

**IMPLEMENTATION OF ACTION PLAN FOR CRITICLALLY
POLLUTED AREA (ASANSOL)**



WEST BENGAL POLLUTION CONTROL BOARD
Building no. 10A, Block – LA, Sector – III,
Salt Lake City, Kolkata – 700098

1. Introduction:

The Asansol-Burnpur area is located in the land area between the river Ajoy on northern side and river Damodar on the southern side. The area is located within the Raniganj-Asansol coal mine belt. Topography of this area is generally flat and sloping from north to south. Number of canals passing through the area ultimately led to the river Damodar, acting as drainage canals of the area. Municipal area is 127.24 sq.km. Asansol is located at 23.03 degrees 40 minutes 25 second N & 86 degrees 56 minutes 45 second East. It has an average elevation of 110-130 metres MSL.

The total population of the area under question is more than 5,00,000. The sensitive receptors include one sub-divisional hospital, 38 nos. nursing homes, 56 nos. educational institutions, one sub-divisional court are located within Asansol- Burnpur Municipal region.

The economy of Asansol is primarily dependent on its steel, coal and railways. IISCO (Indian Iron and Steel Company Ltd.) was the first steel making unit established in India at present day Kulti, the Burnpur unit came up later. Other industries in the area include Refractory manufacturing units, Sodium silicate manufacturing units, Cement plants, Bottling plants, Chemical unit, Paper manufacturing unit etc. Eastern Coalfields which has its headquarters in Sanctoria near Dishergarh, has a big presence in the area due to the huge deposits of high quality Coal. However, most of the coalfields and surrounding residential colonies are located away from the main city of Asansol. Nearby areas like Raniganj, Chinakuri and Jamuria are of particular importance for coal blocks. Railways is a big contributor to the economy of Asansol and they are credited with developing the city in late 19th century.

The cumulative effects of industries as well as other infrastructural development in the region has made an impact on the local environment.

In order to assess the impact on the environment, Central Pollution Control Board (CPCB) has developed a Comprehensive Environmental Pollution Index (CEPI). This is a rational number to characterize the environmental quality of an industrial cluster following an algorithm of source-receptor-pathway framework. Industrial clusters having aggregated CEPI score of 70 and above are generally considered by MoEF as critically polluted cluster.

Ministry of Environment & Forests (MoEF), Government of India issued an Office Memorandum dated 13.01.2010 imposing a moratorium on setting up of new industries and also expansion of existing industries requiring Environmental Clearance as per the EIA notification S. O. 1533(E) dated 14.09.2006 and its amendments thereof, located in critically polluted industrial areas namely Haldia, Howrah and Asansol in West Bengal. The areas under moratorium were also demarcated by MoEF.

In order to improve the environmental quality of Asansol and surrounding areas, the West Bengal Pollution Control Board initiated a series of time bound action plans from 2010 onwards.

The CPCB conducted monitoring in the Critically Polluted Areas (CPAs) during February-April, 2013 and re-assessed the CEPI score. In view of reassessment of CEPI score, MoEF vide Office Memorandum dated 17.09.2013 lifted the moratorium on consideration of projects for environmental clearance in the above mentioned critically polluted areas subject to following conditions:

- i) The concerned SPCB to ensure that any new project / activity or any expansion / modernisation of existing project or activity or any change in product mix is in line with the overall approved action plan of the concerned critically polluted area (CPA).
- ii) The implementation of action plan of every CPA to be reviewed by the concerned Chairman, SPCB on a quarterly basis and report sent to CPCB by the 7th day of the month succeeding the end of quarter.
- iii) Monitoring in CPAs to be got done by SPCB through a third party on annual basis for computing CEPI. The monitoring to be done during December – February and the report sent to CPCB by April. CPCB in turn to submit its report to MoEF.
- iv) Monitoring in CPAs be got done by CPCB through a third party on biannual basis for computing CEPI and report submitted to MoEF for taking an appropriate view.

In the above context, this report is prepared to comply with the conditions (i) and (ii) above. A report on condition (iii) will be submitted in due time.

2. Boundary of the “Critically Polluted Area” (CPA) of Asansol:

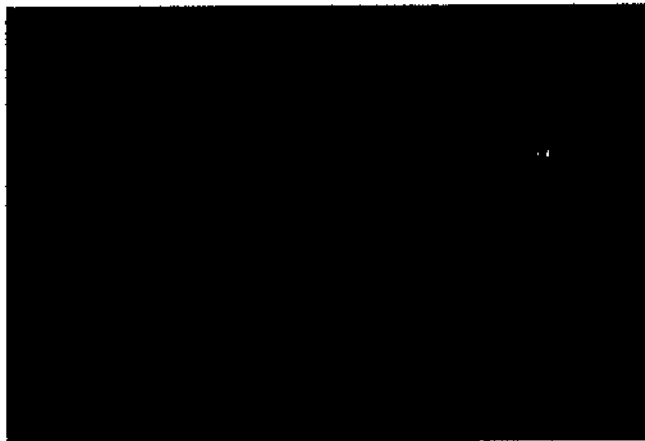


Fig. -1: Boundary (in Red line) is critically polluted area in Asansol (Burnpur area surrounding IISCO) as per the MoEF Memo No. J-11013/5/2010-IA.II(I) dated 15.03.2010.



