CLEAN DEVELOPMENT MECHANISM
PROJECT DESIGN DOCUMENT FORM (CDM-SSC-PDD)
Version 03 - in effect as of: 22 December 2006

CONTENTS

Annexes

Revision history of this document

Version Number	Date	Description and reason of revision
01	21 January 2003	Initial adoption
02	8 July 2005	• The Board agreed to revise the CDM SSC PDD to reflect guidance and clarifications provided by the Board since version 01 of this document. • As a consequence, the guidelines for completing CDM SSC PDD have been revised accordingly to version 2. The latest version can be found at <http://cdm.unfccc.int/Reference/Documents>.
03	22 December 2006	• The Board agreed to revise the CDM project design document for small-scale activities (CDM-SSC-PDD), taking into account CDM-PDD and CDM-NM.

SECTION A. General description of small-scale project activity

A.1 Title of the small-scale project activity:

Replacement of Steam based Horizontal Continuous Crystallizer by Energy Efficient Acid Absorption Crystallizer
Version: 1
Date : 15.02.2008

A.2. Description of the small-scale project activity:

The project activity aims to reduce steam consumption in the crystallisation of glauber salt (Sodium Sulphate -$Na_2SO_4.10H_2O$) by installing Acid Absorption Crystallizer (AAC), using less steam as compared to existing Steam based Horizontal Continuous Crystallizer(HCC). Consequently, corresponding consumption of fuel shall be reduced leading to reduced Green House Gas (GHG) emissions.

The present project activity involves the replacement of 4 existing units of HCC with 4 units of AAC(3 running & 1 standby). The project will be implemented in two phases. Phase-I completed in July 2007, which includes installation of 2 units of AAC and Phase-II includes installation of two units of AAC which are expected to be functional by the end of 2009.

HCC is equipped with steam boosters and ejectors. AAC eliminates the need of energy intensive steam boosters. Therefore, the need for steam is reduced, leading to reduced consumption of coal. However there is slight increase in steam & power consumption in Multi Stage Flash Evaporator (MSFE) required for the evaporation of relatively dilute acid generated in AAC.

The present project activity has sustainable development benefits which can be estimated as per the following parameters:

Environmental benefits:
The project activity has both local and global environmental benefits. It will reduce substantial amount of Steam consumed in production process. The steam is generated by captive Coal based Thermal Power Plant. Reduced generation of Steam will result in reduced consumption of Coal thereby reduced emission of CO2. This will also help to improve Ambient Air Quality in neighbouring area.

Globally, this project activity will help to reduce emission of Green House Gases responsible for Global Warming..

Social benefits:
The project activity shall provide additional employment generation during the construction and commissioning of AAC. Further, operation and maintenance of the AACs shall involve social benefits in terms of employment and improved level of income to the local community.

Technological benefits:

The project activity is a self-motivated technology developed in-house by the project promoter. This initiative taken up by the promoter shall allow the understanding and applicability of the technology for similar applications in industries in future.

A.3. Project participants:

Name of the Party involved(*) ((host)indicates a host party)	Private and/or public entity(ies) project participants (*) (as applicable)	Kindly indicate if the Party involved wish to be considered as project participant (Yes/No)
India	Grasim Industries Ltd., Staple Fibre Division, Birlagram, Nagda (M.P.)	No

A.4. Technical description of the small-scale project activity:

A.4.1. Location of the small-scale project activity:

A.4.1.1. Host Party(ies):

India

A.4.1.2. Region/State/Province etc.:

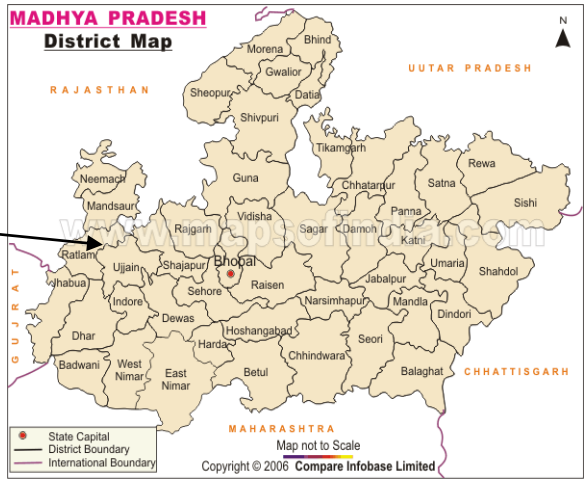
Madhya Pradesh

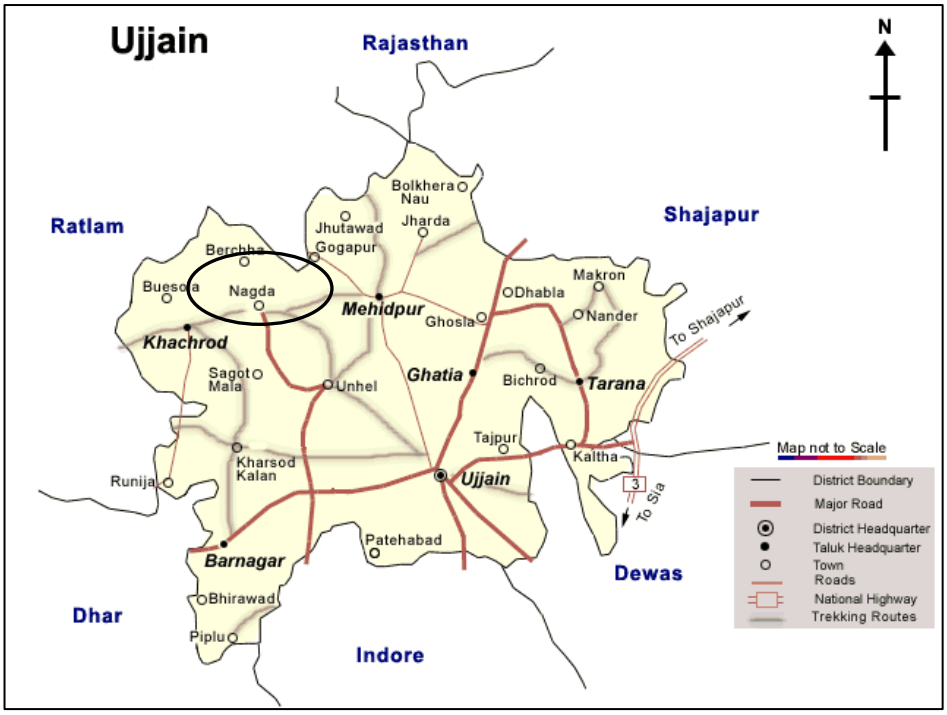
A.4.1.3. City/Town/Community etc:

Nagda

A.4.1.4. Details of physical location, including information allowing the unique identification of this small-scale project activity:

The project activity is located in town Nagda, of Ujjain district, of Madhya Pradesh and lies within 23.5^0 N latitude and 75.7^0 E longitude respectively.





A.4.2. Type and category(ies) and technology/measure of the small-scale project activity:

The project activity can be categorized as follows

Type	Sectoral scope	Sectoral number
II D	Manufacturing Industries	4

A.4.3 Estimated amount of emission reductions over the chosen crediting period:

Sl. No	Crediting Years	Annual estimation of emissions reductions in Tonnes of CO_2 e
1.	2007 – 08	12,158
2.	2008 – 09	12,158
3.	2009 – 10	31,682
4.	2010 – 11	31,682
5.	2011 – 12	31,682
6.	2012 – 13	31,682
7.	2013 – 14	31,682
8.	2014 – 15	31,682
9.	2015 – 16	31,682
10.	2016 – 17	31,682
Total estimated reductions in the crediting periods in tones of CO_2 e		**277,772**
Total number of crediting years		**10**
Annual average of estimated reductions over the crediting (tonnes of CO_2e)		**27,777**

Note: The first two years of operation of the project involves only the Phase-I and hence the CER volume during the first two years is low compared to the remaining years wherein 3 units of AAC will be operational while one will be kept as standby.

A.4.4. Public funding of the small-scale project activity:

No public funding of any kind is applicable for the project activity.

A.4.5. Confirmation that the small-scale project activity is not a debundled component of a large scale project activity:

As mentioned under the Appendix C of the simplified modalities and procedures for small scale CDM project activities, "A proposed small-scale project activity shall be deemed to be a debundled component of a large project activity if there is a registered small-scale CDM project activity or an application to register another small-scale CDM project activity:

- With the same project participants;
- In the same project category and technology/measure; and
- Registered within the previous 2 years; and
- Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point.

None of the above parameters is applicable to the proposed CDM project activity and hence this project activity is not a debundled component of large scale project activity.

SECTION B. Application of a baseline and monitoring methodology

B.1. Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity:

Project Type : II
Project Category : D - Energy efficiency and fuel switching measure for industrial facilities
Version : 11

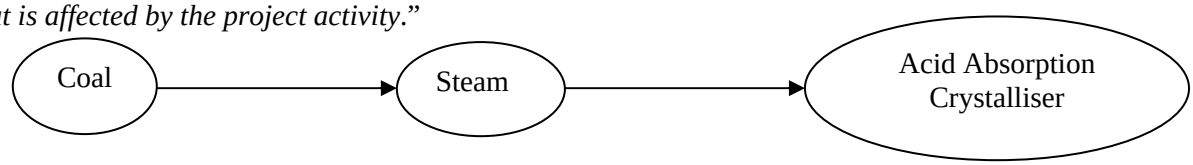
B.2 Justification of the choice of the project category:

The following table indicates the applicability of the methodology in the context of present project activity:

	Conditions	Applicability
Criterion 1	Applies to any energy efficiency and fuel switching measure implemented at • A single industrial or mining and • Mineral production facility.	Project activity involves conserving energy by replacing Horizontal Continuous Crystallizer with Acid Absorption Crystallizer within a single industrial Viscose Staple Fibre manufacturing unit of the project promoter.
Criterion 2	This category covers project activities aimed primarily at energy efficiency. A project activity that involves primarily fuel switching falls into category III.B	Project activity aims at energy efficiency and no fuel switching is involved.
Criterion 3	This category covers replacing, modifying or retrofitting of existing facilities or installing in a new facility	Project activity includes replacing Horizontal Continuous Crystallizer by Acid absorption Crystallizer
Criterion 4	The aggregate energy savings of a single project may not exceed the equivalent of 60 GWhe per year. A total saving of 60 GWhe per year is equivalent to a maximal saving of 180 GWhth per year in fuel input.	The annual average volume of CERs generated due to this project activity is 27,777 tCO_2

B.3. Description of the project boundary:

According to Appendix B of the simplified modalities and procedures of small scale project activity *"The project boundary is the physical, geographical site of the industrial facility, process or equipment that is affected by the project activity.*"



The project boundary of this project activity consists of the physical boundary of the AAC units installed in the industrial unit

B.4. Description of baseline and its development:

In the absence of the CDM project activity, Grasim Industries Ltd. would have continued to use HCC in place of AAC. The AAC being an energy efficient technology will lead to reduced consumption of coal which otherwise would have been used.

As per AMS II D: "the energy baseline consists of the energy use of the existing equipment that is replaced in the case of retrofit measures and of the facility that would otherwise be built in the case of a new facility"

In the present project activity, HCC will be replaced by AAC which is more energy efficient and this will lead to reduction in consumption of coal. The amount of coal usage of the existing (HCC) equipment will be the baseline of this project.

The baseline emission is estimated by multiplying the "energy use" with the emission factor of the energy source. The source of energy in this project activity is sub bituminous coal. Therefore, for accurate result IPCC values are considered for calculating the emission factor of coal. In this project activity sub bituminous coal is consumed and values from IPCC guidelines 2006 are considered. Emission factor of various components of coal are multiplied by their global warming potential and then all the values are added and emission factor is calculated in tCO_2/tJ.

In this activity, installation of MSFE will lead to project emissions. The emissions associated with the project activity itself has been calculated by estimating the additional coal consumption for power generation multiplied with emission factor of coal.

Therefore, the net emission reductions will be the difference of the baseline and project emissions.

B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered small-scale CDM project activity:

The additionality for the proposed CDM project activity is established on the basis of a detailed barrier analysis, relating to the project itself. The following discussion establishes that significant barriers existed

that would have prevented the project from being undertaken, and that the CDM revenue would significantly act as an impetus for the project to overcome these barriers.

Investment Barrier:

The project promoter has utilised the concept of the Vapour Absorption Machine (VAM) technique in order to meet their requirements as per the present project activity. However, unlike VAM, in the present case sulphuric acid is being used instead of lithium bromide as a heat absorber. The usage of sulphuric acid is a very innovative concept being brought in by the project promoter.

However, sulphuric acid is highly corrosive in nature and involves tremendous handling risk. Handling requires specially designed and constructed material, with high degree of control and automation for ensuring occupational health and safety of the operating personnel. The special requirement of non-corrosive / corrosion resistant material stands as a major factor towards the increased project cost. In spite of special care the risk still stands tall. Therefore, the project promoter has to make special operation, health and safety arrangements due to the harmful & risky nature of the absorbent

Moreover, the installation of the Acid Absorber Crystallizer brings in another additional investment of the MSFE required in order to handle the evaporation of additional dilute acid. The MSFE alone forms a major 25% (approx) of the total project cost. In addition, the operation of the MSFE will lead to slight increase in energy (steam & power) consumption which will further add to the operating cost of the project. However, total capacity of MSFE is high and the dilution load of AAC will form only a part of its total capacity. The remaining capacity of MSFE will be utilized for existing plant requirements.

Technological barrier:

The technology adopted for the present project activity is entirely new as compared to the existing one and hence the investment made involves higher risk in comparison with the existing technology.

The project activity is not only capital intensive but also involves major associated risk of design & implementation. The technology employed for the present project activity is not a tried and tested practice and hence involves major uncertainty of success. The technology has been developed in-house which itself required specialised know-how.

