Monitoring report form for CDM project activity
(Version 06.0)

Complete this form in accordance with the instructions attached at the end of this form.

MONITORING REPORT		
Title of the project activity	Hebei Yingxin Glass Group Co. Ltd. Glass Furnace Flue Gas Waste Heat To Energy Project	
UNFCCC reference number of the project activity	GS750	
Version number of the PDD applicable to this monitoring report	2.0	
Version number of this monitoring report	03	
Completion date of this monitoring report	21/09/2018	
Monitoring period number	4	
Duration of this monitoring period	01/01/2017 to 31/05/2018	
Monitoring report number for this monitoring report	/	
Project participants	Hebei Yingxin Glass Group Co. Ltd. (Project Owner) Swiss Carbon Assets Ltd. (Purchaser of GS VERs)	
Host Party	People's Republic of China	
Sectoral scopes	1. Energy industries (renewable - / non-renewable sources) 4. Manufacturing industries ACM0012 (Version 3.2)	
Applied methodologies and standardized baselines	ACM0012 Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects (V3.2)	
Amount of GHG emission reductions or net anthropogenic GHG removals achieved by the project activity in this monitoring period	Amount achieved before 1 January 2013	Amount achieved from 1 January 2013
	0	84,022
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD	95,999	

SECTION A. Description of project activity

A.1. General description of project activity

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Purpose of the project activity is to utilize waste heat of the glass furnaces to produce electricity for self-use of Hebei Yingxin Glass Group Co. Ltd. (Project Owner). The electricity generated can meet part of the electricity demand of the company thereby displacing electricity generation from grid connected fossil fuel-fired power plants of North China Power Grid (NCPG). In the absence of the project, the waste heat would be vented into the atmosphere. Thus the project can reduce greenhouse gas emissions.

The project installs four recovery boilers with two sets of condensing turbine generator units. The installed capacity is 12 MW, consisting of two 6 MW units.

A.2. Location of project activity

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The project is located in Donghuan Road, Shahe City (county-level city), Xingtai City, Hebei Province, P.R. China. The plant is near to national road G107. The exact location of the plant is 36˚51'18"N, 114˚30'11"E.

Figure A.1 The location of the project

A.3. Parties and project participants

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
People's Republic of China (host Party)	Hebei Yingxin Glass Group Co. Ltd. (Project Owner)	No
Switzerland	Swiss Carbon Assets Ltd. (Purchaser of GS VERs)	No

A.4. Reference to applied methodologies and standardized baselines

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UNFCCC Approved consolidated baseline and monitoring methodology ACM0012 Version 3.2: "Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects".

The ACM0012 methodology refers to the Version 02 of the "Tool to calculate the emission factor for an electricity system" and Version 05.2 of the "Tool for the Demonstration and Assessment of Additionality".

For detailed information on the methodology and related tools please refer to: http://cdm.unfccc.int/methodologies/PAmethodologies/approved

A.5. Crediting period type and duration

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Type of the crediting period: fixed.
The fixed crediting period is from 01/01/2010 to 31/12/2019. The total number of years is 10 years.
This is the 4th monitoring period, from 01/01/2017 to 31/05/2018.

SECTION B. Implementation of project activity

B.1. Description of implemented project activity

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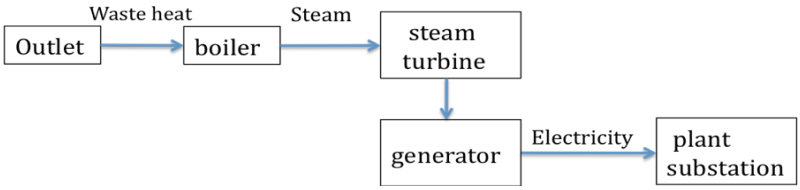
The project activity completed its construction on 12 August 2009, and the equipment commissioning started on 12 August 2009.

The project activity consists of one site only and the implementation is not phased.

The waste heat is generated by four existing glass production lines. The waste heat is fed through waste heat pipes to four waste heat recovery boilers, which allow the feed water to recover the heat energy of low-temperature waste heat and convert it into superheated steam. Then steam is fed into the steam turbine through the steam pipe. The heat energy is converted into kinetic energy in the steam turbine to enable the turbine rotor to rotate at high speed, and then is converted into mechanical energy to drive the generator to rotate, and then electricity is generated. The main process of the Project Activity is as below:



Please find the information of equipment applied in the project activity:

Equipment	Technical Information
Generator 1	Type: QF-J6-2 Rated Power: 6 MW Rated speed: 3000 r/min Manufacturer: Hangzhou Electrical Equipment Works Serial number: 2008-111-2
Generator 2	Type: QF-J6-2 Rated Power: 6 MW Rated speed: 3000 r/min Manufacturer: Hangzhou Electrical Equipment Works Serial number: 2008-111-1

Turbine 1	Type: N6-2.35 Capacity: 6 MW Rated speed: 3000 r/min Manufacturer: Hangzhou Chinen Steam Turbine Power Co., Ltd Serial number: HS4513
Turbine 2	Type: N6-2.35 Capacity: 6 MW Rated speed: 3000 r/min Manufacturer: Hangzhou Chinen Steam Turbine Power Co., Ltd Serial number: HS4503
Waste Gas Recovery Boiler 1	Type: QCF 110/500-15-2.5/420 Capacity: 16 t/h Manufacturer: Hangzhou Boiler Company Serial number: 6988001
Waste Gas Recovery Boiler 2	Type: QCF 110/500-18-2.5/420 Capacity: 17 t/h Manufacturer: Hangzhou Boiler Company Serial number: 66987001
Waste Gas Recovery Boiler 3	Type: QCF 110/500-18-2.5/420 Capacity: 16 t/h Manufacturer: Hangzhou Boiler Company Serial number: 66987002
Waste Gas Recovery Boiler 4	Type: QCF 110/500-15-2.5/420 Capacity: 11 t/h Manufacturer: Hangzhou Boiler Company Serial number: 66986002

During this monitoring period (01/01/2017 - 31/05/2018), the project activity is operating normally and the implementation status is stable. No equipment was exchanged or overhauled.

No events or situation that occurred during the monitoring period, which may impact the GHG emission reductions or removals and monitoring.

B.2. Post-registration changes

B.2.1. Temporary deviations from the registered monitoring plan, applied methodologies or standardized baselines

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NA

B.2.2. Corrections

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NA

B.2.3. Changes to the start date of the crediting period

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NA

B.2.4. Inclusion of monitoring plan

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NA

B.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools

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NA

B.2.6. Changes to project design

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NA

SECTION C. Description of monitoring system

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Data collection procedures

1. Data generation: Electricity data are measured by calibrated power meters, which are operated and maintained by the project owner.
2. Data recording and transfer: First, the data measured are manually recorded by onsite staffs in the daily operation report. Second, the onsite manager approves daily operation report and transfers the data to monthly report. Third, at the end of each month, GS VER supervisor checks the monthly report and sends it to Swiss Carbon Assets Ltd.
3. Data aggregation: The calculated net power output is aggregated monthly.
4. Calculation: Total electricity generation ($Q_{OE,y}$), Electricity exported to the glass plant by the Project ($EG_{export,y}$) and Electricity imported to the proposed project from the Grid ($EG_{imported,\ y}$) per month are the difference between the cumulative values on the power meters. Net electricity output by the project activity (EG_y) is Electricity exported ($EG_{export,y}$) minus Electricity Imported ($EG_{imported,y}$). See section E for calculations of emission reductions.
5. Reporting: The calculated values are included in an Excel sheet and reported in the MR.