Fig. -2: Boundary (in Red line) of critically polluted area in Asansol (Burnpur area surrounding IISCO) demarcated by CPCB (Green line shows the area where industries are located within the identified area and have major impact), MoEF Memo No. J-11013/5/2010-1A.11(1) dated 15.03.2010

3. Major Industries and Waterbodies in the concerned Area:

Major sources of various pollutants are industries like integrated steel plants, Refractory manufacturing units, Sodium silicate manufacturing units, Cement plants, Bottling plants, Chemical unit, Paper manufacturing unit etc. Other than industrial pollution, vehicular pollution and pollution generated from fossil fuel burning in domestic settlement also contribute to air pollution in a congested area like Asansol.

The major rivers are Damodar and Barakar. Other than these major rivers there are a number of nullahs of which the important ones are Nunia, Dihika, Damra and Gharui. The waste water generated at different sources is carried through the existing drainage network ultimately reaching the river Damodar.

About 40,000 KLD of Industrial effluent is generated by the various process industries. Besides, about 20,000 KLD of municipal sewage arising out of the residential establishments is also generated. The treated effluents of IISCO Steel plant and effluent generated at the township of IISCO is discharged to river Damodar through Damra & Dihika nullahs. Some amount of effluent generated in the industrial area at Kanyapur also reaches river Damodar via Damra canal. The effluent is discharged directly or indirectly to River Damodar. Other industrial and domestic effluents of Asansol area are carried through Nunia & Gharui nullahs which leads to river Damodar.

Nehru Park (formerly Lahmeyer Park) was built utilising the natural contour of the terrain on the banks of the Damodar. The airstrip at Burnpur can handle small aircraft.

Major industries located in the area:

- ✓ Industries under "17 Categories" - 01 no.
- ✓ Red Category Industries (54 Categories) - 23 nos.
- ✓ Orange and Green Category industries - 100 nos.
- ✓ Grossly Polluting Industries – 1 no.

Keeping in mind the environmental load bearing capacity of a sensitive area like Asansol, which has so many major industries, the West Bengal Pollution Control Board has taken elaborate action plan since 2010 involving the major industries ADDA and local authority. Action plan includes short term and long term action points. Action plans are as follows :

M/s. SAIL,ISP, Burnpur, Burdwan.

Action Points	Possible improvement in environmental quality
On-main charging system with high pressure liquor aspiration (HPLA) in Coke oven battery nos. 10 Zero leakage door & hydrojet cleaner Screw feeder charging system and water sealed AP Caps Rectification in oven doors, leads in Coke oven Battery no. 8&9.	Reduce emission from Coke Oven area
Installation of a three stage BOD Plant at Coke Oven (For Battery no. 8,9,10) is completed . Separate BOD plant for Battery no. 11 will be installed and existing BOD plants (8&9) will be phased out.	Improve water quality.
Blast furnace no.5 (Under installation) to have following facilities: Coal dust injection , top pressure recovery turbine , Cast house dedusting facility and on line slag granulation Pulverized coal injection system, oxygen enrichment and BF flue dust granulation to be installed in BF – 2 & 3.	Reduction of coke consumption & improve air environment of the area
Unit to install following facilities at new BOF in modernization plant e.g. Stage wise Ventury scrubber for gas cleaning station,De-dusting facility with ESP for dog house, On line stack monitoring facility. Existing Twin hearth furnaces (2x110 TPD) will be phased out.	Improve air quality of the area,

M/s Majumdar Industries, Nakrasota, PO-Burnpur, PS-Hirapur, Dist-Burdwan.

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s Mansarovar Cement, Kamalpur, Radhanagar road, PS-Kulti, Burdwan.

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s Calcutta Cement, Vill & PO-Baradhemo, PS-Asansol(S), Dt- Burdwan.

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s Hanuman Cement, ADDA Industrial estate, Kanyapur, Asansol, Dist-Burdwan.

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s Omni Cement. ADDA Industrial estate, Kanyapur, Asansol, Dist-Burdwan.

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s Ambey Super Cement,Vill-Belrui, PO-Sitarampur, PS- Kulti, Burdwan

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s A.T.C International (P) Ltd, Ramjibanpur Road, PO- Sitarampur, Dt-Burdwan.

