client] Please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.			
Date: 21 st December 2006 Pankaj Mohan			
[Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR12 could be closed out.			
Date:24-12-2006 S Shetty			
[Acceptance and close out] OK NIR12 closed out.			

Date: 13-06-2006		Raised by: Pankaj Mohan	
No.	Type	Issue	Ref
13	NIR13	Specific procedure is not identified for internal audits.	5.2.11
Date: 16th November 2006			
[Comment client] Please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.			
Date: 21 st December 2006 Pankaj Mohan			
[Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR13 could be closed out.			
Date:24-12-2006 S Shetty			
[Acceptance and close out] OK NIR13 closed out.			

Date: 13-06-2006		Raised by: Pankaj Mohan	
No.	Type	Issue	Ref
14	NIR14	Specific procedure is not identified for project performance reviews.	5.2.12
Date: 16th November 2006			
[Comment client] Please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.			
Date: 21 st December 2006 Pankaj Mohan			
[Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR14 could be closed out.			
Date:24-12-2006 S Shetty			

[Acceptance and close out] OK NIR14 closed out.

Date: 13-06-2006

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
15	NIR15	Specific procedure is not identified for corrective actions in order to provide more accurate data for future monitoring and reporting.	5.2.13

Date: 16th November 2006

[Comment client] Please refer Annex 4 of the revised PDD and also the attached GHG monitoring and internal audit documents.

Date: 21st December 2006 Pankaj Mohan

[Comment Local Assessor] The revised PDD mentions this in Annex 4 and hence NIR15 could be closed out.

Date: 24-12-2006 S Shetty

[Acceptance and close out] OK NIR15 closed out.

Date: 13-06-2006

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
16	NIR16	Training Requirement is not mentioned in the PDD clearly.	8.2.4

Date: 16th November 2006

[Comment client] training is required for operating the boilers and turbines of the project activity. This was carried out by the supplier during installation.

Date: 21st December 2006 Pankaj Mohan

[Comment Local Assessor] The purchase agreement mentions about the training requirement of the project proponent. This was accepted and Hence NIR16 could be closed out.

Date: 24-12-2006 S Shetty

[Acceptance and close out] OK NIR16 closed out.

Date: 13-06-2006

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
17	CAR17	No, the project's starting date is not defined clearly and operational lifetime is 15 years which is reasonable.	8.3.1

Date: 16th November 2006

[Comment client] The start date of the project activity has been corrected as per the Minutes of Meeting conducted by NSIL for undertaking the project as a CDM project.

Date: 21st December 2006 Pankaj Mohan

[Comment Local Assessor] The minutes of meeting obtained and also verified by talking to the Director of the company. This was accepted and hence CAR17 could be closed out.

Date: 25-12-2006 S Shetty

[Acceptance and close out] OK CAR17 closed out.

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