Organizational structure, roles and responsibilities

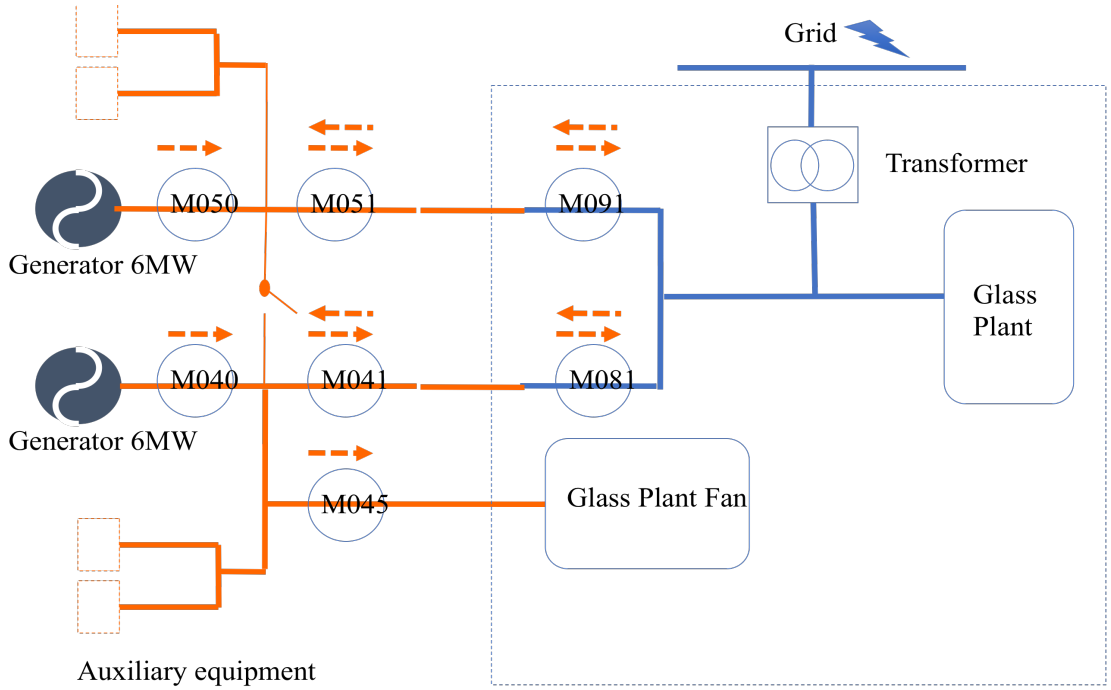
A GS VER supervisor has been appointed and trained who is responsible for the GS VER monitoring system. Monthly recording of power meters falls under the responsibility of the site.
Three level training are provided, which are company safety training, workshop safety training and team safety training. The target group of company safety training is all the employees of Yingxin Glass Group, especially the new employees. They receive intensive training on safety before practical operation. When new employees get familiar with general company safety rules, they are allocated to different workshops. The detailed technical training is provided during workshop training. From which employees understand production management and equipment operation. Then employees are allocated to different teams under workshops. Responsibilities to each individual according to his/her position are clarified.

Emergency procedures for the monitoring system

The GS VER supervisor notifies the manufacturer and the equipment maintenance team in case there is doubt about the correct functioning of the meters mentioned in the monitoring plan. In that case, manufacturer or the maintenance team check, repair and where necessary replace the meters. No GS VERs are claimed for the period during which the meters were not functioning correctly. During this monitoring period, the meters have been working properly.

Line Diagram

Please find monitoring line diagram below. The numbers in the line diagram are meter tag numbers.



M050, M040 are used for total electricity generation ($Q_{OE,y}$).
M045, bidirectional meters M091 and M081 are used for net electricity output by the project activity (EG_y).
M051 and M041, which are installed at generation side, are used to crosscheck M091 and M081.

All meters are calibrated[1] by Shahe Power Supply Company as per Verification Regulation of Electrical Energy Meters with Electronics (JJG596-1999)[2] , Please find Calibration and Accuracy of Meters Sheet below:

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[1] All these meters have been calibrated respectively and the five-year calibration frequency is in accordance with the requirement of JJG596-1999.

But according to the MP of the GS-PDD and previous MR, meter calibration frequency should be once per year. Therefore, a conservative approach is adopted in the calculation of emission reductions for the project activity:

Emission reductions can be discounted by applying the maximum permissible error of the electricity meters measuring electricity values. Here the full accuracy level (0.5% for meters M091, M081 and M045) of the electricity meter is applied to the deduction from the electricity supplied to the grid (-0.5% for exports) as well as the increase to the electricity imported from the grid (+0.5% for imports); for calculation of f_{cap}, the full accuracy level of 0.2% for meters M050 and M040 is applied to the increase of total electricity generated by the two generators ($Q_{OE,y}$). So that the net electricity values claiming for emission reductions, which are calculated by deducting electricity imported from electricity exported, will be conservative; and the f_{cap} determined by $Q_{OE,BL}/Q_{OE,y}$ will also be conservative.

[2] In the registered PDD, the standard of Technical Administrative Code of Electric Energy Metering (DL/T448-2000) was referred to. However, as the local calibration company follows the Verification Regulation of Electrical Energy Meters with Electronics (JJG596-1999), which is also a national standard and widely used in the industry. Therefore, it is acceptable.

Calibration and Accuracy of Meters Sheet

Meter Measuring	Tag No.	Meter Serial No.	Meter type and model	Specific location	Accuracy (%)	Calibration date (dd/mm/yy)	Valid until (dd/mm/yy)	Certificate No.
$Q_{OE,y}$	050	500006	DSSD331	Generator	0.2S	15/10/2016	14/10/2021	20161016012
$Q_{OE,y}$	040	500004	DSSD331	Generator	0.2S	15/10/2016	14/10/2021	20161016004
$EG_{export,y}$ $EG_{import,y}$	051	500001	DSSD331	Control room	0.2S	15/10/2016	14/10/2021	20161016014
$EG_{export,y}$ $EG_{import,y}$	041	500005	DSSD331	Control room	0.2S	15/10/2016	14/10/2021	20161016063
$EG_{export,y}$	045	550476	DSSD331	Control room	0.5	12/09/2016	11/09/2021	20161016021
$EG_{export,y}$ $EG_{import,y}$	081	006513	DSSD904	Glass furnace room	0.5S	15/10/2016	14/10/2021	20161016102
$EG_{export,y}$ $EG_{import,y}$	091	006519	DSSD904	Glass furnace room	0.5S	15/10/2016	14/10/2021	20161016011

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante

Data/Parameter	$EF_{grid,CM,y}$
Unit	tCO_2/MWh
Description	CO_2 emission factor for the electricity source i (i=gr (grid) or i=is (identified source)), displaced due to the project activity, during the year y in tons CO_2/MWh
Source of data	Calculated according to the procedure outlined in B.6.1 of the registered PDD
Value(s) applied	0.8935
Choice of data or measurement methods and procedures	/
Purpose of data/parameter	Used for Baseline emission calculation Calculated on an ex-ante basis. The emission factor will not be updated during the crediting period.
Additional comments	For this and other descriptions relating to this parameter, see the description in Section B.6.2 of the registered PDD, Data and parameters that are available at validation.

Data/Parameter	$Q_{OE,BL}$
Unit	MWh
Description	Output energy (i.e. electricity) that can be theoretically produced (in MWh), to be determined on the basis of maximum recoverable energy from the WECM, which would have been released in the absence of project activity.

Source of data	Feasibility Study Report
Value(s) applied	86,400 MWh (the total electricity generation)
Choice of data or measurement methods and procedures	/
Purpose of data/parameter	Used for Baseline emission calculation
Additional comments	This is to determine the f_{cap}

D.2. Data and parameters monitored

(Copy this table for each piece of data and parameter.)

