MONITORING REPORT

Monitoring Period

30.11.2007 to 02.04.2008

(Both days included)

Version: 01

Date: 01/09/2008

Project 1257: Power capacity expansion project at Dwarikesh Puram

Site:

Village- Bahadurpar, District - Bijnor, Uttar Pradesh

Latitude: 29^0 19'N, Longitude: 78^0 31'E

Dwarikesh Sugar Industries Limited

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Maharashtra - 400021

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Description of the project activity

Project Status

As proposed, Dwarikesh Sugar Industries Limited (DSIL) has increased the power generation capacity at its existing sugar manufacturing facility at Dwarikesh Puram by installation of a new Bi-drum, natural circulation, balanced draft top supported water tube bagasse fired traveling grate, spreader stoker boiler suitable for steam output capacity of 120 tons per hour (tph) at 86 kg/cm^2 pressure and steam temperature of 515 +/- 5^o C and a 24 MW double extraction cum condensing turbine for generating power along with all other accessories and equipments. The project activity got fully commissioned on 04th February 2008.

The power getting generated from the project activity is being supplied to the Northern grid which is under severe power shortage. The technical specification of the equipments deployed in the project activity is as listed below:

Boiler specifications

Description	Bi-drum, natural circulation, balanced draft, top supported water tube, bagasse fired, traveling grate, spreader stoker
Steam generating capacity (tons per hour)	120
Steam pressure (kg/cm^2)	86
Steam temperature (^{0} C)	515 ± 5
No.	1

Turbine specifications

Description	Double extraction cum condensing turbine
Capacity (MW)	24
Steam pressure (kg/cm^2)	86
Steam temperature (^{0} C)	515 ± 5
No.	1

Electrical Generator

Description	Four pole, 3 phase Air cooled, Brushless excitation with digital automatic voltage type regulation system
Speed (RPM)	1500
Frequency (Hz)	50
Power factor (lagging)	0.8
Voltage (kV)	11
No.	1

Pre project scenario

In the pre project scenario the sugar mill of DSIL in Dwarikesh Puram was meeting its in house steam and power requirements by a set of low pressure boilers and turbo generators respectively , the specifications for which are as given below:

Boiler details

Description	**1**	**2**
Steam generating capacity (tonnes per hour)	60	60
Steam pressure (kg/cm^2)	45	45

Turbine details

Description	**1**	**2**	**3**
Power (MW)	3	3	3

The project activity got registered with the UNFCCC on 30/11/2007. This is the first monitoring report considering the monitoring period from the date of start of crediting period as indicated in the PDD i.e. 30/11/2007 to 02/04/2008 (both days included). The net power generated by the project plant and steam supplied to the process during this period was 22772.95 MWh and 118445.02 tons respectively. The bagasse quantity consumed was 48250.35 MT.

Parameters monitored

The project proponent has been monitoring the parameters as outlined in the registered PDD. The details of the monitoring parameters are as given below:

1. Net quantity of electricity generated in the project plant

Data / Parameter:	$\mathbf{EG_{project\ plant,\ y}}$
Data unit:	MWh
Description:	Net quantity of electricity generated in the project plant during the year y
Data reported in :	Plant log books
Description of measurement methods and procedures to be applied:	The project activity has installed electronic tri-vector meters of accuracy class 0.5 which permit continuous monitoring and measurement. Hourly recordings of data were taken from energy meters and logged in the daily log books by the Switch Board attendant. The shift in-charge is responsible for signing off in the logbook at the end of every shift. The daily power generation is thence signed by power plant manager. The meters are being calibrated annually by an independent third party.
QA/QC procedures to be applied:	The consistency of metered net electricity generation is being cross checked with receipt of sales and the quantity of biomass fired. The meters are being calibrated regularly.

