

MONITORING REPORT

Date of Submission: (16/02/2009)

Version: 01

For the monitoring period: 01/02/2008 to 31/10/2008

(Both dates included)

Project Title

“Effective utilization of waste heat by installing vacuum pre-concentrator in urea section” at Indo Gulf Fertilisers (A Unit of Aditya Birla Group), Jagdishpur.

Reference No. UNFCCC 1272

Project Location

Indo Gulf Fertilizers (IGF),

(A unit of Aditya Birla Nuvo Limited)

Indo Gulf Fertilizers- Jagdishpur, City- Sultanpur (Uttar Pradesh)



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Project Description

The objective of the project activity “Effective utilization of waste heat by installing vacuum pre-concentrator in urea section” is to reduce the Specific Steam Consumption Ratio (SSCR) of Urea Section. The reduction in SSCR of urea section would lead to Low Pressure (LP) steam consumption reduction in urea section. The steam savings in urea section subsequently reduces fossil fuel consumption in the boiler. Therefore the project activity leads to CO₂ emission reduction due to fossil fuel combustion.

The project activity involves installation of Vacuum Pre-Concentrators in two streams of urea section. The vacuum pre-concentrator would utilize the enthalpy present in the off gases to pre-concentrate the urea solution from 71% to 85% in vacuum pre concentrator before feeding the solution to the vacuum concentrator. This results in reduction of SSCR of urea section and subsequently lowers the LP steam requirement of the urea plant. Any reduction in LP steam requirement would lead to fuel saving in Boiler and abates GHG emissions.

Current Status of the Project

The Vacuum Pre-Concentrator project being undertaken by IGF has been implemented and commissioned on 01/07/2001.

Statement to what extent the Project has been implemented as planned

The VPC project has been implemented at the IGF plant as planned and described in the previous section. After implementation of the project activity, IGF plant has been operated continuously. However there were planned major outages for a period of approximately 12 days (Details are given in the table below).

Serial Number	Major Outage Period		Outage Period
	Start of Outage	Up To	(Days)
1	28/05/2008	30/05/2008	3
2	04/06/2008	12/06/2008	9
		Total	12

After the implementation of the project activity, the project proponent has made no changes in the project boundary.

Monitoring Period Details

The Monitoring period is chosen from 01/02/2008 to 31/10/2008 (both days included).

Sustainability Description:
(Economical and Social well being)

The nature and execution of the project activity can be shown to be sustainable due to a number of consequences of its implementation, some of which are illustrated below:

1. The project activity uses the enthalpy of off gases to pre-concentrate the urea solution, and reduces the steam consumption of urea section. This subsequently reduces the fuel consumption in the service boiler (from where steam is sourced for vacuum concentrator), leading to reduction in GHG emissions.
2. The fossil fuel conservation achieved by the project activity also reduces dependence on imported fuels, thus improving energy security.
3. As a mode of fulfilling its social responsibility to the local population, the IGF unit at Jagdishpur has been contributing to social well being by way of employing local people for the cleaning and other non technical operations (primarily during shut downs). In addition, it is creating business opportunities for the local stakeholders such as suppliers, contractors etc. during construction phase of the project thereby contributing to economic well-being aspects.
4. The IGF unit is also paying a significant amount as additional taxes, accrued due to monetary savings resulting from reduced operational expenditure on fuel.

Parameters being monitored according to Monitoring Plan

For the Project, the following parameters are being monitored on continuous basis:

Monitoring Plan- IGF Plant, Jagdishpur

Parameter	Unit	Source Department and Source Documents				Document details Compiled at Technical Department
		Data Source	Recording Document	Recording Frequency	Monitoring Procedure	
LP Steam consumption in Urea Plant	Ton /day	Log Sheet / DCS	Urea-D-14	Daily	ISO Manual	CDM-PE-VPC
LP Steam Pressure	Kg/cm ²	Log Sheet / DCS	Urea-D-14	Daily	ISO Manual	CDM-PE-VPC
LP Steam Temp.	Deg. °C	Log Sheet / DCS	Urea-D-14	Daily	ISO Manual	CDM-PE-VPC
HP Steam Pressure	Kg/cm ²	Log Sheet / DCS	PPU-D-13	Daily	ISO Manual	CDM-PE-VPC
HP Steam Temp.	Deg. °C	Log Sheet / DCS	PPU-D-13	Daily	ISO Manual	CDM-PE-VPC
Boiler Feed water Temperature	Deg. °C	Log Sheet / DCS	PPU-D-13	Daily	ISO Manual	CDM-PE-VPC
DM Water Temp.	Deg. °C	Log Sheet / DCS	AMM-D-06	Daily	ISO Manual	CDM-PE-VPC
Steam Generation Rate of Boiler	Ton/day	Daily Report	PRC	Daily	ISO Manual	CDM-PE-VPC
Urea Production	Ton /day	Daily Report	PRC	Daily	ISO Manual	CDM-PE-VPC
Quantity of Fuel(s) used in the boiler(s)	Nm ³ /day, KL/day	Daily Report	PRC	Daily	ISO Manual	CDM-PE-VPC