Data / Parameter:	EG_y
Unit:	MWh
Description:	Net electricity output by the project activity
Measured/ Calculated / Default:	Calculated
Source of data:	Power meters
Value(s) of monitored parameter:	01/01/2017 – 31/12/2017: 66,364.35 MWh (after conservative calculation) 01/01/2018 – 31/05/2018: 27,673.26MWh (after conservative calculation)
Monitoring equipment:	Three electricity meters (M045, bidirectional meter M091 and M081) are used for net electricity output by the project activity. Please refer to Calibration and Accuracy of Meters Sheet in section C.
Measuring/ Reading/ Recording frequency:	Read and recorded on daily basis and aggregated monthly
Calculation method (if applicable):	$EG_y = EG_{export,y} – EG_{imported,y}$
QA/QC procedures:	The calculation result will be crosschecked with data measured at generation plant
Purpose of data:	Used for baseline emission calculation
Additional comment:	-

Data / Parameter:	$Q_{OE,y}$
Unit:	MWh
Description:	Quantity of total electricity generation during the year y
Measured/ Calculated / Default:	Measured
Source of data:	Measurement records
Value(s) of monitored parameter:	01/01/2017 – 31/12/2017: 72,555.72 MWh 01/01/2018 – 31/05/2018: 31,307.81 MWh
Monitoring equipment:	Two electricity meters (M050 and M040) are used for measuring total electricity generation. Please refer to Calibration and Accuracy of Meters Sheet in section C.
Measuring/ Reading/ Recording frequency:	Read and recorded on daily basis and aggregated monthly

Calculation method (if applicable):	N/A
QA/QC procedures:	Direct measurement by project participant through standard power meters. The electricity amount is monitored continuously and recorded monthly. The meters are calibrated according to national Verification Regulation of Electrical Energy Meters with Electronics (JJG 596- 1999). The accuracy of meters is no worse than 1.0. All the data must be kept for at least two years after the end of the crediting period.
Purpose of data:	Baseline emission
Additional comment:	-

Data / Parameter:	$EG_{export,y}$
Unit:	MWh
Description:	Electricity exported by the project activity to the plant during year y in MWh which is used to calculate emission reduction
Measured/ Calculated / Default:	Measured
Source of data:	Power meters
Value(s) of monitored parameter:	01/01/2017 – 31/12/2017: 66,747.64 MWh 01/01/2018 – 31/05/2018: 27,831.10 MWh
Monitoring equipment:	Three electricity meters (M045, M091 and M081) are used for measuring electricity exported by the project activity to the plant. Please refer to Calibration and Accuracy of Meters Sheet in section C.
Measuring/ Reading/ Recording frequency:	Read and recorded on daily basis and aggregated monthly
Calculation method (if applicable):	N/A
QA/QC procedures:	The meters are calibrated according to national Verification Regulation of Electrical Energy Meters with Electronics (JJG 596- 1999). The accuracy of meters is no worse than 0.5. All the data must be kept for at least two years after the end of the crediting period.
Purpose of data:	Baseline emission
Additional comment:	-

Data / Parameter:	$EG_{imported,y}$
Unit:	MWh
Description:	Electricity imported by the project activity from the grid during year y, which is used to calculate emission reduction
Measured/ Calculated / Default:	Measured
Source of data:	Power meters
Value(s) of monitored parameter:	01/01/2017 – 31/12/2017: 49.30 MWh 01/01/2018 – 31/05/2018: 18.60 MWh
Monitoring equipment:	Two electricity meters (M091 and M081) are used for measuring electricity imported by the project activity from the grid. Please refer to Calibration and Accuracy of Meters Sheet in section C.
Measuring/ Reading/ Recording frequency:	Read and recorded on daily basis and aggregated monthly

Calculation method (if applicable):	N/A
QA/QC procedures:	The meters are calibrated according to national Verification Regulation of Electrical Energy Meters with Electronics (JJG 596- 1999). The accuracy of meters is no worse than 0.5. All the data must be kept for at least two years after the end of the crediting period.
Purpose of data:	Project emission
Additional comment:	-

D.3. Implementation of sampling plan

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N/A

D.4. Other data and parameters monitored

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No		1
Indicator		Air Quality during construction period
Mitigation measure		The major ambient air pollutant during construction period is dust. A 2m height dust fence will be built around the project construction site and water sprayed at the construction site on a regular basis. For the onsite workers, masks would be dispensed. Construction residues would be covered to reduce dust, guaranteeing the onsite workers' health.
Repeat for each parameter		/
Chosen parameter		Dust development during construction
Current situation of parameter		N/a
Estimation of baseline situation of parameter		N/a
Future target for parameter		Potential dust development during construction shall be controlled within the plant area
Way of monitoring	How	Photo or documentation records shall provide evidence that the mitigation measures and PPE had been implemented.
	When	Once upon validation
	By who	Monitored by Yingxin and validated by DOE

No		2
Indicator		Air Quality during operating period
Mitigation measure		N/A as indicator scores positive
Repeat for each parameter		/
Chosen parameter		Dust and SO_2 concentration at exhaust pipe
Current situation of parameter		Before PA: Dust concentration=167 mg/m^3 < 200 mg/m^3; SO_2=645 mg/m^3 < 800 mg/m^3 (GB9078-1996)
Estimation of baseline situation of parameter		N/a
Future target for parameter		Lower dust concentration is expected
Way of monitoring	How	Measurement of dust and SO_2 concentration at exhaust pipe during normal operating time.
	When	Annually
	By who	Performed by Yingxin and Verified by DOE

No	3
Indicator	Quality of employment
Mitigation measure	N/A as indicator scores positive

Repeat for each parameter		/
Chosen parameter		Permanent job positions, fire protection measures, workplace air quality
Current situation of parameter		In absence of the Project, no more permanent job positions will be offered.
Estimation of baseline situation of parameter		N/a
Future target for parameter		24 (job positions created solely by the PA) The workplace air quality follows national standard (GBJ16-87 and GBZ1-2002); The fire protection equipment are in place. The employees receive fire protection training.
Way of monitoring	How	Employment numbers and their relation to the permanency of a job are reported in HR data. Certification from government or third party regarding workplace air quality Fire protection equipment list and training records
	When	Annually
	By who	Monitored by Yingxin or third party and Verified by DOE

No		4
Indicator		Human and institutional capacity
Mitigation measure		N/A as indicator scores positive
Repeat for each parameter		/
Chosen parameter		Female employment (number and job-related education).
Current situation of parameter		0
Estimation of baseline situation of parameter		N/a
Future target for parameter		≥ 1
Way of monitoring	How	Female employment and training records for female employees are reported in HR data
	When	Annually
	By who	Monitored by Yingxin

No		5
Indicator		Quantitative employment and income generation
Mitigation measure		N/A as indicator scores positive
Repeat for each parameter		/
Chosen parameter		Number of jobs and income satisfaction rate
Current situation of parameter		0 (In the absence of the Project, no additional employment opportunities would be generated)
Estimation of baseline situation of parameter		/
Future target for parameter		Permanent job positions created solely by the PA: Number of jobs: 24 positions The employees are satisfied with the income.
Way of monitoring	How	HR data of job number and income will be copied and stored for verification check. Interviews will be performed with employees regarding satisfaction on income level and interview records will be stored for verification check.
	When	Annually
	By who	Monitored by Yingxin