2. Net quantity of electricity generated in all power units

Data / Parameter:	$\mathbf{EG_{total,\ y}}$
Data unit:	MWh
Description	Net quantity of electricity generated in all power units at the project site, generated from firing the same type(s) of biomass residues as in the project plant, including the new power unit installed as part of the project activity and any previously existing units, during the year y
Data reported in :	Plant log books
Description of measurement methods and procedures to be applied:	The project activity has installed electronic tri-vector meters of accuracy class 0.5 which permit continuous monitoring and measurement. Hourly recordings of data were taken from energy meters and logged in the daily log books by the Switch Board attendant. The shift in-charge is responsible for signing off in the logbook at the end of every shift. The daily power generation is thence signed by power plant manager. The meters are being calibrated annually by an independent third party.
QA/QC procedures to be applied:	The consistency of metered net electricity generation is being cross-checked with receipts from electricity sales and the quantity of fuels fired.

3. Quantity of bagasse combusted in the project plant

Data / Parameter:	**$BF_{k, y}$**
Data unit:	Tonnes
Data reported in :	Plant log books
Description of measurement methods and procedures to be applied:	The direct measurement of bagasse is being monitored by monitoring the speed of the rotary feeder. This monitoring instrument is being calibrated to give the amount of bagasse being combusted in the project activity. Also annual mass and energy balance has been carried out to cross check the biomass quantity used in the project activity. The mass balance has been done on the basis of the measured quantity of sugarcane crushed; water added, mixed juice and excess bagasse. Similarly the energy balance has been done on the basis of steam quality and quantity generated.
QA/QC procedures to be applied:	Any direct measurement with mass or volume meters at the plant site is cross checked with an annual energy balance that is based on purchased quantities and stock changes.
Accuracy	

4. Net calorific value of the biomass

Data / Parameter:	**NCV_k**
Data unit:	MWh / tonne
Data reported in :	Test Reports
Description of measurement methods and procedures to be applied:	The net calorific value of bagasse is fairly constant. It is being monitored every six months by an external laboratory, taking at least three samples for each measurement as specified in the monitoring plan of the registered PDD.
QA/QC procedures to be applied:	The accredited external laboratories would ensure that proper monitoring of the calorific value is being carried out.

5. Moisture content of bagasse

Data / Parameter:	**Moisture content of bagasse**
Data unit:	% water content
Data reported in :	On-site laboratory measurements
Description of measurement methods and procedures to be applied:	Measured in in-house laboratories on monthly basis by drying a measured sample of bagasse in an oven and then measuring the dried sample. The same procedure is repeated till relatively consecutive readings are obtained.
QA/QC procedures to be applied:	Procedure for monitoring is repeated with multiple samples till consecutive readings are obtained.

6. Net quantity of steam generated from firing biomass in the project plant

Data / Parameter:	**$S_{project\ plant,\ y}$**
Data unit:	Tones
Data reported in :	On-site measurements
Description of measurement methods and procedures to be applied:	Continuous monitoring of steam is being carried out and totalized hourly. Steam flow meters are venturi type meters with Nozzle Accuracy of 1 to 1.5 % Full scale division (FSD) and Transmitter accuracy 0.1% of FSD.
QA/QC procedures to be applied:	The meters used for monitoring the steam generation and other physical properties are being calibrated at regular intervals atleast once a year. The consistency of metered net steam generation is cross-checked with the quantity of fuels fired.

7. Average net energy efficiency of heat generation

Data / Parameter:	**ε_{Boiler}**
Data unit:	%
Description:	Average net energy efficiency of heat generation in the boiler that would generate heat
Data reported in :	Used the lower value among (a) the measured efficiency and (b) manufacturer's information on the efficiency
Description of measurement methods and procedures to be applied:	Use recognized standards for the measurement of the boiler efficiency, such as the "*British Standard Methods for Assessing the thermal performance of boilers for steam, hot water and high temperature heat transfer fluids*" (BS845). Where possible, use preferably the direct method (dividing the net heat generation by the energy content of the fuels fired during a representative time period), as it is better able to reflect average efficiencies during a representative time period compared to the indirect method (determination of fuel supply or heat generation and estimation of the losses). The efficiency of the boiler will be measured on monthly basis.
QA/QC procedures to be applied:	Check consistency with manufacturers' information or the efficiency of comparable plants.