Moreover, the corrosive nature of the sulphuric acid poses significant risks towards the successful running of the project through its entire lifespan. It is uncertain whether the project might require additional overhauling costs within a short period of its operation due to rapid corrosion of the operating parts.

Other Barriers:

Since this project activity is an in-house effort of the project promoter, no previous data or references are available. Though usage of VAM utilising Lithium Bromide (LiBr) is an established concept but using sulphuric acid as an absorber is a new concept adopted by project promoter. Therefore, the risk associated with the actual operation of the project is tremendous.

No previous references of design of AAC of the proposed capacity as well in other similar industries were available. The project activity is a self-motivated in-house technology development initiative of the project proponent.

B.6. Emission reductions:

B.6.1. Explanation of methodological choices:

Type : AMS II.D "Energy efficiency and fuel switching measure for industrial facilities" Version11.

Energy efficient AAC would lead to mitigation of GHG emissions that would have been released into the atmosphere by less efficient HCC. The project activity involves replacement of four units of HCC with four units of AAC (three operational and one standby). In order to monitor the mitigation of GHG due to project activity, the amount of steam saved needs to be monitored. Installation of MSFE will lead to additional consumption of steam & power. Therefore, additional steam and power consumption should be continuously monitored for calculating project emissions. Based on monitored data and the IPCC emission factor from IPCC guidelines 2006, the baseline emissions are calculated.

There is no technology transfer as this technology is in-house technology developed by project promoter. Therefore, the difference between the baseline and project emissions would be the emission reductions from the project activity.

B.6.2. Data and parameters that are available at validation:

(Copy this table for each data and parameter)

Data / Parameter:	Steam consumption
Data unit:	Tonnes per hour
Description:	Amount of steam consumed by the conventional horizontal continuous crystallizer
Source of data used:	Steam consumption details as per the past records maintained by the project promoter
Value applied:	14.5
Justification of the choice of data or description of measurement methods and procedures actually applied :	The data available has been drawn from the maintained log-books of project promoter as per the past steam consumption details. The data were measured with the help of a flow meter installed at site.
Any comment:	The project shall be implemented as Phase I and Phase II. Phase I consists of the replacement of one unit of conventional HCC and the remaining three crystallizers shall be replaced as a part of Phase II during 2009. Therefore, for the purpose of calculation of the CERs the value applied for the first and second years of the crediting period is 5.3 TPH and for the remaining years is 14.5 TPH.

Data / Parameter:	Quantity of sub bituminous coal used
Data unit:	Tonnes per annum
Description:	Amount of sub bituminous coal used for the conventional unit
Source of data used:	Coal consumption value has been calculated from the steam generation considering the specific coal consumption for the required steam generated.
Value applied:	20704.26

Justification of the choice of data or description of measurement methods and procedures actually applied :	The data available in the log-books of the project promoter as per the past consumption details has been used.
Any comment:	The project will be implemented in two phase. Phase I consist of replacement of one unit of conventional HCC. And in Phase II three units of conventional HCC. Therefore, for calculating CERs the value applied is 7567.764 TPA for the first and second period and 20704.26 TPA for remaining crediting period.

Data / Parameter:	CO_2 Emission Factor for sub bituminous coal
Data unit:	tCO_2/TJ
Description:	CO_2 Emission Factor for sub bituminous coal
Source of data used:	2006 IPCC Guidelines for National Greenhouse Gas Inventory
Value applied:	96.775
Justification of the choice of data or description of measurement methods and procedures actually applied :	This value has been taken form 2006 IPCC Guidelines for National Greenhouse Gas Inventories. This data is publically available for reference.
Any comment:	NA

B.6.3 Ex-ante calculation of emission reductions:

Project emissions

The project activity involves the installation and operation of a MSFE which consumes additional power for operation thus leading to project related emissions. The annual project emissions (*PE)*, in tCO_2, during each year of crediting period are expressed as follows:

$PE = EC * EF_{coal}$

Where,

EC = Additional Sub bituminous coal consumption for power generation tonnes/yr

EF_{coal} = Emission factor of Sub bituminous coal in tCO_2/TJ (reference IPCC 2006)

As the project will be installed in two phases, Phase I & Phase II. So the project emissions for Phase I that is for year 2007 & 2008 will be 620.04 tCO_2/yr. and for Phase II emissions will be 1816.75 tCO_2/yr.