No	6
Indicator	Noise
Mitigation measure	Install noise reduction equipment and protection measures for

		personnel
Repeat for each parameter		/
Chosen parameter		Implementation of noise reduction equipment for generators and protection measures for personnel
Current situation of parameter		N/a
Future target for parameter		The noise reduction equipment and personal protective equipment are implemented. The noise level follows the national standards, i.e. GBJ 87-85 and GB12348-1990.
Way of monitoring	How	Certificate from third party or authority Staff will check the installation and protection measures and maintain reporting log. The reporting log will be presented for the DOE's review and interviews with the plant employees will be performed as well.
	When	Annually
	By who	Project owner, qualified third party or local environmental protection authority

No		7
Indicator		Water quality
Mitigation measure		/
Repeat for each parameter		/
Chosen parameter		Wastewater treatment
Current situation of parameter		N/a
Future target for parameter		Circulating cooling water, boiler blow down water and municipal wastewater properly treated, as per national standards.
Way of monitoring	How	Layout of wastewater treatment system will be provided for better understanding on how the wastewater is treated by the PO. Certificate from third party or government will be provided to prove that wastewater is treated in accordance with national standards.
	When	Annually
	By who	Project owner or third party

No		8
Indicator		Air quality of whole glass plant area after the PA
Mitigation measure		N/A
Repeat for each parameter		/
Chosen parameter		Dust and SO_2 concentration in atmosphere
Current situation of parameter (before PA)		Dust concentration<0.15 mg/m^3, SO_2< 0.30 mg/m^3
Future target for parameter (after PA)		Dust concentration<0.15 mg/m^3, SO_2< 0.30 mg/m^3
Way of monitoring	How	Measurement of dust and SO_2 concentration in atmosphere by third party or government. Report or certificate will be reviewed by DOE during verification.
	When	Once upon the first verification
	By who	Local authority

No	9
Indicator	Safe and healthy work environment for workers of the whole plant
Mitigation measure	N/A
Repeat for each parameter	/
Chosen parameter	Plant safety regulation and training; work environment status
Current situation of parameter (before PA)	N/A
Future target for parameter	The plant safety measures are in place; work environment is

(after PA)		healthy
Way of monitoring	How	Plant safety measures, regulation and training records; Employee interview records on work environment; Certificate for work environment from third party or authority
	When	Annually
	By who	PO and third party or authority

No		10
Indicator		Furnace waste refractory brick disposal
Mitigation measure		N/A
Repeat for each parameter		/
Chosen parameter		Furnace waste refractory brick disposal with proper hazardous waste management measures
Current situation of parameter (before PA)		In case any disposal of waste refractory brick from the furnace, a licensed hazardous waste treatment company would be used for proper hazardous waste disposal and treatment.
Future target for parameter (after PA)		Status quo ante
Way of monitoring	How	Maintenance records of glass furnace. Order forms and transfer manifests with the licensed third party that is handling waste refractory brick would be kept for records.
	When	Annually
	By who	PO

The monitoring result of the SD indicators are as follows:

1. Air Quality during construction period

Parameter	Target for parameter	Frequency / When	Monitored value
Dust during construction	Dust during construction (dust shall not disturb neighbourhood)	Construciton period	Mitigation measures of spraying water etc. were implemented and dust did not disturb the life of local villagers.

Source: Shahe Environmental Protection Monitoring Center

The dust did not disturb the neighborhood during construction period. Please refer to Annex I for certificates.

2. Air Quality during operating period

Parameter	Target for parameter (mg/m3)	Frequency / When	Monitored value (mg/m3)
Dust concentration in flue gas	100	annually	lower than 100
SO2 concentration in flue gas	600		lower than 600

Source: Shahe Environmental Protection Monitoring Center

Based on the national standard of "Emission standard of air pollutants for flat glass industry" (GB26453-2011)[3], the emission concentration of dust and SO_2 during the monitoring period is below 100 mg/m^3 and 600 mg/m^3. Please refer to Annex II. Workplace air quality for certificates of year 2017. As per sustainability monitoring plan, the monitoring frequency for air quality during operating period is annual.

[3] Originally in the registered GS Passport, the national standard here referred to GB9078-1996. But this standard was already replaced with GB26453-2011 since October 2011. http://wenku.baidu.com/link?url=cLidMfVRIu-Qg4yn3k00bBs2LZ6666pzr_C4R66DE9nDdTmUy01K2T0RZP5gvUwMPKjwE-MzisqYOu_y19EQ5C1RfbgsqLoS6hXgUzlGpwS

3. Quality of employment

Parameter	Target for parameter	Frequency / When	Monitored value
Number of full time jobs	24		24
Workplace air quality	The workplace air quality follows national standard	annually	No benzene, sulfur trioxide, hydrogen-fluoride or other harmful gases are generated by the project. The workshop has good ventilation.
Fire protection	The fire protection equipments are in place; the employees recieve fire protection training.		The fire potection system was checked and approved by local fire protection bureau. The employees took fire protection training and exams

Source:HR records; Shahe Environmental Protection Monitoring Center ; Local fire protection bureau certificate and training records

The project has created 24 job positions. The work place follows the national standard and fire protection measures are in place. Please refer to Annex III for HR records, workplace air quality and fire protection certificates and training records.

The HR record with the information of employee name, job position, income and gender provided in Annex III is the latest employee list, which is attached here as a sample. The employee lists for year 2017 have also been provided to DOE during site visit. Therefore, the HR records cover the whole monitoring period.

For monitoring workplace air quality, as per sustainability monitoring plan, the monitoring frequency of safe and healthy work environment for workers of the whole plant is annual.

The fire protection certificate provided in Annex III is actually the fire protection system approval issued by Shahe Fire Protection Bureau after the completion of the project activity's construction, which has illustrated that the fire protection system of the project activity has been qualified and approved by the local fire protection official. This kind of approval is always issued once a new project completing construction and passing the materials review and onsite inspection, while it is certainly not conducted annually by local authority. As per the statement of this approval, if the project involves reconstruction, extension, internal renovation and change of use, the project should apply to the local fire protection authority for fire protection inspection and acceptance again. For this project activity, no reconstruction, extension, internal renovation and change of use is involved, so no fire protection certificate or the fire protection system approval needs to be applied annually for the project activity. In fact, annually the project owner itself is responsible for inspection and maintenance of the fire protection system and provides fire protection training to employees during project's operation. Relevant inspection, maintenance and training records of fire protection system are all well reserved.

4. Human and institutional capacity

Parameter	Target for parameter	Frequency/When	Monitored value
Female employment	≥1	annually	1

Source: HR records and training records

The project has created 1 female employment positions. Please refer to Annex III for HR records and training records.

5. Quantitative employment and income generation

Parameter	Target for parameter	Frequency / When	Monitored value
Number of jobs and income satisfaction rate	Number of jobs: 24 positions; The employees are satisfied with the income.	annually	24 job positions are created. The income level of the employees are satisfying

Source: HR income records; interview records

The project has created 24 job positions. The income level is satisfying. Please refer to Annex III for HR records.

6. Noise

Parameter	Target for parameter	Frequency / When	Monitored value
Implementation of noise reduction equipment for generators and protection measures for personnel	N/A	annually	Equipments are covered by noise reduction shield and personnel has separate operation room with protection measures

Source: interview and equipment check records; noise certificate

Noise reduction equipment for generators and protection measures for personnel have been implemented. Based on the national standard of "Emission standard for industrial enterprises noise at boundary" (GB12348-2008), the noise level during this monitoring period is below 60 dB(A) during daytime and below 50 dB(A) during night. Please refer to Annex IV for noise certificates for year 2017. The monitoring frequency for noise is annual as per sustainability monitoring plan.