Monitored data

Parameters related to Power generation

Month	Gross Generation T1 (24MW)	Gross Generation T2 (9MW)	Auxiliary consumption (T1)	Auxiliary consumption (T2)	Net Generation ($EG_{project\ plant,y}$)	$EG_{total,\ y}$
15/07/2008 to 03/02/2008	-	-	-	-	-	-
04/02/2008 to 29/02/2008	12278.48	3873.13	1440.23	692.12	10838.25	14019.26
01/03/2008 to 31/03/2008	12843.70	3862.58	1392.71	604.16	11450.99	14709.41
01/04/2008 to 02/04/2008	544.52	52.51	60.81	9.76	483.71	526.46
TOTAL	**25666.70**	**7788.22**	**2893.75**	**1305.74**	**22772.95**	**29255.13**

Note: All figures are reported in MWh

Parameters related to bagasse and Steam

Month	Quantity of bagasse combusted in project boiler 1 – $BF_{k,y}$ (tonnes)	Moisture Content (%)	Net quantity of steam generated ($S_{project\ plant,\ y}$)
15/07/2008 to 03/02/2008	-	-	-
04/02/2008 to 29/02/2008	23251.61	49.69	57022.26
01/03/2008 to 31/03/2008	23857.16	48.09	58617.35
01/04/2008 to 02/04/2008	1141.58	49.70	2805.41
Total	**48250.35**	**49.16**	**118445.02**

Parameters related to Thermal Energy

Boiler 1

Months	Steam pressure (Kg/cm^2g)	Steam temperature (°C)	Enthalpy (Kcal/Kg)	Enthalpy of feed water at 104.92°C (Kcal/Kg)	GCV of bagasse	Mass of steam (tonnes)	Mass of fuel (tonnes)	Ratio	Efficiency ($\varepsilon_{boiler1}$)
15/07/2008 to 03/02/2008	-	-	-	-	-	-	-	-	-
04/02/2008 to 29/02/2008	85.63	499.37	810.16	130.76	2266	57022.26	23251.61	2.45	73.5
01/03/2008 to 31/03/2008	82.66	483.76	801.77	162.14	2266	58617.35	23857.16	2.46	69.4
01/04/2008 to 02/04/2008	85.10	501.85	811.79	155.87	2266	2805.41	1141.58	2.46	71.1

Energy Content of Fuel (Bagasse)

Net Calorific Value (kcal/kg) of Bagasse – Test conducted on 25/02/2008

Sample 1 - 1821

Sample 2 - 1812

Sample 3 - 1840

Calculations of emission reduction

Estimation of emission reductions:

Formula used for estimation of the total net emission reductions due to the project activity during a given year *y* is as under.

$$ER_y = ER_{heat,y} + ER_{electricity,y} + BE_{biomass,y} - PE_y - L_y$$

Where

ER_y are the emissions reductions of the project activity during the year *y* in tons of CO_2,

$ER_{electricity,y}$ are the emission reductions due to displacement of electricity during the year *y* in tons of CO_2,

$ER_{heat,y}$ are the emission reductions due to displacement of heat during the year *y* in tons of CO_2,

$BE_{biomass,y}$ are the baseline emissions due to natural decay or burning of anthropogenic sources of biomass during the year *y* in tons of CO_2 equivalents,

PE_y are the project emissions during the year *y* in tons of CO_2, and

L_y are the leakage emissions during the year *y* in tons of CO_2.

Emission reductions due to the displacement of electricity ($ER_{electricity,y}$)

$ER_{electricity,y} = EG_y \times EF_{electricity}$

$ER_{electricity,\ y}$ are emission reductions due to displacement of electricity during the year *y* in tons of CO_2,

EG_y is the net quantity of increased electricity generation as a result of the project activity (incremental to baseline generation) during the year *y* in MWh,

$EF_{electricity}$ is the CO_2 emission factor for the electricity displaced due to the project activity in tons CO_2/MWh

The emission factor for the displacement of electricity corresponds to the grid emission factor ($EF_{electricity} = EF_{grid}$).