The project emissions for Phase I have been calculated as under:

Description	**Unit**	**Value**
Additional power consumption	Mwh/yr	341.706
Specific coal consumption	Tonnes of Coal / Mwh	0.75

Coal consumption	Tonnes of Coal / yr.	256.279
Emission factor	tCO_2/TJ	96.775
Total project emissions	tCO_2/yr	620.04

The project emissions for Phase II have been calculated as under:

Description	**Unit**	**Value**
Additional power consumption	Mwh/yr	1001.22[1]
Specific coal consumption	Tonnes of Coal / Mwh	0.75
Coal consumption	Tonnes of Coal / yr.	750.916
Emission factor	tCO_2/TJ	96.775
Total project emissions	tCO_2/yr	1816.75

Total project emissions for ten years= 15774 tCO_2/yr

Leakage:
As per the approved small-scale methodology AMS IID, version 11, the calculation of leakage for the project activity is not required and hence the leakage associated with the project activity is zero.

Baseline Emissions:
The baseline emissions as discussed is calculated on the basis of amount of coal saved because of the installation of energy efficient Acid Absorption Crystallizer which would otherwise have been used to generate the equivalent amount of steam in horizontal Continuous Crystallizer.

The annual baseline emissions BE, in tCO_2, during each year of crediting period, are calculated as per AMS II D, "Energy efficiency and fuel switching measure for industrial facilities"

$BE = EC * EF_{coal}$

Where,

EC_{coal} = amount of Sub bituminous coal consumed for steam generation in TJ
EF_{coal} = emission factor of the fuel, i.e. Sub bituminous coal. in tCO_2/TJ

Emission factor is calculated by

$EF_{coal} = EF\_coal\_CO_2 + EF\_coal\_CH_4 .GWP\_CH_4 + EF\_coal\_N_2O. GWP\_N_2O$

Where,

EF_Coal_CO_2 = CO_2 equivalent emission factor per unit of energy of Sub bituminous coal in [tCO2/TJ]. In the present context, fuel used in the baseline

[1] Data provided by Grasim Industries Ltd.

scenario is coal and the emission factor for the same will be considered constant over the crediting period. (Ref. 2006 IPCC Guidelines for Greenhouse Gas Inventories)

EF_Coal_CH_4= IPCC default CH_4 emission factor of Sub bituminous coal associated with fuel combustion, measured in [tCH_4/TJ]. (Ref. 2006 IPCC Guidelines for Greenhouse Gas Inventories)

EF_Coal_ N_2O= IPCC default N_2O emission factor of Sub bituminous coal associated with fuel combustion, measured in [tN_2O/TJ]. (Ref. 2006 IPCC Guidelines for Greenhouse Gas Inventories)

GWP_CH_4 = Global warming potential of CH_4 set by the IPCC in the "Climate Change 1995: The Science of Climate Change, Table 4, p. 22, 1996" as GWP_CH_4 = 21 tCO_2/tCH_4.

GWP_N_2O = Global warming potential of N_2O set by the IPCC in the "Climate Change 1995: The Science of Climate Change, Table 4, p. 22, 1996" as GWP_N_2O = 310 $tCO2/tN_2O$.

The baseline emissions for the Phase I of project activity have been calculated as below:

Description	**Unit**	**Value**
Net Steam Saving per annum	TPA	32403.24
Specific coal consumption	tCoal/tSteam	0.163
Coal Saved	Tones	5281.72[2]
Net Calorific Value of coal	TJ/Kg	0.000025
Amount of Energy	TJ	132.04
Emission factor	tCO_2/TJ	96.775
Total baseline emissions	tCO_2/yr	12778

The baseline emissions after Phase II of project activity have been calculated as below:

Description	**Unit**	**Value**
Net Steam Saving per annum	TPA	84945.72
Specific coal consumption	tCoal/tSteam	0.163
Coal Saved	Tones	13846.15[3]
Net Calorific Value of coal	TJ/Kg	0.000025

[2] Data provided by Grasim Industries Ltd.

[3] Data provided by Grasim Industries Ltd.

Amount of Energy	TJ	346.15
Emission factor	tCO_2/TJ	96.775
Total baseline emissions	tCO_2/yr	33499

Total Baseline Emissions for ten years= 293548tCO_2/yr

Emission Reductions

The emission reductions are calculated as the difference between the baseline emissions and the project emissions due to the project activity.

Emission Reductions = Baseline Emissions – (Project Emissions + Leakage)

B.6.4 Summary of the ex-ante estimation of emission reductions:

Year	Estimation of baseline emissions (tCO_2e)	Estimation of project activity emissions(tCO_2e)	Estimation of leakage (tCO_2e)	Estimation of overall emission reductions (tCO_2e)
2007 – 08	12778	620	0	12158
2008 – 09	12778	620	0	12158
2009 – 10	33499	1817	0	31682
2010 – 11	33499	1817	0	31682
2011 – 12	33499	1817	0	31682
2012 – 13	33499	1817	0	31682
2013 – 14	33499	1817	0	31682
2014 – 15	33499	1817	0	31682
2015 – 16	33499	1817	0	31682
2016 – 17	33499	1817	0	31682
Total (tonnes of CO_2e)	**293548**	**15776**	**0**	**277772**

