



# HARYANA STATE POLLUTION CONTROL BOARD

## REGIONAL OFFICE, BAHADURGARH

SCF No. 42 & 43, SHOPPING CENTRE, SECTOR-6, HUDA, BAHADURGARH  
Ph No. 01276-243077-242078, E-Mail: hspcbrobdh@gmail.com, Web: hspcb.gov.in

**No. HSPCB/BDR/2019/2491**

**Dated: 22/10/2019**

To

The Registrar,  
National Green Tribunal,  
Faridkot House, Copernicus Marg,  
New Delhi-110001.

**Sub: OA No. 834/2018 titled as Ved Parkash Vs State of Haryana.**

**Ref: NGT order dated 01.07.2019.**

The Hon'ble National Green Tribunal vide order dt. 01.07.2019 has directed to furnish a report on factual aspects to this Tribunal in regard to submission made in the letter about M/s Aravali Power Co. (P) Ltd. Vill-Jharli, Distt. Jhajjar & M/s Jhajjar Power Ltd. Vill-Jharli, Distt. Jhajjar.

In regard of above find enclosed herewith the report on factual aspects in the matter of above said units in the OA No. 834/2018 titled as Ved Parkash Vs State of Haryana.

DA/As above

Regional Officer  
Bahadurgarh Region

**Endst. No. HSPCB/ BDR/2019/**

**Dated:**

A copy of the above is forwarded to the Sh. Anil Grover, Additional Advocate General, A-174, 2<sup>nd</sup> Floor, Defense Colony, New Delhi-110024 for information.

Regional Officer  
Bahadurgarh Region

**Endst. No. HSPCB/ BDR/2019/**

**Dated:**

A copy of the above is forwarded to the Member Secretary, HSPCB, Panchkula for information, please.

Regional Officer  
Bahadurgarh Region

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI

OA No.834/2018

IN THE MATTER OF:

Vedprakash ... Applicant

Versus

State of Haryana ... Respondent

**REPORT ON FACTUAL ASPECTS ON BEHALF OF  
HARYANA STATE POLLUTION CONTROL BOARD IN  
COMPLIANCE OF ORDER DATED 01.07.2019**

MOST RESPECTFULLY SHOWETH:

1. That this Hon'ble Tribunal took notice of the complaint letter alleging improper disposal of the fly ash generated by NTPC Aravali Power Co. (P) Ltd. and M/s Jhajjar Power Ltd. (CLP India) in District Jhajjar. The Hon'ble Tribunal vide its order dated 01.07.2019 sought following reports.
  - (i) Report from M/s NTPC Aravali Power Co. (P) Ltd. and M/s Jhajjar Power Ltd. (CLP India) about the current status of the fly ash disposal and management and action plan along with timelines within one month from today.
  - (ii) Report from the Chief Medical Officer, Jhajjar District about the health impact study of the fly ash in the area in question.
  - (iii) Report from the HSPCB on the status of air quality and stack monitoring in respect of M/s NTPC Aravali Power Co. (P) Ltd. and M/s Jhajjar Power Ltd. (CLP India).

2. M/s Indira Gandhi Super Thermal Power Project (IGSTPP), Jhajjar at Village-Jharli, Haryana is a 3x500 MW coal based station owned by Aravali Power Co. Pvt. Ltd. (APCPL). APCPL is a joint venture of NTPC (50%), IPGCL (25%) and HPGCL (25%). Unit has submitted the current status of the fly ash generation, disposal, management and action plan for disposal of fly ash along with timelines which is annexed as **Annexure-1** and the details is as under:-

Ash generated in course of power production is categorized as fly ash and bottom ash which are generated in the ratio of approx. 80% and 20% respectively.

**Current Status of Ash Disposal:-**

- Ash utilized in financial year 2017-18 is 68.93%.
- Ash utilized in financial year 2018-19 is 103.40%.

**Ash utilized in financial year 2019-20 till 30<sup>th</sup> June 2019**

Sl. No	Period	Ash Generation (Lakh MT)			Ash Utilization (Lakh MT)			Total Ash utilization i.e. Fly Ash and stored pond Ash. (%)	Ash Stock in Ponds (As on 30 <sup>th</sup> June, 2019) (Lakh MT)
		Fly Ash	Bottom Ash (sent to pond)	Total	Fly Ash	Pond ash	Total		
1	FY2019-20  (As on 30th June 2019)	1.59	0.39	1.98	1.59	1.72	3.31	167%  (it includes 100% of fly ash being generated and backlog of pond ash)	56.5

**Action Plan for Pond Ash Utilization with time lines:-** Total 56.5 LAKH(MT) pond ash is stored in different ash dyke ponds.

There are 3 ash dyke ponds and detail is as under:-

**Pond-I** is presently in service and partially filled up with approx. 18 Lakh MT ash. Hence, it is not possible to evacuate this ash right now. It will be evacuated in the financial year 2022-23 after changing over the discharge of ash slurry to another pond i.e. pond –III and when the slurry therein get dried up.

**Pond-IIA** has approx.10.5 LakhMT HCSD fly ash as on date and its evacuation is under progress with various agencies and expected to be completed by March, 2021.