7. Water quality

Parameter	Target for parameter	Frequency / When	Monitored value
Wastewater treatment	Circulating cooling water, boiler blow down water and municipal wastewater properly treated, as per national standards	annually	The wastewater treatment meets national standard GB8978-1996

Source:Shahe Environmental Protection Monitoring Center

The wastewater is properly treated and meets national standards. Please refer to Annex V for water quality certificates for year 2017. As per sustainability monitoring plan, the monitoring frequency for water quality is annual. Please refer to Annex V for the water quality certificates.

8. Air quality of whole glass plant area after the PA

Parameter	Target for parameter (mg/m3)	Frequency / When	Monitored value
Dust concentration in atmosphere	0.15	Once upon the first Verification	lower than 0.15
SO2 concentration in atmosphere	0.3		lower than 0.3

Source:Shahe Environmental Protection Monitoring Center

The concentration of dust and SO_2 in the atmosphere during the 1st verification monitoring period is below 0.15 mg/m^3 and 0.3 mg/m^3. Please refer to Annex V for the certificates.

9. Safe and healthy work environment for workers of the whole plant

Parameter	Target for parameter	Frequency / When	Monitored value
Plant safety regulation and training and work environment status	The plant safety measures are in place; work environment is healthy	annually	The plant complies with Occupational Health and Safety requirements (GB/T 28001-2011)

Source: Glass plant Occupational Health and Safety Ceritificate

The glass plant provides good working environment to the employees and obtained Occupational Health and Safety certificate. Please refer to Annex VI for QHS certificate.

10. Furnace waste refractory brick disposal

Parameter	Target for parameter	Frequency / When	Monitored value
Furnace waste refractory brick disposal with proper hazardous waste management measures	N/a	annually	The waste refractory brick will be sold to third party and reused. No hazardous waste is produced

Source: waste refratory brick recycle contract

Please refer to Annex VII for disposal contact.

D.2. Implementation of sampling plan

>>
NA

SECTION E. Calculation of emission reductions or net anthropogenic removals

E.1. Calculation of baseline emissions or baseline net removals

>>

Summary tables for year 2017 and 2018 including the calculation of baseline emissions, applying actual values, formulae and descriptions are as below. Please refer to ER calculation sheet for detailed monthly electricity generation and emission reduction calculation.

From 01/01/2017 to 31/12/2017

Calculation of baseline emission	Symbol	Amount	Unit	Formula	Notes
Electricity exported by the project activity to the plant	EGexport, y	66413.90	MWh		1
Electricity imported by the project activity from the grid	EGimported, y	50	MWh		2
Net electricity production by the project activity	EGy	66364	MWh	EGy =EGexport, y- EGimported, y	
Emission factor	EFgrid,CM,y	0.8935	ton/MWh		3
Total electricity generated by project activity	QOE,y	72701.48	MWh		4
Annual electricity output that can be theoretically produced in this monitoring period	QOE,BL	86400	MWh/y		5
fcap	fcap	1.00		fcap=QOE,BL/QOE,y	6
Total baseline emissions	BEy	59296.55	ton	BEy=EGy*fcap*EFgrid,CM,y	

Notes
1 power meter readings
2 power meter readings
3 fixed for this crediting period
4 power meter readings
5 Feasibility study report and days of this monitoring period
6 as per methodology and PDD

From 01/01/2018 to 31/05/2018

Calculation of baseline emission	Symbol	Amount	Unit	Formula	Notes
Electricity exported by the project activity to the plant	EGexport, y	31370.43	MWh		1
Electricity imported by the project activity from the grid	EGimported, y	19	MWh		2
Net electricity production by the project activity	EGy	31352	MWh	EGy =EGexport, y- EGimported, y	
Emission factor	EFgrid,CM,y	0.8935	on/MWh		3
Total electricity generated by project activity	QOE,y	31370.43	MWh		4
Annual electricity output that can be theoretically produced in this monitoring period	QOE,BL	35744	MWh/y		5
fcap	fcap	1.00		fcap=QOE,BL/QOE,y	6
Total baseline emissions	BEy	24726.06	ton	BEy=EGy*fcap*EFgrid,CM,y	

Notes
1 power meter readings
2 power meter readings
3 fixed for this crediting period
4 power meter readings
5 Feasibility study report and days of this monitoring period
6 as per methodology and PDD

Electricity output measured by meter M091 and M081 at recipient side is crosschecked with the output measured by meter M051 and M041 at generation side. The crosschecked results are summarized in the following table and it shows the monitoring system is accurate and reliable, with minor difference due to line loss.

Year	Theoretical Line Loss	Actual Line Loss	Theoretical Line Loss	Actual Line Loss
	M051 – M091	M051 – M091	M041 – M081	M041 – M081
2017	0.65%	-0.71%	0.64%	-0.69%
2018	0.69%	-0.73%	0.61%	-0.71%
Total	**0.66%**	**-0.72%**	**0.63%**	**-0.70%**

As shown in the table above, the actual line losses calculated based on actual meter readings during this monitoring period are all slightly higher than the theoretical line losses calculated based on equipment

parameters of electricity transmission line. So the line loss between generation side and recipient side is reasonable.

E.2. Calculation of project emissions or actual net removals

>>

There is no project emission for the project during this monitoring period.

E.3. Calculation of leakage emissions

>>

There is no leakage for the project during this monitoring period

E.4. Calculation of emission reductions or net anthropogenic removals

	Baseline GHG emissions or baseline net GHG removals ($t CO_2e$)	Project GHG emissions or actual net GHG removals ($t CO_2e$)	Leakage GHG emissions ($t CO_2e$)	GHG emission reductions or net anthropogenic GHG removals ($t CO_2e$)		
				Before 01/01/2013	From 01/01/2013	Total amount
Total	84,022	/	0	0	84,022	84,022

E.5. Comparison of emission reductions or net anthropogenic removals achieved with estimates in the registered PDD

Amount achieved during this monitoring period ($t CO_2e$)	Amount estimated ex ante ($t CO_2e$)
84,022	95,999

E.6. Remarks on increase in achieved emission reductions

>>

NA

Annex I. Air Quality during construction period

沙河市环境保护监测站

监测结果报告书

报告日期 2009 年 06 月 15 日

样品名称 TSP　　采样地点 项目现场　　采样方法　　规　　范

监测日期 见　表　　采 样 人 李　峰　　受检单位　　河北迎新玻璃集团有限公司 2×6MW 余热发电项目施工过程中粉尘

检测分析结果：

监测日期	监测项目	监测点位	单位	监测结果	标准值
2009 年 04 月 08 日	TSP	1#	mg/m³	0.124	0.3
		2#	mg/m³	0.117	0.3
		3#	mg/m³	0.132	0.3
		4#	mg/m³	0.121	0.3
		5#	mg/m³	0.116	0.3
		6#	mg/m³	0.114	0.3
2009 年 06 月 12 日	TSP	1#	mg/m³	0.127	0.3
		2#	mg/m³	0.121	0.3
		3#	mg/m³	0.133	0.3
		4#	mg/m³	0.125	0.3
		5#	mg/m³	0.114	0.3
		6#	mg/m³	0.120	0.3

本次监测期间，该企业 2×6MW 余热发电项目施工过程中，对项目现场 6 个样点进行了监测，TSP 日均值排放浓度均符合《环境空气质量标准》（GB3095-1996）中二级标准 。