Emission Factor of the Grid (EF_{Grid})

The emission factor of Northern grid ($EF_{electricity}$) is 0.80 tCO_2/MWh

Determination of electricity generation (EG_y)

EG_y is determined as follows:

$$EG_y = MIN\left\{\begin{array}{c} EG_{project\ plant,y} - \varepsilon_{el,other\ plant(s)} \cdot \frac{1}{3.6} \cdot \sum_k BF_{k,y} \cdot NCV_k \\ EG_{total,y} - \frac{EG_{historic,3yr}}{3} \end{array}\right\}$$

where:

EG_y = Net quantity of increased electricity generation as a result of the project activity (incremental to baseline generation) during the year y (MWh)

$EG_{project\ plant,y}$ Net quantity of electricity generated in the project plant during the year y (MWh)

$\varepsilon_{el,other\ plant(s)}$ Average net energy efficiency of electricity generation in (the) other power plant(s) that would use the biomass residues fired in the project plant in the absence of the project activity ($MWh_{el}/MWh_{biomass}$)

$EG_{total,y}$ Net quantity of electricity generated in all power plants at the project site, generated from firing the same type(s) of biomass residues as in the project plant, including the new power plant installed as part of the project activity and any previously existing plants, during the year y (MWh/yr)

$EG_{historic,3yr}$ Net quantity of electricity generated during the most recent three years in all power plants at the project site, generated from firing the same type(s) of biomass residues as in the project plant[14] (MWh)

$BF_{k,y}$ Quantity of biomass residue type k combusted in the project plant during the year y (tons of dry matter or liter)

NCV_k Net calorific value of the biomass residue type k (GJ/ton of dry matter or GJ/liter)

With respect to Scenario 13, $\varepsilon_{el,other\ plant(s)}$ corresponds to the average net efficiency of electricity generation in the "reference plant" ($\varepsilon_{el,reference\ plant}$) that would be installed in the absence of the CDM project activity.

Emission reductions or increases due to displacement of heat ($ER_{heat,y}$)

As demonstrated in the PDD, $ER_{heat,y} = 0$.

Baseline emissions due to natural decay or uncontrolled burning of anthropogenic sources of biomass

As per ACM0006 (version 05), for scenario 13, baseline emissions due to uncontrolled burning or decay of the biomass residues are zero i.e $BE_{Biomass} = 0$

Project emissions (PE_y)

According to the methodology ACM0006, Project emissions include CO_2 emissions from transportation of biomass to the project site (PET_y), CO_2 emissions from on-site consumption of fossil fuels due to the project activity ($PE_{FF,y}$) and CH_4 emissions from the storage of biomass.

In the project scenario, since the project activity uses bagasse as the fuel, the project leads to no GHG on-site emissions. The GHG emission of the combustion process, mainly CO_2, is sequestered during the growth of sugarcane.

[a] Project Emissions associated with fossil fuel combustion
As there is no fossil fuel combustion associated with the project activity, hence there are no project emissions associated to fossil fuel combustion due to project activity implementation.

[b] Project Emissions associated with transport of bagasse fuel
The bagasse to be used as the feedstock for project activity is supplied by the sugar mill itself; no transportation of bagasse is involved. Hence there are no emissions due to transportation of bagasse.

[c] Project Emissions associated with the storage of bagasse fuel
The net increase of methane emissions associated with the storage of bagasse fuel is regarded as negligible if the bagasse is not stored for more than one year. The bagasse utilized for the project activity is stored in open piles for not more than one year. Therefore there would be no project emissions associated with the storage of bagasse fuel.

Thus $PE_y = 0$.

Leakage (L_y)

In case of scenario 13, according to ACM0006 (version 05), the diversion of biomass residues to the project activity is already considered in the calculation of baseline reductions. Thus, the leakage effects do not need to be addressed i.e. $L_y = 0$.