Calorific Value of Fuel (GCV & NCV)	Kcal/Nm ³ , Kcal/Kg	Daily Report	PRC	Every delivery of fuel	Monitored by GAIL	CDM-PE-VPC
Ultimate Analysis of fuel	%	Daily Report	PRC	Every delivery of fuel	Monitored by GAIL	CDM-PE-VPC
Boiler Efficiency	%	Calculated		Monthly		CDM-PE-VPC

Emission Reductions

The emission reductions per month during month 01/02/2008 to 31/10/2008, the net emission reductions of the plants for the period are illustrated below:

IGF Plant, Jagdishpur:

Period		Net emission reductions (tons of CO₂)
2008	01/02/2008 to 31/10/2008	27514
Total		27514

Measures to ensure the Results / uncertainty analysis

The calibration of monitoring equipment is done regularly as per the specific ISO procedure. The parameters like LP steam characteristics, Steam Consumption/Generation, fuel composition and all other project parameters being recorded as per the monitoring plan given in the registered PDD weekly or daily, and the same is being verified by the responsible authorities mentioned in ISO procedure. Please find below the calibration details of instruments used for monitoring.

S. No.	Parameter	Calibration Procedure	Record Number
1.	LP Steam consumption in Urea Plant	ISO Manual INM-P-09	CDM/INST/CAL
2.	LP Steam Pressure	ISO Manual INM-P-09	CDM/INST/CAL
3.	LP Steam Temp.	ISO Manual INM-P-09	CDM/INST/CAL
4.	HP Steam Pressure	ISO Manual INM-P-09	CDM/INST/CAL
5.	HP Steam Temp.	ISO Manual INM-P-09	CDM/INST/CAL
6.	Boiler Feed water Temperature	ISO Manual INM-P-09	CDM/INST/CAL
7.	DM Water Temp.	ISO Manual INM-P-09	CDM/INST/CAL
8.	Steam Generation Rate of Boiler	ISO Manual INM-P-09	CDM/INST/CAL
9.	Urea Production		
10.	Quantity of Fuel(s) used in the boiler(s)	ISO Manual INM-P-09	CDM/INST/CAL
11	Calorific Value of Fuel (GCV & NCV)	GAIL/JAG/FTL/2006/02	
12	Ultimate Analysis of fuel	GAIL/JAG/FTL/2006/02	