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s National Glass Works, Sataisa, Gopalka Road, PO-Sitarampur, PS-Asansol, Dt-Burdwan.

Action Points	Possible improvement in environmental quality
This unit should install producer gas based regenerative furnace	Improve air quality using cleaner fuel

M/s Burnpur Ceramics, Bartoria, PO-Mithani, PS-Asansol, Dt-Burdwan.

Action Points	Possible improvement in environmental quality
Refractory manufacturing units should switch over to new generation producer gas fired Shuttle kiln, Tunnel Kiln or Push-bat kiln	Fuel efficient kiln, smoother operation leading to less emission and improved air quality

M/s Sree Ganesh Silicate & Soda.Ushagram, Asansol, Dt-Burdwan

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s United spirits Ltd., GT Road, Kumarpur, Asansol, Burdwan.

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s Vamshi Chemicals, ADDA Industrial estate, Kanyapur, Asansol, Burdwan.

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s. S.G Pulp & Paper (P) Ltd. Sataisa more, Baradhemo. Dist-Burdwan.

Action Points	Possible improvement in environmental quality
Husk fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emissions, improve air quality

M/s. Vedant Retreads

Action Points	Possible improvement in environmental quality
Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	Reduce emission, improve air quality

M/s. Asansol Ceramics Pvt Ltd , Patmohona ,P.S. Hirapur , Asansol

Action Points	Possible improvement in environmental quality
Refractory manufacturing units should switch over to new generation producer gas fired Shuttle kiln, Tunnel Kiln or Push-bat kiln	Fuel efficient kiln, smoother operation leading to less emission and improved air quality

Long term action points

Action Points (including source & mitigation measures)	Responsible Stake Holders	Possible improvement in environmental quality
Dedicated coal transport corridor to be constructed. Enhancement of loading & unloading facility with proper dust suppression facility. Use of surface miner as much as possible. Trapping of Methane from underground mines prior mining.		Improve overall environment and air quality

Action Points (including source & mitigation measures)	Responsible Stake Holders	Possible improvement in environmental quality
Area wise common reservoir for storage of mine drainage water, storm water and to provide necessary treatment facility prior discharge.	1. M/s Bejdih Colliery. 2. M/s Dhemomain Colliery, 3. M/s Methani Colliery, 4. M/s Narsamuda Colliery, 5. M/s Patmohona Colliery under E.C.L	Improve overall environment and water quality
Backfilling of mine voids with overburden. Utilisation of ash from thermal power plants to be adopted for mine filling. Pond ash to be utilized along with sand for stowing underground mines.		Improve overall environment, ensure waste utilization.
To intimate surrounding locality about blasting well in advance and to adopt best practices. Noise generation to be minimized from heavy earth moving machines, drilling etc.		Improve overall environment and reduce noise pollution, ensure safety of neighbouring locality
Area wise common reservoir for storage of mine drainage water, storm water and to provide necessary treatment facility prior discharge.		Water resource conservation Improvement water quality
S.T.P.at Kalipahari	Asansol Municipal Corporation jointly with MH & PE, Gol	Improvement water quality
2 Nos. of STPs (21 MLD & 29 MLD with associated Sewage Network)	ADDA jointly with MH & PE, Gol	Improvement of water quality
Municipal Solid waste management for Asansol	ADDA jointly with MH & PE, Gol	MSW management
South City Road (From G.T. Road to Proposed Bridge over Damodar River-12.2 K.M.)	ADDA jointly with MH & PE, Gol	Improve overall environment and air quality
Road from Jubilee Dhaba to Scope Gate of IISCO-4.604 K.M.	ADDA jointly with MH & PE, Gol	
Expansion of G.T.Road (Ashram more to Chelidanga)	Asansol Municipal Corporation jointly with MH & PE, Gol	
7.4 KM Road from IISCO to NH-2	IISCO	

Action Points (including source & mitigation measures)	Responsible Stake Holders	Possible improvement in environmental quality
Road Bridge over Damodar from Burnpur to Madhukunda	IISCO	
S.T.P. at IISCO Township	IISCO	Improvement of water quality
S.T.P. at Shristinagar	Bengal Shristi Infrastructure	

Status of Implementation of Action Plan for Asansol Critically Polluted Area as on September 2014 is enclosed in Annexure - A

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Summary of short term action points:

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
1.	On-main charging system with high pressure liquor aspiration (HPLA) in Coke oven battery nos. 10 Zero leakage door & hydrojet cleaner Screw feeder charging system and water sealed AP Caps Rectification in oven doors, leads in Coke oven Battery no. 8&9.	M/s. IISCO Steel plant, SAIL., Burnpur	• HPLA and on-main charging Implemented along with rebuilding of coke oven battery no. 10.	Complied	Implemented
			• Zero leakage door, hydrojet cleaner, screw feeder, water seal AP installed at coke oven battery no. 10.	Complied	Implemented
			• Cold repair for Coke Oven battery No. 8 is in progress.	Complied	Implemented
			• Coke Oven battery No. 9 under cold repair.	Complied	Implemented
			• New Coke Oven battery No. 11 with CDQ, waste heat recovery Boiler, land based pushing emission control system has been commissioned.	Complied	Implemented