B.7 Application of a monitoring methodology and description of the monitoring plan:

B.7.1 Data and parameters monitored:

(Copy this table for each data and parameter)

Data / Parameter:	**Steam Consumption**
Data unit:	TPH
Description:	Amount of steam consumed by the Acid Absorption Crystallizer unit
Source of data to be used:	The amount of steam consumed will be measured by the flow meters installed at each end of project boundary
Value of data	4.803
Description of measurement methods	The steam consumption for the project will be measured with the help of flow meters installed for the units. The measured data will be recorded in log-books

and procedures to be applied:	which will be available for verification
QA/QC procedures to be applied:	The Grasim Industries Ltd is ISO 9001:2000 certified company and all the QA/QC procedures are in accordance to this standard.
Any comment:	NA

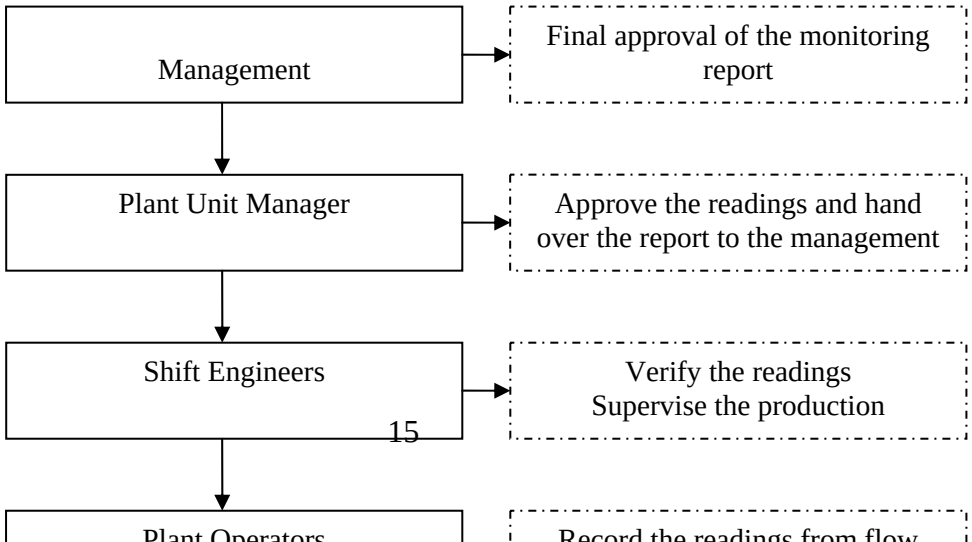
Data / Parameter:	**Power Consumption**
Data unit:	Kwh / Day
Description:	Amount of additional power consumed due to the installation of Acid Absorption crystallizer
Source of data to be used:	Power consumption can be continuously measured.
Value of data	4231
Description of measurement methods and procedures to be applied:	The amount of power consumed will be monitored continuously and records of the same will also be maintained in log-books which will be available for verification.
QA/QC procedures to be applied:	The Grasim Industries Ltd is ISO 9001:2000 certified company and all the QA/QC procedures are in accordance to this standard.
Any comment:	NA

B.7.2 Description of the monitoring plan:

The project involves installation of energy efficient AAC. As per the applied methodology, the critical parameter which needs to be monitored is the energy use in the equipment. In the case of this project activity the amount of steam consumed is monitored continuously.

The project promoter has designed a monitoring and reporting structure in order to monitor the GHG emission reductions from the project activity. The roles and responsibilities of the personnel have been clearly identified in order to achieve the same. The plant operator will record the reading of the consumption of the steam & power from the flow and energy meters installed at the site and will hand over the report to Shift engineer, who will verify the readings and supervise the production. The report prepared will be handed over to the Plant unit manager, who will approve the readings and hand over the report to the management.

The operational structure for the monitoring plan is as follows:



B.8 Date of completion of the application of the baseline and monitoring methodology and the name of the responsible person(s)/entity(ies)

Date: 15th January 2008
Name & Contact Details:

Organization:	Asia Carbon Emission Management India Pvt. Ltd.
Street/P.O.Box:	# 167, Kodmbakkam High Road, Nungambakkam
City:	Chennai
State/Region:	Tamil Nadu
Postfix/ZIP:	600 034
Country:	India
Telephone:	+91 44 3918 0501
FAX:	+91 44 3918 0501
URL:	http://www.asiacarbon.com
Represented by:	
Title:	Manager
Salutation:	Mr.
Last Name:	Kashyap
First Name:	Santonu
Mobile:	+91 93821 47748
Direct tel:	+91 44 3918 0503
Personal E-Mail:	skashyap@asiacarbon.com