检验者　　审核　　（盖章）

Annex II. Air Quality during operating period

operation period- 2017

沙河市环境保护监测站

监测结果报告书

报告日期：2017 年 12 月 27 日

样品名称	废气	采样地点	排气筒	采样方法	抽取
监测日期	见表	采样人	李峰	受检单位	河北迈新玻璃集团有限公司余热发电项目

检测分析结果：

监测日期	监测项目	监测结果	标准值
2017 年 03 月 09 日（第一季度）	排气量（Nm^3/h）	48,742	---
	SO_2（mg/m^3）	543	600
	颗粒物（mg/m^3）	83.5	100
2017 年 06 月 06 日（第二季度）	排气量（Nm^3/h）	47,108	---
	SO_2（mg/m^3）	519	600
	颗粒物（mg/m^3）	79.1	100
2017 年 09 月 12 日（第三季度）	排气量（Nm^3/h）	49,801	---
	SO_2（mg/m^3）	535	600
	颗粒物（mg/m^3）	75.3	100
2017 年 12 月 25 日（第四季度）	排气量（Nm^3/h）	51,347	---
	SO_2（mg/m^3）	517	600
	颗粒物（mg/m^3）	64.6	100

本次监测期间，该企业废气排放中各污染因子均符合《平板玻璃工业大气污染物排放标准》（GB26453-2011）表 1 中玻璃熔窑标准限值要求，为达标排放。

检验者 [illegible]　　审核 [illegible]　　监测站（盖章）

Annex III. Quality of employment, Human and institutional capacity, Quantitative employment and income generation

Annual HR records during this monitoring period – Name, Job Position, Income and Gender

河北迎新集团余热电厂工资表

序　号	姓　名	职　位	月　薪	性　别
1	赵秀军	一值值长	2500	男
2	郭亮朋	电气值班员	2450	男
3	王　宇	汽机值班员	2450	男
4	李　鹏	汽机值班员	2450	男
5	陈志杰	锅炉值班员	2450	男
6	韩日奇	锅炉值班员	2450	男
7	王庆波	锅炉值班员	2450	男
1	张俊平	二值值长	2500	女
2	任雪召	电气值班员	2450	男
3	王晓鹏	电气值班员	2450	男
4	赵子豪	汽机值班员	2450	男
5	秦士杰	汽机值班员	2450	男
6	刘鹏露	锅炉值班员	2450	男
7	姚建帅	锅炉值班员	2450	男
1	石志廷	三值值长	2500	男
2	付亮凯	电气值班员	2450	男
3	贺晓光	汽机值班员	2450	男
4	刘博涛	汽机值班员	2450	男
5	赵亚伦	锅炉值班员	2450	男
6	杨秘宁	锅炉值班员	2450	男
7	韩童童	锅炉值班员	2450	男
1	王燕波	机电维修工	2500	男
2	刘艳强	机电维修工	2500	男
3	贾霄星	机电维修工	2500	男

沙河市环境保护监测站

监测结果报告书

报告日期：2017 年 12 月 1 日

样品名称	见表	采样地点	余热发电室内	采样方法	规范
监测日期	2017/11/29	采样人	刘伟	受检单位	河北迎新玻璃集团有限公司余热发电项目室内环境空气监测

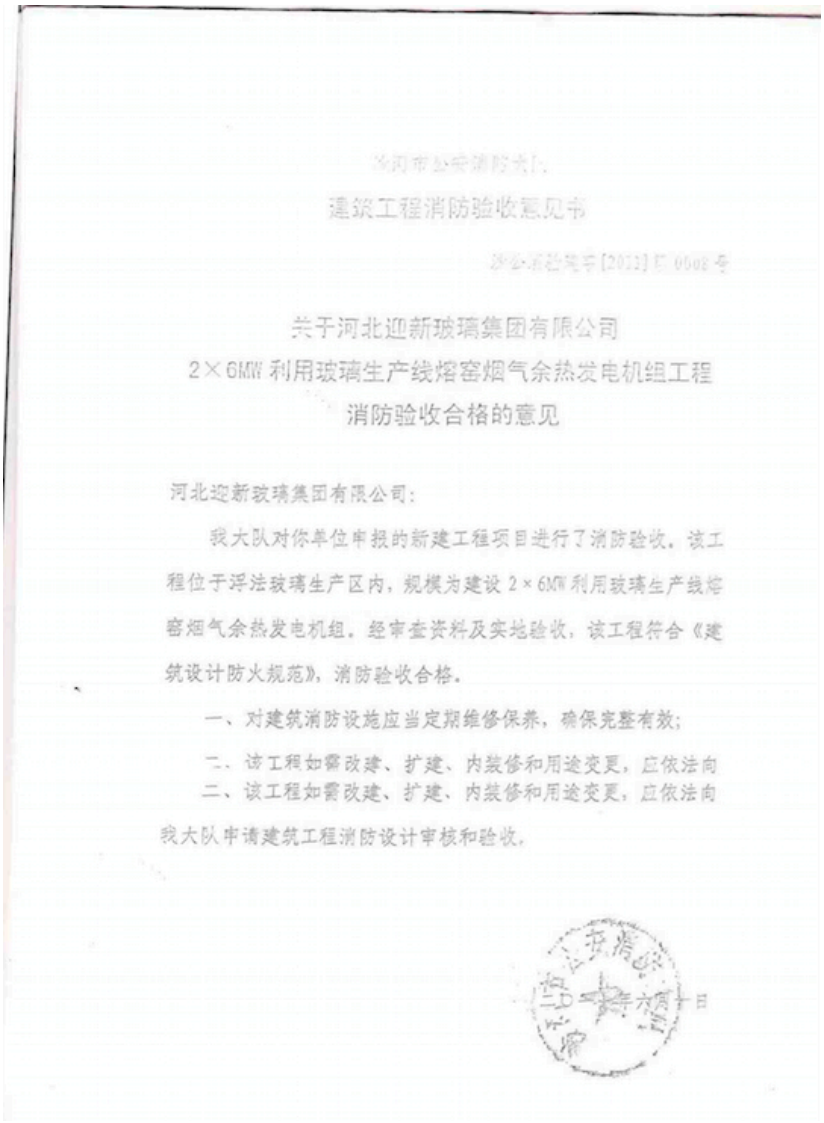
检测分析结果：

监测日期	监测项目	监测点位	单位	监测结果
2017 年 11 月 29 日	苯	1#东	mg/m³	未检出
		2#南	mg/m³	未检出
		3#西	mg/m³	未检出
		4#北	mg/m³	未检出
	硫酸雾	1#东	mg/m³	未检出
		2#南	mg/m³	未检出
		3#西	mg/m³	未检出
		4#北	mg/m³	未检出
	氟化氢	1#东	mg/m³	未检出
		2#南	mg/m³	未检出
		3#西	mg/m³	未检出
		4#北	mg/m³	未检出

本次监测期间，该企业 2×6MW 余热发电项目室内空气浓度均未检出，生产过程中不涉及有毒有害气体，发电车间通风正常，员工作业室配有暖气空调，工作环境舒适。

检验者 [illegible]　　审核 [illegible]　　监测站（盖章）

Fire protection system approval by Shahe Fire Protection Bureau



邢河市公安消防支队：

建筑工程消防验收意见书

沙公消验字[2017]E 0008号

关于河北迎新玻璃集团有限公司
2×6MW 利用玻璃生产线熔窑烟气余热发电机组工程
消防验收合格的意见

河北迎新玻璃集团有限公司：

我大队对你单位申报的新建工程项目进行了消防验收，该工程位于沙法玻璃生产区内，规模为建设 2×6MW 利用玻璃生产线熔窑烟气余热发电机组。经审查资料及实地验收，该工程符合《建筑设计防火规范》，消防验收合格。

一、对建筑消防设施应当定期维修保养，确保完整有效；

二、该工程如需改建、扩建、内装修和用途变更，应依法向

二、该工程如需改建、扩建、内装修和用途变更，应依法向

我大队申请建筑工程消防设计审核和验收。

二〇一七年六月十日

Project employees' safety training records

2017:

河北迁新玻璃集团有限公司　　记录表格

培 训 记 录

编号:JL-6.2-01　　单位：余热发电厂

时间：4.6	培训题目：冷油器出口温度变化有哪些原因.	培训教师：[illegible]
地点：主控室		培训方式：讲解

参加培训人员名单（共 2 人）：贺晓光 刘博涛.