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
2.	Installation of a three stage BOD Plant at Coke Oven (For Battery no. 8,9,10) is completed . Separate BOD plant for Battery no. 11 will be installed and existing BOD plants (8&9) will be phased out.	M/s.IISCO Steel plant ,SAIL.Burnpur	<ul style="list-style-type: none"> BOD Plant commissioned in June, 2010 for treatment of effluent generated from No. 8, 9 & 10 Coke Oven batteries. Old BOD plants phased out in June, 2010. Mechanised NaOCI dosing facility installed at the outlet of BOD plant to control cyanide. BOD Plant of Coke Oven battery No.11 is under operation along with Coke Oven battery No.11. 	<p style="text-align: center;">Complied</p> <p style="text-align: center;">Complied</p>	<p style="text-align: center;">Implemented</p> <p style="text-align: center;">Implemented</p>
3.	Blast furnace no.5 (Under commissioning) have following facilities : Coal dust injection , top pressure recovery turbine , Cast house dedusting facility and on line slag granulation Pulverized coal injection system, oxygen enrichment and BF flue dust granulation to be installed in BF – 2 & 3.	M/s.IISCO Steel plant ,SAIL.Burnpur	<ul style="list-style-type: none"> Blast Furnace No. 5 is under commissioning along with BOF. BF no. 3 is phased out on 16th March, 2012. CDI and TRT are not feasible in BF 2 (small capacity furnace of 530 cu.m) 	<p style="text-align: center;">Complied</p> <p style="text-align: center;">BF no. 3 phased out</p>	<p style="text-align: center;">Implemented</p> <p style="text-align: center;">Not implemented due to technical reason</p>

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
4.	Unit to install following facilities at new BOF in modernization plant e.g. Stage wise Ventury scrubber for gas cleaning station, De-dusting facility with ESP for dog house, On line stack monitoring facility. Existing Twin hearth furnaces (2x110 TPD) will be phased out.	M/s.IISCO Steel plant ,SAIL.Burnpur	<ul style="list-style-type: none"> BOF shop is under commissioning with ventury scrubber, gas cleaning plant and dog house, online stack monitoring. Both THF have been phased out. 	Under compliance complied	Under implementation Implemented
5	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Majumdar Industries	Coal fired slag drier equipped with air pollution control system and stack.	Yet to comply	The unit informed CBM fired slag drier is not economically viable
6	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Mansarovar Cement	The unit remained closed from last one & half year.	---	The industry is presently not in operation.
7	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Calcutta Cement	Coal fired slag drier equipped with air pollution control system and stack.	—	The unit is complying with the emission norms

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
8	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Hanuman Cement	Coal fired slag drier equipped with air pollution control system and stack.	---	The unit has applied for switch over from cement grinding unit to quartz grinding unit with additional Air Pollution Control Systems.
9	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Omni Cement	Coal fired slag drier equipped with air pollution control system and stack.	---	The unit is complying with the emission norms
10	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Ambey Super Cement	Coal fired slag drier equipped with air pollution control system and stack.	---	The unit is complying with the emission norms.
11	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Kalika Cement	The unit has dismantled the Slag drier.	---	The unit is complying with the emission norms.

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
12	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s A.T.C International (P) Ltd.	Coal fired slag drier equipped with air pollution control system and stack.	---	The industry is presently not in operation.
13	Coal fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s United Spirits Ltd.	The unit has dismantled the coal fired Boiler. The industry already implemented necessary upgradation of ETP for meeting effluent standard.	---	Value of parameters of effluents sampling were found to be within limits.
14	Refractory manufacturing units should switch over to new generation producer gas fired Shuttle kiln, Tunnel Kiln or Push-bat kiln which are much more fuel efficient kiln for environment friendly smoother operation, improvement in quality of the product.	M/s Asansol Ceramics & M/s Burnpur Ceramics	M/s. Burnpur Ceramics is operating Tunnel Kilns only using petroleum coke procured mainly from Gujarat. Operation of existing chamber kiln, down draft kiln suspended.	Introduced tunnel kiln	M/s. Asansol Ceramics has been closed since last two & half years.