SECTION C. Duration of the project activity / crediting period

C.1 Duration of the project activity:

C.1.1. Starting date of the project activity:

July 1, 2005

C.1.2. Expected operational lifetime of the project activity:

15 Years and 0 months

C.2 Choice of the crediting period and related information:

C.2.1. Renewable crediting period

NA

C.2.1.1. Starting date of the first crediting period:

NA

C.2.1.2. Length of the first crediting period:

NA

C.2.2. Fixed crediting period:

C.2.2.1. Starting date:

The start date of the crediting period is 01/06/2008or a date not earlier than the date of registration of the small scale project activity

C.2.2.2. Length:

10 years and 0 months

SECTION D. Environmental impacts

D.1. If required by the host Party, documentation on the analysis of the environmental impacts of the project activity:

The project activity reduces fossil fuel consumption by energy efficient technologies and does not fall under the purview of the Environmental Impact Assessment (EIA) notification of the Ministry of Environment and Forest, Government of India. The project has excellent environmental benefits in terms of green house gas reduction and fossil fuel conservation. As per the Ministry of Environment and Forests (MOEF), Government of India notification dated September 14th, 2006 regarding the requirement of EIA studies as per the Environment Protection Rule, 1986 (MOEF, 2002) is not required for this project activity.

D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party:

No significant environmental impact due to the project has been identified and therefore does not call for any significant measures to be adopted to prevent the impacts from occurring.

SECTION E. Stakeholders' comments

E.1. Brief description how comments by local stakeholders have been invited and compiled:

A stakeholder meeting was conducted on 11th August 2007 to intimate the local community about the project activity and benefits on its implementation and to get their feedback about the proposed project.

The stakeholders identified for the project are the following:

- Local People
- NGO Member (Rotary Club / Lions Club Members)
- Equipment Suppliers & Contractors
- Labour Contractors
- Grasim Representatives

Grasim representatives explained about their project activity and the benefits about the project. It was informed that reduction in emissions by implementing energy efficient activities will improve the ambient air quality in the local area. A separate questionnaire was circulated to the stakeholders during the meeting and the respective comments are summarized and attached in Appendix A. Grasim representative explained about the project activity to the participants in the local language and explained the questionnaire details.

E.2. Summary of the comments received:

A brief introduction about the project was given by the project proponent and after that the chair person, interacted with the stakeholders regarding their doubts and concerns of their proposed project activity. The comments can be summarized as positive and environmental friendliness due to the reduction of fossil fuel in thermal energy applications and Socio economic benefits from the project activity had also been appreciated

E.3. Report on how due account was taken of any comments received:

No negative comments due to the project activity

Annex 1

CONTACT INFORMATION ON PARTICIPANTS IN THE PROJECT ACTIVITY

Organization:	Grasim Industries ltd Staple Fibre Division
Street/P.O.Box:	Birlagram
Building:	
City:	Nagda
State/Region:	Madhya Pradesh
Postfix/ZIP:	456331
Country:	India
Telephone:	+91 7366 246760-6
FAX:	+91 7366 247160, 244114
E-Mail:	sspipara@adityabirla.com
URL:	www.birlacellulose.com
Represented by:	
Title:	Sr. Vice President
Salutation:	Mr.
Last Name:	Pipara
Middle Name:	S
First Name:	Sardar
Department:	(Technical)
Mobile:	+91 9425394222
Direct FAX:	+91 7366 247160, 244114
Direct tel:	+91 7366 255059
Personal E-Mail:	sspipara@adityabirla.com

Annex 2

INFORMATION REGARDING PUBLIC FUNDING

No Public Funding

Annex 3

BASELINE INFORMATION

Sl. No.	Parameters	Existing	Proposed
1	Boosters	9	-
2	Steam consumption (TPA)	**127020**	**42076.03**
3	Steam Saved (TPA)	-	84943.97
3	Coal Consumed (Kg/yr)	20704260	6858393
4	Power consumption (KWh/day)	8756	12076
5	For additional Evaporation Load (KWh/day)	-	911
6	Total electricity consumption (KWh/day)	**8756**	**12987**