培训内容摘要：

冷油器出口油温变化原因有.

1. 冷却水门开度变化
2. 冷却水量变化
3. 冷却水温变化
4. 冷却水旁路阀堵塞，使冷却水量减少，油温升高.
5. 冷油器水侧或油侧脏污，结垢，使油温升高.

考核方式及成绩：

考核合格率：

编制：　　审核：　　批准：　　日期：2017.6.6.

培训记录

编号:JL-6.2-01 单位：余热电厂

时间：11.7	培训题目：碳刷打火的危害及原因	培训教师：张永杰
地点：中控室		培训方式：讲解
参加培训人员名单（共 6 人）：陈志杰、王佳恒、张杰、刘超、付亮凯、赵亚伦		
培训内容摘要：打火若不及时处理，火花越来越大，严重发热，会烧坏碳刷和滑环，造成励磁回路中断或刷架烧毁。 原因：① 碳刷研磨不良，接触面积小 ② 碳刷和滑环表面不洁 ③ 碳刷引线及接线端子连接有松动 ④ 碳刷压力不均匀或弹簧压力不够 ⑤ 碳刷过短 ⑥ 碳刷材质不合格		
考核方式及成绩：		
考核合格率：		
编制： 审核： 批准： 日期：2017.11.7		

河北迎新玻璃集团有限公司　　记录表格

培 训 记 录

编号:JL-6.2-01　　单位：余热电厂

时间：12.10	培训题目：	培训教师：张振杰
地点：中控室	富士变频器常见报文	培训方式：讲解

参加培训人员名单（共 6 人）：

张杰、刘超、付德凯、赵亚伦、王佳旺、陈杰杰

培训内容摘要：

常见故障报文有：

OC：过电流　　OH1：散热片过热

OU：过电压　　OH2：外部报警

LU：欠电压　　OH3：变频器内过热

OLU：变频器过载　　OL1：电机过载

考核方式及成绩：

考核合格率：

编制：　　审核：　　批准：　　日期：2017.12.10.

2018:

河北迎新玻璃集团有限公司 记录表格

培训记录

编号：JL-6.2-01 单位：

时间：3月10、11日	培训题目：开抽汽阀步骤	培训教师：杨进国
地点：主控室		培训方式：讲解

参加培训人员名单（共 6 人）：

王宇、于鹏、申雄伟、赵子豪、贾晓光、刘博涛

培训内容摘要：

1. 开启抽汽侧面压力油针型阀（全开）
2. 缓慢开抽汽阀手轮，观察阀门指针指示向上移动。

考核方式及成绩：

考核合格率：

编制： 审核： 批准： 日期：2018.3.11.

河北迎新玻璃集团有限公司 记录表格

培训记录

编号：JL-6.2-01 单位：余热电厂

时间：4.9	培训题目：目前直流屏用电说明。	培训教师：张红杰
地点：中控室		培训方式：讲解

参加培训人员名单（共 6 人）：

陈志杰 王佳恒 张杰 王志刚 付尚礼 赵亚伦

培训内容摘要：

直流屏总母线为两路电源，主路引自低压I段抽屉开关供直流屏电源，备路引自UPS柜内空气开关，标签为照明箱与直流屏；

正常运行时，直流屏用主路电源，当发生事故时，自动切换到备路运行，而当主路恢复正常后，又会自动切换到主路运行。

当发生事故直流屏用UPS供电时，为减少供电负荷，要将除锅炉、汽机、电气主机以外的全部电源关闭，UPS照明箱内开关全部断开(如事故发生在晚上，可适当保留必要照明)

考核方式及成绩：

考核合格率：

编制： 审核： 批准： 日期：2018.4.9.

In addition to the training, the staff would attend test for production. The test sample is as follows:

特种作业人员培训题库

单位：余热电厂 工种：值班 班次：二值 姓名：赵彦军 总得分：94

一、名词解释（每题 5 分，共 15 分）

1. 特种作业：是指容易发生人员伤亡事故，对操作者本人、他人的生命健康及周围设施的安全可能造成重大危害的作业。
2. 重大危险源：长期地或临时地生产、加工、搬运、使用或贮存危险物质，且危险物质的数量等于或超过临界量的单位（包括设施或场所）。
3. 特种设备：是指涉及生命安全、危险性较大的锅炉、压力容器（含气瓶）、压力管道、电梯、起重机械、客运索道、大型游乐设施。

二、填空题（每空 1.5 分，共 37.5 分）

1. 我公司重大危险源的两个重点保护单位是：（ 煤气车间 ）和（ 化保车间 ）。
2. 我公司的特种设备有（ 煤气炉 ）、（ 压力容器 ）、（ 压力管道 ）、（ 天车 ）、（ 叉车 ）、（ 电梯 ）。
3. 安全技术法律法规是指国家为搞好（ 安全生产 ），（ 防止 ）和（ 消除 ）生产中的灾害与事故，保障职工人身（ 安全 ）与（ 健康 ）而制定的法律法规。
4. 中华人民共和国劳动法是我国生产领域的根本大法，于（ 1995年5月1日 ）正式实施。
5. 消防法方针：（ 预防为主 ）、（ 防消结合 ）。
6. 安全生产方针：（ 安全第一 ）、（ 预防为主 ）、（ 综合治理 ）。
7. 造成安全事故的原因：（ 人的不安全状态 ）、（ 物的不安全状态 ）、（ 管理上的缺陷 ）
8. 安全三原则：（ 整理、~~整顿、清扫~~ ），有一个整洁有序的作业环境、（ ~~整~~ 经常维护保养 ）（ 按照标准进行操作 ）。整顿、工作地点

三、选择题（每题 1.5 分，共 6 分）

1. 中华人民共和国安全生产法于（ B ）起实施。

A 2002 年 5 月 1 日　　B2002 年 11 月 1 日　　C2001 年 5 月 1 日

2. 下列设备属于承压类特种设备的是（ C ）。

A 起重机械　　B 大型游乐设施　　C 锅炉

3. 下列哪种情况可认定为工伤（ A ）？

A 工作时间和工作场所内，因工作原因受到事故伤害的

B 工作时间和工作场所内，因没有履行工作职责受到暴力等意外伤害的

C 因公外出期间，非工作原因受到伤害或发生事故下落不明的

4. 下列事故程度分类正确的是（ B ）。

A 特大伤亡事故：指一次死亡 1 5～2 9 人的事故

B 一般死亡事故：指一次死亡 1~2 人的事故

C 重伤事故：不超过失能 105 工作日的无死亡事故

1

四、 判断题（每题 1.5 分，共 7.5 分）

1. 在抢险救灾等维护国家利益、公共利益活动中受到伤害的可视同工伤。 （√）
2. 工作时间和工作岗位，突发疾病死亡或 48 小时之内经抢救无效死亡的不能视为工伤。 （X）
3. 在上下班途中，受到机动车事故伤害的可视为工伤。 （√）
4. 中华人民共和国职业病防治法是我国生产领域的根本大法，于 2002 年 5 月 1 日起实施。 （√）
5. 压力容器是承压类特种设备 。 （√）