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
15	Coal fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Sree Ganesh Silicate & Soda.	Coal fired Boiler has been dismantled.	---	Coal fired boiler is no more in operation.
16	Husk fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	S.G Pulp & Paper (P) Ltd.	Husk fired boiler equipped with air pollution control system and stack and meeting with the emission norms.	---	The unit has closed its operation.
17	Coal fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance)	M/s Vamshi Chemicals	The unit is presently closed	---	The unit remained closed since last 3 years.
18	Coal fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Vedant Retreads	The unit is using CBM fired boiler for various process.	Complied	Implemented
19	This unit should install producer gas based regenerative furnace which is less polluting and will enhance fuel efficiency.	M/s National Glass Works	Producer gas based regenerative furnace already installed and in operation.	Complied	Implemented

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Long Term Action Points:

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
1.	<p>1. Dedicated coal transport corridor to be constructed.</p> <p>2. Enhancement of loading & unloading facility with proper dust suppression facility.</p> <p>3. Use of surface miner as much as possible.</p> <p>4. Trapping of Methane from underground mines prior mining. To be completed by December 2012</p>	<p>1. M/s Bejdih Colliery, 2. M/s Dhemomain Colliery, 3. M/s Methani Colliery, 4. M/s Naisamuda Colliery, 5. M/s Patnohona Colliery Under E.C L</p>	<ul style="list-style-type: none"> • Dedicated coal transport corridor is constructed for coal transportation. The transport road is black top road. • To reduce the pollution impact water sprinkler is used to suppress the dust. • Trucks are covered with tarpaulin cover. • Plantation is done in buffer zone and road side. 40000 saplings are planted in this financial year. The saplings are maintained by third party. • The mines which are mentioned in the table, are underground mine. Use of surface miner is not applicable for UG mines. • The mines are located within Ranigunj coal field area in West Bengal. M/s Great Eastern Energy Corporation Pvt. Ltd. already started activities for extraction of coal bed methane in the Ranigunj Coal Field area. 	Mostly Complied	<p>These Coal mines are identified under Cluster 6 for which TOR has been issued by MoEF, GoI for conducting EIA study. Public Hearing for expansion of these mines has been conducted on 29.11.2013.</p>

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
2.	Area wise common reservoir for storage of mine drainage water, storm water and to provide necessary treatment facility prior discharge.		<ul style="list-style-type: none"> Two nos. of reservoirs with capacity of 20 lakh gallons are being used for five mines. This stored water is used for water sprinkling and domestic purpose for residential colony after treatment. 	Complied	Implemented
3.	Backfilling of mine voids with overburden. Utilisation of ash from thermal power plants to be adopted for mine filling. Pond ash to be utilized along with sand for stowing underground mines.		<ul style="list-style-type: none"> The mines are UG mines, so back filling is not applicable in this case. Use of flyash for stowing the UG mines is not possible. Technically this practise is not feasible. 		
4.	To intimate surrounding locality about blasting well in advance and to adopt best practices. Noise generation to be minimized from heavy earth moving machines, drilling etc.		<ul style="list-style-type: none"> In case of UG mines quantum of explosive used for blasting is very less to cause any damage at surface. Utmost care is taken in blasting design to have less effect at the surface. Best available practices are followed 	Mostly complied	Awareness program conducted in the locality time to time.

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no	Project details	Implementing agency	Status as on September 2014	Compliance status	Remarks
1.	S.T.P.at Kalipahari	Asansol Municipal Corporation jointly with MH & PE, Gol	<ul style="list-style-type: none"> STP of 12 MLD capacity is constructed under Ganga Action Plan (GAP-II). 	Complied	Implemented
2.	2 Nos. of STPs (21 MLD & 29 MLD with associated Sewage Network)	ADDA jointly with MH & PE, Gol	<ul style="list-style-type: none"> Proposal is prepared and sent for approval. 	Action initiated for compliance	
3.	Municipal Solid waste management for Asansol	ADDA jointly with MH & PE, Gol	<ul style="list-style-type: none"> At Kalipahari area land selection process is going on. Location have been identified for MSW management. 	Action initiated for compliance	At present, the MSW is being sent to Common MSW facility at Raniganj, for safe disposal.
4.	South City Road (From G.T. Road to Proposed Bridge over Damodar River-12.2 K.M.)	ADDA jointly with MH & PE, Gol	<ul style="list-style-type: none"> Action has been initiated for preliminary survey work. The issues also taken up with Railway Authority as some portion of the land belongs o Railways. 	Under consideration	
5.	Road from Jubilee Dhaba to Scope Gate of IISCO-4.604 K.M.	ADDA jointly with MH & PE, Gol	<ul style="list-style-type: none"> Road expansion work under progress. Expected to complete within June 2014. 	Under compliance	To be implemented shortly
6.	Expansion of G.T.Road (Ashram more to Chelidanga)	Asansol Municipal Corporation jointly with MH & PE, Gol	<ul style="list-style-type: none"> ADDA is the nodal agency for this project and it is under active consideration 	Yet to comply	
7.	7.4 KM Road from IISCO to NH-2	IISCO	Already constructed	Complied	Implemented
8.	Road Bridge over Damodar from Burnpur to Madhukunda	IISCO	<ul style="list-style-type: none"> The construction of the bridge is linked to the construction of South City road. 	Yet to comply	
9.	S.T.P. at IISCO Township	IISCO	<ul style="list-style-type: none"> The construction work of STP is under progress 	Under compliance	Expected to be completed by December 2014.
10.	S.T.P.at Shristinagar	Bengal Shristi Infrastructure	<ul style="list-style-type: none"> STP in operation. 	Complied	Implemented