For further information please refer to Section B.4

Annex 4

MONITORING INFORMATION

Please Refer To Section B.7

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Appendix A									
Grasim Industries Limited - Stakeholders Comments									
Place : Nagda & Date : 11.08.2007									
S.No.	**Stakeholder Name**	**Category**	**Employment opportunities are increased?**	**Whether land values are increased?**	**Infrastructure facilities are developed?**	**Whether you have learnt or exposed to new technology?**	**Whether you are facing any type of pollution (Air / Water / Sound) problems due to the project?**	**Whether the electricity facilities are improved?**	**Whether your local area is improved in the following terms?**
1	S.S. Pipara	Project Representative, Grasim Industries Limited	YBMV	Y	YVVM	Y	N	N	VNVM
2	Sukhvinder Singh	Contractor	YBVV	Y	YVVV	Y	N	Y	VVVV
3	Hiralal	Technician	YBVV	Y	YVVV	Y	N	N	MVVV
4	Tara Prashad	Technician	YBVM	Y	YVMV	Y	N	Y	MMVV
5	Pramod Rai	Plant Operator	YBMM	Y	YMMM	Y	N	N	MMVM
6	Mahboob Hussain	Contract labour	YBMM	Y	YMMM	Y	N	N	MMMM
7	Mangilal	Contract labour	YBMM	Y	YMMM	Y	N	N	MMMM
8	Ram Awadh Prasad	Plant Operator	YBVV	Y	YVVV	Y	N	N	VVVV
9	Ramchandra	Plant Operator	YBVV	Y	YVVV	Y	N	N	VVVV
10	Bharat Singh Sisodiya	Plant Operator	YBVV	Y	YVVV	Y	N	Y	VMVM
11	K. C. Panchal	Safety Manager	YBMM	Y	YMMM	Y	N	N	MMMM
12	H. N. Shukla	Manager (Fire)	YBMM	Y	YVVV	Y	N	N	VVVV
13	Manoj Kumar Joshi	AGM, Site Incharge	YBVV	Y	YVVV	Y	N	N	VVVV
14	Dr. Kapil Chaturvedi	President, Rotary Club, Nagda	YBVV	Y	YVVV	Y	N	Y	VMVV
15	Suresh Shrimal	Equipment Supplier	YBVM	Y	YMMM	Y	N	E	VMVV
16	Arvind Nahar	Local People	YBVV	Y	YVMV	Y	N	N	MMVV

17	D. D. Sethia	Local People	YBVV	N	YMMV	Y	N	Y	MMVM
18	Ajay Garwal	Lions Club, Nagda	YBVV	Y	YMMM	Y	N	N	MMMM
19	S.K. Bhattacharya	Gwalior Chemical Ind. Ltd., Nagda	YBVV	Y	YVVV	Y	N	E	VVVV
20	Suresh Parmar	Local People	YBVV	Y	YMMV	Y	N	N	MMVV
21	Sanwarmal Jalwal	Ex. Councillor	YBMM	Y	YMMM	Y	N	E	MMVV
22	B. L. Agrawal	Local People	YBVV	N	YVMV	Y	N	E	MMVN
23	Pradeep Rathu	Councillor	YBVV	Y	YVVV	Y	N	N	VVVV
24	T. M. Sunar	GM, CDM Incharge, Grasim Industries Limited	YBMM	Y	YVMV	Y	N	N	MMMV
25	Pankaj Maru	Lions Club Member, Nagda	YBMM	N	YVVV	Y	N	Y	VVVV
26	K. K. Gupta	GM (Production Manager)	YBVV	Y	YVVV	Y	N	Y	VVVV
27	J. M. Gaur	DGM	YBVV	Y	YVVV	Y	N	Y	VVVV
28	D.R. Bharadwaj	DGM	YBVV	Y	YVVV	Y	N	Y	VVVV
29	Deepak Surana	DGM	YSVV	Y	YVMM	Y	N	Y	VVVV
30	K.C. Mehta	GM	YBVV	Y	YVVV	Y	N	E	VVVV
31	Ashok Gupta	DGM	YBVV	Y	YVVV	Y	N	Y	VVVV
32	Pyarelal Porwal	Local People	YBVV	N	YVMM	Y	N	Y	MMVM
33	Ashok Gokhale	Rotary Club Member, Nagda	YBVV	Y	YVVV	Y	N	Y	VVVV
34	Divyakant Pandit	LIC of India, Nagda	YBMM	Y	YVVV	Y	N	N	VVVV
35	R. S. Sharma	AGM (Auxiliary)	YBVV	Y	YVVV	Y	N	N	VVVV
36	S.N. Shah	Sr. Vice President	YBVV	Y	YVVV	Y	N	N	MVVM
37	Harendra Singh	Rotary Club Member, Nagda	YBMM	Y	YVMM	Y	N	N	VNVM
38	Anand Surana	CDM Project Team Member, Grasim Industries	YBMM	Y	YMMM	Y	N	N	MMVV

		Limited							
39	R. C. Shukla	CDM Project Team Member, Grasim Industries Limited	YBVM	Y	YVVV	Y	N	N	VMVM
40	Dharmendra Mehra	CDM Project Team Member, Grasim Industries Limited	YBMM	Y	YMMM	Y	N	N	MMMM

Y – YES
N – No
S – Skilled labours
B - Both Skilled & Unskilled labours
V – Visible
M – Marginal
E – Expected