Emission reductions

$ER_{heat,y}$	**$ER_{electricity,y}$**	**$BE_{biomass,y}$**	**PE_y**	**L_y**	**ER_y**
0	10479	0	0	0	**10479**

Thus net emission reductions by the project activity during the current monitoring period is ER_y = 10479 tCO_2

Measures to ensure the Results / uncertainty analysis

The project-monitoring plan consists of metering the electricity generated by the project activity, total electricity generated by all the units at site, quantity of bagasse fired in project activity, calorific value of bagasse, net quantity of heat generated by project plant and average net energy efficiency of heat generation in the boilers operated next to the project plant.

Energy meters are being used for monitoring the energy generated by all the units. All energy meters used are electronic tri-vector meters of accuracy class 0.5 %. The energy meters are maintained in accordance with electricity standards in India. Each meter is inspected and sealed ensuring no interference by anyone. All the energy meters are tested for accuracy annually by an independent agency, which is accredited with National Accreditation Board for Testing & Calibration Laboratories (NABL), Department of Science & Technology, Government of India. If during the yearly test check, any meter is found to be beyond permissible limits of error, it would be calibrated immediately. Net Calorific Value of bagasse is established every six months based on the test conducted by an independent agency taking at least three samples for each measurement.

Total quantity of bagasse fired in the project plant is measured as per the procedure documented in the PDD and the related equipments such as the weigh bridge and rotary feeder are calibrated annually by an independent agency.

Any observations (like inconsistencies in reported parameters) and/or discrepancies in the operation of the power plant observed by any of the team member are informed to the concerned personnel for necessary action. These measures are undertaken in order to detect and minimize the uncertainty levels in data monitoring. Furthermore, as a safety measure, the total power generating system is equipped with an 'Automatic Alarming System' which gives a prior indication of any fluctuations in the operating parameters of the power plant thereby enabling the operators to take necessary preventive measures.
The following tables indicate the details of various meters including their accuracy levels and calibration dates:

1. Gross Generation – 24 MW.-(M1)

Description	
S. No.	ELI 10810
Voltage	-/110V_/3
CT Ratio	-/1A
Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007

2. Cogen Convertor Transformer (Auxiliary Consumption-24 MW)-(M3)

Description	
S. No.	ELI09055
Voltage	-/110V_/3
CT Ratio	-/1A
Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	04/12/2007

3. Cogen Distribution Transformer Auxiliary Consumption-24 MW)-(M4)

Description	
S. No.	ELI10812
Voltage	110V_/3
CT Ratio	-/1A
Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007

4. Gross Generation Turbine No.01-03 MW-(M12)

Description	
S. No.	ELI11869
Voltage	240 Volts (Phase to Neutral)
CT Ratio	-/5A
Accuracy Class	0.5s

Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007.

5. Gross Generation Turbine No.02-03 MW-(M13)

Description	
S. No.	ELI10857
Voltage	240 Volts (Phase to Neutral)
CT Ratio	-/5A
Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007

6. Gross Generation Turbine No.03-03 MW-(M14)

Description	
S. No.	ELI10856
Voltage	240 Volts (Phase to Neutral)
CT Ratio	-/5A
Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007

07. Bolier No. 01 MCC – Auxiliary of 09 MW-(M10)

Description	
S. No.	ELI11872
Voltage	240 Volts (Phase to Neutral)
CT Ratio	-/5A
Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007

08. Bolier No. 02 MCC – Auxiliary of 09 MW-(M11)

Description	
S. No.	ELI10858
Voltage	240 Volts (Phase to Neutral)
CT Ratio	-/5A
Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007

09. MCC for Feed Pump 1&2 – Auxiliary of 09 MW-(M8)

Description	
S. No.	ELI11868
Voltage	240 Volts (Phase to Neutral)
CT Ratio	-/5A
Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007

10. MCC for Feed Pump No.03- Auxiliary of 09 MW-(M09)

Description	
S. No.	ELI11870
Voltage	240 Volts (Phase to Neutral)
CT Ratio	-/5A
Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007