Sl. No.	Date	Environment Awareness program conducted at Asansol & Burnpur area.	Place
01	13.08.11 to 15.08.11	Plantation Program within Asansol Municipal Corporation (AMC) . At Ward No.9, Ward No.25,Ward No.32,Ward No.36. Saplings planted and maintained by WBPCB.	AMC Area. Asansol.
02	05.06.12	World Environmental Day jointly with Municipal Corporation. Road Rally, tableau, speech by local dignitaries followed by cultural program by eco club members.	Rabindra Bhaban , Asansol.
03	01.09.12	Environmental Awareness program , Road Rally – with school student , industrial representative , Chamber of Commerce.	G T Road , Asnsol
04	12.06.13 to 13.06.13	World Environmental Day jointly with Municipal Corporation. Road Rally, tableau, speech by local dignitaries followed by cultural program by eco club members. Sit & Draw and Quiz competition among School Students . Speech-by dignitaries. Cultural program and prize distribution.	Rabindra Bhaban. Asansol
05	20.07.13	Samajik Bonosrijon Utsab 2013. Gathering of 2500 nos school student & industrial representatives etc. 5000 nos saplings planted. Jointly organised with Municipal Corporation.	Bonogram, Burnpur
06	16.08.13	Anti-Plastic awareness campaign. Speech by School Students followed by rally with Tableau.	Burnpur Market
07	04.01.14 to 12.01.14	Burnpur Utsab 2014. WBPCB provided Stall for awareness generation and distribution of Books, leaflets on environmental awareness. Awareness campaign on noise pollution, use of plastic carrybags and biomedical waste management was conducted at the venue.	Burnpur Thana ground. Burnpur.
08	05.06.2014.	World Environmental Day jointly with Municipal Corporation. Road Rally, tableau, speech by local dignitaries followed by cultural program by eco club members.	Rabindra Bhaban , Asansol.

Summary of Compliance Status:

During assessment of the progress made in implementation of Action Plans and subsequent improvement in the environmental condition of Asansol area, following points have been noticed:

- The implementations of Short Term Action Plans by the individual industries are either completed or nearing the stage of completion.
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Implementation & monitoring of Action plans for Asansol area as on September, 2014

Summary of short term action points:

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
1.	On-main charging system with high pressure liquor aspiration (HPLA) in Coke oven battery nos. 10 Zero leakage door & hydrojet cleaner Screw feeder charging system and water sealed AP Caps Rectification in oven doors, leads in Coke oven Battery no. 8&9.	M/s. IISCO Steel plant, SAIL., Burnpur	<ul style="list-style-type: none"> HPLA and on-main charging Implemented along with rebuilding of coke oven battery no. 10. Zero leakage door, hydrojet cleaner, screw feeder, water seal AP installed at coke oven battery no. 10. Cold repair for Coke Oven battery No. 8 is in progress. Coke Oven battery No. 9 under cold repair. New Coke Oven battery No. 11 with CDQ, waste heat recovery Boiler, land based pushing emission control system has been commissioned. 	<p>Complied</p> <p>Complied</p> <p>Complied</p> <p>Complied</p> <p>Complied</p>	<p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p> <p>Implemented</p>

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks -
2.	Installation of a three stage BOD Plant at Coke Oven (For Battery no. 8,9,10) is completed . Separate BOD plant for Battery no. 11 will be installed and existing BOD plants (8&9) will be phased out.	M/s.IISCO Steel plant ,SAIL.Burnpur	<ul style="list-style-type: none"> BOD Plant commissioned in June, 2010 for treatment of effluent generated from No. 8, 9 & 10 Coke Oven batteries. Old BOD plants phased out in June, 2010. Mechanised NaOCl dosing facility installed at the outlet of BOD plant to control cyanide. BDD Plant of Coke Oven battery No.11 is under operation along with Coke Oven battery No.11. 	<p>Complied</p> <p>Complied</p>	<p>Implemented</p> <p>Implemented</p>
3.	Blast furnace no.5 (Under commissioning) have following facilities : Coal dust injection , top pressure recovery turbine , Cast house dedusting facility and on line slag granulation Pulverized coal injection system, oxygen enrichment and BF flue dust granulation to be installed in BF – 2 & 3.	M/s.IISCD Steel plant ,SAIL.Burnpur	<ul style="list-style-type: none"> Blast Furnace No. 5 is under commissioning along with BOF. BF no. 3 is phased out on 16th March, 2012. CDI and TRT are not feasible in BF 2 (small capacity furnace of 530 cu.m) 	<p>Complied</p> <p>BF no. 3 phased out</p>	<p>Implemented</p> <p>Not implemented due to technical reason</p>