五、 问答题（共 34 分）

1. 请简述不能认定为工伤的情况。（4 分）

答：1.违法犯罪 2.醉酒导致伤亡 3.自杀

2. 请列举几类公司目前的特种作业。（4 分）

答：1.电工作业 2.高压作业 3.低压作业 4.登高架空作业 5.金属切割.焊接 6.起重作业

3. 请列举违章操作主要表现。（8 分）

答：劳保用品穿戴 不按照操作程序操作 冒险进入危险区域 不认真登记和交接班

4. 简述从业人员的八项权利。（8 分）

答：知情权 建议权 批评.检举控告权 拒绝权 紧急避险权 接受教育权 享受工伤保险待遇赔偿权

5. 请结合自己的岗位特征谈谈你工作中应该注意的安全事项。（10 分）

答：高空坠物 预防触电 高温 高压 预防火灾

Annex IV. Noise

Operation period – 2017

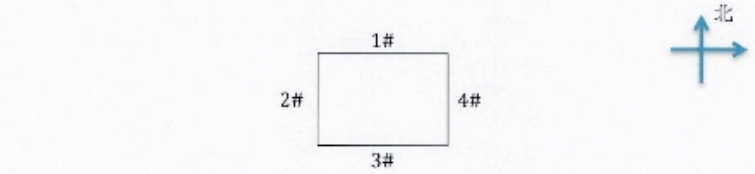
沙河市环境保护监测站

监测结果报告书

报告日期：2017 年 10 月 13 日

样品名称	噪声	采样地点	厂界	采样方法	规范
采样日期	见表	采样人	李峰	受检单位	河北迁新玻璃集团有限公司余热发电项目室内环境空气监测

检测分析结果：



监测日期	类别	1#北厂界	2#西厂界	3#南厂界	4#东厂界	标准
2017.10.10	昼间	53.6	54.1	56.9	55.4	60
	夜间	43.7	45.3	46.8	44.5	50
2017.10.11	昼间	54.9	55.8	57.3	53.2	60
	夜间	43.7	45.4	46.1	44.8	50

本次监测期间，该企业噪声排放符合《工业企业厂界环境噪声排放标准》（GB12348-2008）中表一 2 级标准要求，为达标排放。

为达标排放。

检验者 [illegible] 审核 [illegible] 监测站（盖章）

Annex V. Water quality

Operation period – 2017

沙河市环境保护监测站

监测结果报告书

报告日期：2017 年 9 月 14 日

样品名称	废水，废气	采样地点	总排污口、厂界	采样方法	规范
监测日期	见表	采样人	谁雪坡	受检单位	河北迪新玻璃集团有限公司

检测分析结果：

总排污口废水监测结果

监测日期	监测项目	监测值		标准值
		第一次	第二次	
2017 年 9 月 12 日	pH(无量纲)	7.17	7.38	6-9
	COD_{cr} (mg/L)	69.5	66.4	150
	悬浮物(mg/L)	54.8	50.9	150
	氨氮(mg/L)	17.8	14.7	25

无组织排放废气监测结果

监测日期	监测项目	监测值				标准值
		东厂界	西厂界	南厂界	北厂界	
2017 年 9 月 12 日	SO_2 (mg/m³)	0.134	0.135	0.138	0.137	0.5
	颗粒物(mg/m³)	0.289	0.277	0.273	0.281	1.0

本次监测期间，该企业经化粪池和沉淀池处理后的废水排放各项污染物均符合《污水综合排放标准》（GB8978-1996）二级标准限值要求，为达标排放。无组织颗粒物和 SO_2 排放均符合《大气污染物综合排放标准》（GB16297-1996）表 2 无组织排放监控浓度限值的要求，为达标排放。

检验者 [illegible]　　审 核 [illegible]　　监测站（盖章）

Annex VI. Safe and healthy work environment for workers of the whole plant

Occupational Health and Safety certificate

CERTIFICATE

职业健康安全管理体系

认 证 证 书

证书编号：00215S11393R1L

兹证明

河北迎新玻璃集团有限公司
河北迎新集团矸石热电有限公司

组织机构代码：71586267-5; 76205735-3
住所：河北省沙河市迎新大街东段
住所：河北省沙河市东环路中段
认证地址：河北省沙河市迎新大街东段(054100)
认证地址：河北省沙河市东环路中段（054100）

管理体系符合

GB/T 28001-2011/OHSAS 18001:2007
《职业健康安全管理体系 要求》

覆盖的产品及其过程

平板玻璃及低辐射镀膜玻璃的生产、热力的生产
覆盖的分场所及认证范围见附件

生效日期：2015 年 08 月 10 日　　有效期至：2018 年 08 月 09 日

注册号：CQM-99-2008-0125-0003

（本证书信息可在国家认证认可监督管理委员会官方网站 www.cnca.gov.cn 或方圆标志认证集团官方网站上查询，也可通过致证《确认证书》确认本证书的有效性）

方圆标志认证集团有限公司

二零一五年八月十日

GB/T 28001

中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C002-M

方圆标志认证集团

地址：北京市海淀区增光路33号（100048）
http://www.cqm.com.cn

CERTIFICATE

环境管理体系认证证书

证书编号：CQM15E21850R1L

兹证明

河北迎新玻璃集团有限公司
河北迎新集团矸石热电有限公司

组织机构代码：71586267-5；76205735-3
住所：河北省沙河市迎新大街东段
住所：河北省沙河市东环路中段
认证地址：河北省沙河市迎新大街东段(054100)
认证地址：河北省沙河市东环路中段（054100）

管理体系符合

GB/T 24001-2004/ISO 14001:2004
《环境管理体系 要求及使用指南》

覆盖的产品及其过程

平板玻璃及低辐射镀膜玻璃的生产、热力的生产

覆盖的分场所及认证范围见附件

生效日期：2015 年 08 月 10 日　　有效期至：2018 年 08 月 09 日

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（本证书信息可在国家认证认可监督管理委员会官方网站 www.cnca.gov.cn 或方圆标志认证集团官方网站上查询，也可通过登录《确认证书》确认本证书的有效性）

二零一五年八月十日

方圆标志认证集团

地址：北京市海淀区增光路33号（100048）
http://www.cqm.com.cn

Annex VII. Furnace waste refractory brick disposal

Waste refractory brick disposal contract

格法二线买卖合同

甲方：河北迎新玻璃集团有限公司

乙方：于友祥

经甲乙双方协商，乙方自愿购买甲方格法二线窑炉及设备，具体协议如下：

一、 乙方购买的总价款为：肆佰捌拾万元整（480 万，为不含税价），合同签定后预交押金 10 万元。

二、 乙方所购设备等详见清单，清单作为合同一部分与合同具有同等法律效力

三、 乙方拆卸日前交总价款的 50%（240 万元），设备等出厂前交清剩余的 50%价款（240 万元），乙方预付的 10 万元可顶替在总价款中。

四、 乙方所购的窑炉、设备等拆卸、运输均由乙方自己负责，拆卸、运输过程中乙方发生的一切安全工伤事故由乙方自己负责，与甲方无关。

五、 乙方拆运过程中须遵守甲方厂规厂纪。

六、 乙方施工过程中所需的水、电及住宿由甲方提供。

七、 乙方拆卸及运输期限为 100 天，乙方不负责清理垃圾及窑内玻璃疙瘩。在保证乙方大型设备进出的情况下乙方不得损坏甲方的厂房等基础设施，否则由此给甲方所造成的损失由乙方负责赔偿。

八、 本合同一式两份，甲乙双方各执一份。

九、 本合同自签订之日起生效。

甲方：河北迎新玻璃集团有限公司　　乙方：(代表签字)

（代表签字）

二零一一年五月三日

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Document information

Version	*Date*	*Description*
06.0	7 June 2017	Revision to: • Ensure consistency with version 01.0 of the "CDM project standard for project activities" (CDM-EB93-A04-STAN); • Make editorial improvements.
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from *F-CDM-MR* to *CDM-MR-FORM*; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB 70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01.0	28 May 2010	EB 54, Annex 34. Initial adoption.

Decision Class: Regulatory
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