11. Bagasse Handling MCC-Auxiliary of 09 MW-(M07)

Description	
S. No.	ELI11871
Voltage	240 Volts (Phase to Neutral)
CT Ratio	-/5A

Accuracy Class	0.5s
Reference Standard	IEC:62053-22
Date of Calibration	24/11/2007

9. Feed water flow

Name	DP Transmitter
Make	Emerson
Sr. No.	286123
Range	0-2500 mm wc
ID No.	FT-01
Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Feed water flow Transmitter

10. Boiler Steam flow

Name	DP Transmitter
Make	Emerson
Sr. No.	286124
Range	0-8000 mm wc
ID No.	FT-02
Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Boiler Steam flow Transmitter

11. Attemp. Spray Water Flow

Name	DP Transmitter
Make	Emerson
Sr. No.	286125
Range	0-1000 mm wc

ID No.	FT-03
Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Attemp. Spray Water Flow Transmitter

12. Feed water Temp Eco Inlet

Name	K-Type Thermocouple
Make	Pyro Instrument
Sr. No.	---------
Range	0-800^{O}C
ID No.	TE-01
Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Feed water Temp Eco Inlet element

13. Feed water Temp Eco Outlet

Name	K-Type Thermocouple
Make	Pyro Instrument
Sr. No.	---------
Range	0-800^{O}C
ID No.	TE-02
Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Feed water Temp Eco Outlet element.

14 Main Steam Temp (Element)

Name	K-Type Thermocouple
Make	Pyro Instrument
Sr. No.	---------
Range	0-800^{O}C
ID No.	TE-07

Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Main Steam Temp. Element

15. Main Steam Temp (Transmitter)

Name	Temperature Transmitter
Make	Emercon
Sr. No.	286155
Range	0-800^{O}C
ID No.	TT-07
Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Main Steam Temp Transmitter

16. Boiler Drum Pressure

Name	Pressure Transmitter
Make	Emerson
Sr. No.	286144
Range	0-160 kg/cm^2
ID No.	PT-01
Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Drum PressureTransmitter

17. Steam Pressure

Name	Pressure Transmitter
Make	Emerson
Sr. No.	286145
Range	0-160 kg/cm^2

ID No.	PT-02
Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Steam Pressure Transmitter

18. Feed Pump Discharge Pressure

Name	Pressure Transmitter
Make	Emerson
Sr. No.	286146
Range	0-160 kg/cm^2
ID No.	PT-26
Date of Calibration	01-12-2007
Next Calibration Proposed on	01-12-2008
Location	Feed Pump Discharge Press Transmitter

21. Bagasse Rotary Feeder No.5 Speed.

Name	Speed Transmitter
Make	P & F
Sr. No.	10569
Model No.	KFU8-FSSP-1D
Range	0-3 RPM
Date of Calibration	17-11-2007
Next Calibration Proposed on	17-11-2008
Location	Bagasse Rotary Feeder No.5

22. Bagasse Rotary Feeder No.4 Speed.

Name	Speed Transmitter
Make	P & F
Sr. No.	10568

Model No.	KFU8-FSSP-1D
Range	0-3 RPM
Date of Calibration	17-11-2007
Next Calibration Proposed on	17-11-2008
Location	Bagasse Rotary Feeder No.4

23. Bagasse Rotary Feeder No3 Speed.

Name	Speed Transmitter
Make	P & F
Sr. No.	10567
Model No.	KFU8-FSSP-1D
Range	0-3 RPM
Date of Calibration	17-11-2007
Next Calibration Proposed on	17-11-2008
Location	Bagasse Rotary Feeder No.3

24. Bagasse Rotary Feeder No. 2 Speed.

Name	Speed Transmitter
Make	P & F
Sr. No.	10566
Model No.	KFU8-FSSP-1D
Range	0-3 RPM
Date of Calibration	17-11-2007
Next Calibration Proposed on	17-11-2008
Location	Bagasse Rotary Feeder No.2.