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
4.	Unit to install following facilities at new BOF in modernization plant e.g. Stage wise Ventury scrubber for gas cleaning station, De-dusting facility with ESP for dog house, On line stack monitoring facility. Existing Twin hearth furnaces (2x110 TPD) will be phased out.	M/s. IISCO Steel plant, SAIL, Burnpur	<ul style="list-style-type: none"> • BOF shop is under commissioning with ventury scrubber, gas cleaning plant and dog house, online stack monitoring. • Both THF have been phased out. 	Under compliance complied	Under implementation Implemented
5	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Majumdar Industries	Coal fired slag drier equipped with air pollution control system and stack.	Yet to comply	The unit informed CBM fired slag drier is not economically viable
6	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Mansarovar Cement	The unit remained closed from last one & half year.	---	The industry is presently not in operation.
7	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Calcutta Cement	Coal fired slag drier equipped with air pollution control system and stack.	---	The unit is complying with the emission norms

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
8	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Hanuman Cement	Coal fired slag drier equipped with air pollution control system and stack.	---	The unit has applied for switch over from cement grinding unit to quartz grinding unit with additional Air Pollution Control Systems.
9	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Omni Cement	Coal fired slag drier equipped with air pollution control system and stack.	----	The unit is complying with the emission norms
10	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Ambey Super Cement	Coal fired slag drier equipped with air pollution control system and stack.	---	The unit is complying with the emission norms.
11	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Kalika Cement	The unit has dismantled the Slag drier.	---	The unit is complying with the emission norms.

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
12	Coal fired slag drier should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s A.T.C International (P) Ltd.	Coal fired slag drier equipped with air pollution control system and stack.	---	The industry is presently not in operation.
13	Coal fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s United Spirits Ltd.	The unit has dismantled the coal fired Boiler. The industry already implemented necessary upgradation of ETP for meeting effluent standard.	---	Value of parameters of effluents sampling were found to be within limits.
14	Refractory manufacturing units should switch over to new generation producer gas fired Shuttle kiln, Tunnel Kiln or Push-bat kiln which are much more fuel efficient kiln for environment friendly smoother operation, improvement in quality of the product.	M/s Asansol Ceramics & M/s Burnpur Ceramics	M/s. Burnpur Ceramics is operating Tunnel Kilns only using petroleum coke procured mainly from Gujarat. Operation of existing chamber kiln, down draft kiln suspended.	Introduced tunnel kiln	M/s. Asansol Ceramics has been closed since last two & half years.

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
15	Coal fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Sree Ganesh Silicate & Soda.	Coal fired Boiler has been dismantled.	---	Coal fired boiler is no more in operation.
16	Husk fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	S.G Pulp & Paper (P) Ltd.	Husk fired boiler equipped with air pollution control system and stack and meeting with the emission norms.	---	The unit has closed its operation.
17	Coal fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance)	M/s Vamshi Chemicals	The unit is presently closed	---	The unit remained closed since last 3 years.
18	Coal fired boilers should be converted to Oil/Gas fired drier. (Preferably with CBM which is available within accessible distance).	M/s Vedant Retreads.	The unit is using CBM fired boiler for various process.	Complied	Implemented
19	This unit should install producer gas based regenerative furnace which is less polluting and will enhance fuel efficiency.	M/s National Glass Works	Producer gas based regenerative furnace already installed and in operation.	Complied	Implemented

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Long Term Action Points:

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
1.	<p>1. Dedicated coal transport corridor to be constructed.</p> <p>2. Enhancement of loading & unloading facility with proper dust suppression facility.</p> <p>3. Use of surface miner as much as possible.</p> <p>4. Trapping of Methane from underground mines prior mining. To be completed by December 2012</p>	<p>1. M/s Bejdih Colliery,</p> <p>2. M/s Dhemomain Colliery,</p> <p>3. M/s Methani Colliery,</p> <p>4. M/s Narsamuda Colliery,</p> <p>5. M/s Patmohona Colliery Under E.C.L</p>	<ul style="list-style-type: none"> • Dedicated coal transport corridor is constructed for coal transportation. The transport road is black top road. • To reduce the pollution impact water sprinkler is used to suppress the dust. • Trucks are covered with tarpaulin cover. • Plantation is done in buffer zone and road side. 40000 saplings are planted in this financial year. The saplings are maintained by third party. • The mines which are mentioned in the table, are underground mine. Use of surface miner is not applicable for UG mines. • The mines are located within Raniganj coal field area in West Bengal. M/s Great Eastern Energy Corporation Pvt. Ltd. already started activities for extraction of coal bed methane in the Raniganj Coal Field area. 	Mostly Complied	These Coal mines are identified under Cluster 6 for which TOR has been issued by MoEF, GoI for conducting EIA study. Public Hearing for expansion of these mines has been conducted on 29.11.2013.