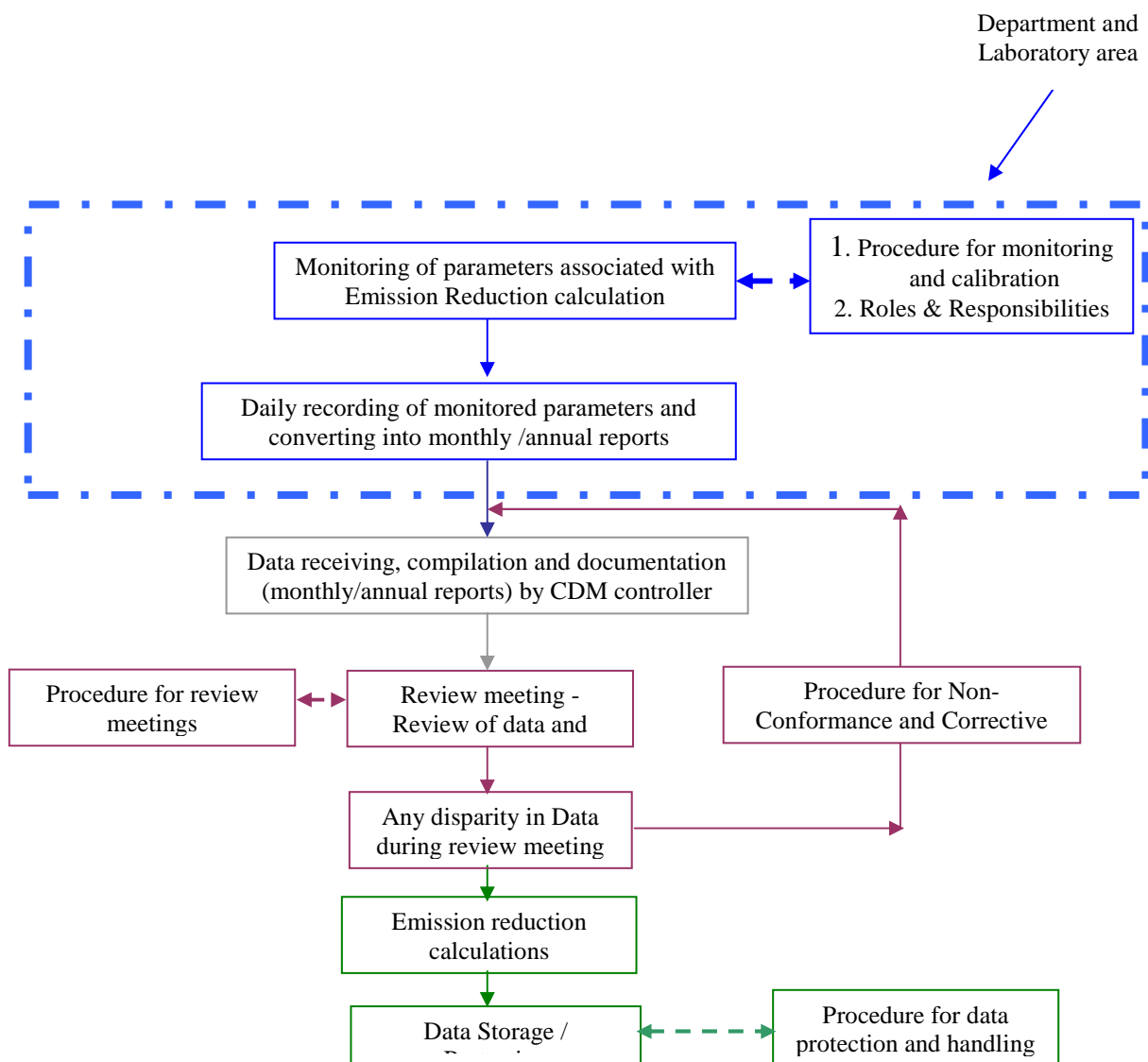
S.No.	Parameters	Tag	Data Source	Field Inst. Serial No.	Last Cal. Date	Next Due Date
1	LS Steam Consumption	11FT207	11-FQI-207	S 25269	25-Jan-08	24-Jan-09
		21FT207	11-FQI-207	S 25205	24-Jan-08	23-Jan-09
2	LP Steam Pressure	11PIC226	11-PIC-226	S 11086	5-Feb-08	4-Feb-09
		21PIC226	21-PIC-226	S 11089	4-Feb-08	3-Feb-09
3	LP Steam Temp	11TIC205	11-TIC-205	CR-25	7-May-08	6-May-09
		21TIC205	21-TIC-205	CR-27	7-May-08	6-May-09
4	HP Steam Temperature	06-TT-310	06-TIC-310	S-43937	2-May-08	1-May-09
		06-TT-410	06-TIC-410	S-43935	3-May-08	2-May-09
5	HP Steam Pressure	06-PT-326	06-PI-326	S-81106	26-Sep-08	25-Sep-09
		06-PT-426	06-PI-426	1587000025	27-Sep-08	26-Sep-09
6	Boiler Feed Water temperature	06-TI-316	06-TI-316	DCS	3-May-08	2-May-09
		06-TI-416	06-TI-416	DCS	3-May-08	2-May-09
7	Steam generation Rate of Boiler	06-FT-305	06-FI-305	1586007915	3-Apr-08	2-Apr-09
		06-FT-405	06-FI-405	0251756	2-May-08	1-May-09
8	Natural gas flow to Boiler	06-FT-302	06-FIC-302	S10698	16-Apr-08	15-Apr-09
		06-FT-402	06-FIC-402	S10717	22-Apr-08	21-Apr-09
9	Naphtha flow to Boiler	06-FT-309	06-FIC-309	S25244	17-Apr-08	16-Apr-09
		06-FT-409	06-FIC-409	S-11151	22-Apr-08	21-Apr-09

The instrument used for the monitoring of the above mentioned parameters are calibrated once in a year.

Roles & Responsibilities

A comprehensive CDM manual is prepared to illustrate the roles and responsibility of each and every person involved in project activity. The manual clearly defines the responsibilities and provides guidelines to the individuals for different chores of project activity.

IGF is an ISO-9001 as well as ISO-14001 company. The above parameters are monitored by the operator according to procedure defined in the monitoring plan. Based on the logged data and recorded in panel log sheets, a report consisting of above parameters is prepared by Shift in charge and is forwarded to CDM Coordinator on monthly basis. The report received from the respective department is compiled by Coordinator CDM.



To ascertain the Quality Control and Quality Assurance of the monitored parameters following procedure is adopted:

- The data used is reviewed by conducting a inter department review meeting once in 6 months. The Coordinator CDM will discuss the data (received from respective departments) with CDM Team member of concerned departments. Once the data is compiled and checked, it will be handed over to Verifier (IGF official) for Verification. After data verification, Auditor (IGF official) will be informed to carry out the Audit for concerned data.
- The instruments used for monitoring data are calibrated in regular intervals.