25. Bagasse Rotary Feeder No.1 Speed.

Name	Speed Transmitter
Make	P & F
Sr. No.	10565
Model No.	KFU8-FSSP-1D
Range	0-3 RPM
Date of Calibration	17-11-2007
Next Calibration Proposed on	17-11-2008
Location	Bagasse Rotary Feeder No1

27. Weigh Bridge Calibration details

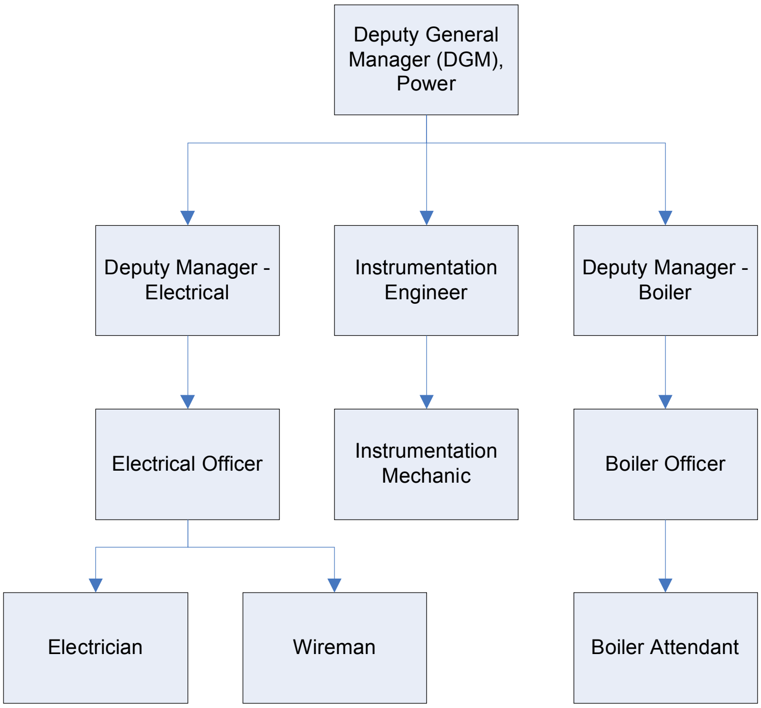
Serial No.	Capacity of Weigh bridge	Date Of Calibration
1	80000 kg	24/10/07
2	10000 kg	23/10/07
3	10000 kg	23/10/07
4	10000 kg	23/10/07
5	50000 kg	23/10/07
6	50000 kg	23/10/07

Roles and responsibilities

In accordance with the monitoring plan of the PDD, The following operational and management structure has been implemented for the project activity:

- The shift in-charge is assigned with the responsibility of monitoring and recording of parameters as per the monitoring plan.
- On a monthly basis, the monitoring records are checked and discussed with project manager.
- In case of any irregularity observed, necessary action is taken immediately.
- On monthly basis, the reports are prepared and forwarded to the management.

The following organisation structure is present to operate the project activity:



Sustainability – Economic and Social Well-being

Socio-economic well being

The project activity helps the Indian national policy on promotion of clean power. Generation of direct and indirect employment has occurred due to the project activity. This employment generation has been during the construction stage and subsequently during operational stage i.e., after project commissioning. In the absence of the project activity, no such employment generation would have occurred either during the retrofitting phase or during the operational phase.

Environmental well being

The project activity has replaced the grid based power generation thereby resulting in reduction of Greenhouse Gas (GHG) emissions associated with the fossil fuel dominated grid power. The project apart from reducing the CO_2 emissions has also helped in conservation of the conventional non renewable fuels. Therefore, the project activity has good environment benefits in terms of reduction in GHG emissions and also conservation of fossil fuels.

Technological well being

The project activity is a shift of the sugar industry from the existing practice of low efficiency, medium pressure, dumping grate boilers to high efficiency, high pressure and temperature, traveling grate boiler leading to technological up-gradation and well being.