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no.	Action points (Including source & mitigation measures)	Responsible stake holders	Status as on September 2014	Compliance status	Remarks
2.	Area wise common reservoir for storage of mine drainage water, storm water and to provide necessary treatment facility prior discharge.		<ul style="list-style-type: none"> Two nos. of reservoirs with capacity of 20 lakh gallons are being used for five mines. This stored water is used for water sprinkling and domestic purpose for residential colony after treatment. 	Complied	Implemented
3.	Backfilling of mine voids with overburden. Utilisation of ash from thermal power plants to be adopted for mine filling. Pond ash to be utilized along with sand for stowing underground mines.		<ul style="list-style-type: none"> The mines are UG mines, so back filling is not applicable in this case. Use of flyash for stowing the UG mines is not possible. Technically this practise is not feasible. 		
4.	To intimate surrounding locality about blasting well in advance and to adopt best practices. Noise generation to be minimized from heavy earth moving machines, drilling etc.		<ul style="list-style-type: none"> In case of UG mines quantum of explosive used for blasting is very less to cause any damage at surface. Utmost care is taken in blasting design to have less effect at the surface. Best available practices are followed 	Mostly complied	Awareness program conducted in the locality time to time.

Implementation & monitoring of Action plans for Asansol area as on September, 2014

Sl no	Project details	Implementing agency	Status as on September 2014	Compliance status	Remarks
1.	S.T.P.at Kalipahari	Asansol Municipal Corporation jointly with MH & PE, Gol	<ul style="list-style-type: none"> STP of 12 MLD capacity is constructed under Ganga Action Plan (GAP-II). 	Complied	Implemented
2.	2 Nos. of STPs (21 MLD & 29 MLD with associated Sewage Network)	ADDA jointly with MH & PE, Gol	<ul style="list-style-type: none"> Proposal is prepared and sent for approval. 	Action initiated for compliance	
3.	Municipal Solid waste management for Asansol	ADDA jointly with MH & PE, Gol	<ul style="list-style-type: none"> At Kalipahari area land selection process is going on. Location have been identified for MSW management. 	Action initiated for compliance	At present, the MSW is being sent to Common MSW facility at Raniganj, for safe disposal.
4.	South City Road (From G.T. Road to Proposed Bridge over Damodar River-12.2 K.M.)	ADDA jointly with MH & PE, Gol	<ul style="list-style-type: none"> Action has been initiated for preliminary survey work. The issues also taken up with Railway Authority as some portion of the land belongs o Railways. 	Under consideration	
5.	Road from Jubilee Dhaba to Scope Gate of IISCO-4.604 K.M.	ADDA jointly with MH & PE, Gol	<ul style="list-style-type: none"> Road expansion work under progress. Expected to complete within June 2014. 	Under compliance	To be implemented shortly
6.	Expansion of G.T.Road (Ashram more to Chelidanga)	Asansol Municipal Corporation jointly with MH & PE, Gol	<ul style="list-style-type: none"> ADDA is the nodal agency for this project and it is under active consideration 	Yet to comply	
7.	7.4 KM Road from IISCO to NH-2	IISCO	Already constructed	Complied	Implemented
8.	Road Bridge over Damodar from Burnpur to Madhukunda	IISCO	<ul style="list-style-type: none"> The construction of the bridge is linked to the construction of South City road. 	Yet to comply	
9.	S.T.P. at IISCO Township	IISCO	<ul style="list-style-type: none"> The construction work of STP is under progress 	Under compliance	Expected to be completed by December 2014.
10.	S.T.P.at Shristinagar	Bengal Shristi Infrastructure	<ul style="list-style-type: none"> STP in operation. 	Complied	Implemented

Sl. No.	Date	Environment Awareness program conducted at Asansol & Burnpur area.	Place
01	13.08.11 to 15.08.11	Plantation Program within Asansol Municipal Corporation (AMC) . At Ward No.9, Ward No.25,Ward No.32,Ward No.36. Saplings planted and maintained by WBPCB.	AMC Area. Asansol.
02	05.06.12	World Environmental Day jointly with Municipal Corporation. Road Rally, tableau, speech by local dignitaries followed by cultural program by eco club members.	Rabindra Bhaban , Asansol.
03	01.09.12	Environmental Awareness program , Road Rally – with school student , industrial representative , Chamber of Commerce.	G T Road , Asnsol
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