**Pond-III** has approx. 28 LakhMT mixed ash. As 03 LakhMT ash is to be kept along inner periphery of dyke bund for preventing erosion of bund base, hence issuable ash is approx. 25 LakhMT only. LOAs for evacuation of 10 LakhMT have been awarded to different agencies. Balance 15 LakhMT of pond-III ash evacuation is being tied-up with NHAI for different road projects. Evacuation completion is expected by August, 2021.

**Pond Ash Quantity Disposal Plan**

Sl. No.	Pond	Qty (Lakh MT)	Expected Evacuation
1.	Pond-I	18	<ul style="list-style-type: none"> <li>In Service, hence evacuation will be started in financial year 2022-23, when the pond is isolated from the service.</li> </ul>
2.	Pond-IIA	10.5	<ul style="list-style-type: none"> <li>3 Lakh MT ash is required along inner periphery of dyke bund for preventing erosion of bund base.</li> <li>The evacuation of remaining 7.5 Lakh MT is under progress by 28 Nos. agencies as per annexure.</li> <li>Expected evacuation by March, 2021.</li> </ul>
3.	Pond-III	28	<ul style="list-style-type: none"> <li>3 Lakh MT ash is required along inner periphery of dyke bund for preventing erosion of bund base.</li> <li>For the evacuation of remaining 25 Lakh MT               <ol style="list-style-type: none"> <li>Contracts for evacuating 10 Lakh MT have been awarded to 20 Nos. agencies as per annexure.</li> <li>Tie up for 15 Lakh MT ash evacuation by NHAI is under process for different NHAI road projects.</li> </ol> </li> <li>Evacuation completion is expected by August, 2021.</li> </ul>

### **Control measures taken by the unit to prevent environment pollution:-**

- High efficiency Electrostatic Precipitators with 99.9% efficiency are installed in all three units to ensure minimal particulate emission from Chimneys.
  - Dry Fog Dust Suppression systems (DFDS) and Dust Extraction Systems(DES) are installed and in use to control the coal dust in CHP area.
  - Dust suppression systems are installed and in use in coal handling area including coal stock yard area for control of coal dust.
  - Road vacuum cleaner are deployed regularly for cleaning of road
  - Sprinkling of water regularly in dust prone area of the plant like ESP, AHP etc.
  - Fly ash being transported through piping to Ash Silos.
  - Dry Fly ash is disposed from Silo to different agencies on sale/free basis by directly discharging ash from silos into Bulkers wherein chance of spillage of ash is nominal.
  - Most of the area of Ash Pond is kept covered with water and vegetation so that pond ash does not become air borne.
  - Pond Ash is disposed through trucks after properly covering with tarpaulin and tying up with ropes to avoid any chance of spillage of ash during transportation.
  - Water spraying is done on Fly ash dropping from silos. These are collected and disposed in ash ponds.
  - Sprinkling of water is being done daily at regular intervals in the Ash pond, Silo area etc.
  - Wheels of vehicles are being washed by water in routine.
  - About 700 acre of green belt provided all along the thermal power plant.
3. M/s Jhajjar Power Ltd. (CLP India) has set up the Mahatma Gandhi Thermal Power Plant (MGTPP) comprising of 1320 MW (2x660MW) coal based power project located at Village Khanpur, Distt. Jhajjar Haryana. Jhajjar Power Ltd. has utilized

100% of ash generated from the power plant upto July 15, 2019 and submitted necessary tie ups to utilize 100% ash which will be generated during the financial year 2019-20 and beyond. Unit has submitted the current status of the fly ash generation, disposal, management and action plan for disposal of fly ash along with timelines which is annexed as **Annexure-2** and the details is as under:-

**Fly ash generation and utilization:-**

Year	Fly Ash Generation Lakh (MT)	Fly Ash Lakh Utilization (MT)	% Utilization
2017-18	18.739	14.309	76%
2018-19	16.48	22.57	137%
2019-20 <sup>\$</sup>	0.516	1.055	204%

<sup>\$</sup> Data till July 25, 2019.

**Fly ash utilization action plan (2019-20):-**

S. No.	Description	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total Fly Ash Utilization in FY 2019-20
A	Ash Generation (Fly Ash+Bed Ash)	MT	394,844	375,317	379,545	449,208	1,598,823
B	Ash Utilization	MT					
	Cement Manufacturing	MT	347,170	317,785	321,509	384,287	1,370,751
i)	Brick Manufacturing	MT	-	-	-	-	-
ii)	Ready Mix Concrete	MT	-	-	-	-	-
iii)	Low Lying are filling/Area Development	MT	-	-	-	-	-
iv)	Road Construction	MT	548,150	67,531	37,945	22,460**	676,086
v)	Filling of abandoned stone quarry	MT	-	-	-	-	-
vi)	Mines void filling	MT	-	-	-	-	-
vii)	Agriculture Utilisation	MT	-	-	-	-	-
viii)	If any other area (specify): traders	MT	17,680	20,000	20,000	20,000	77,680
C	Ash Utilization percentage	%	231%	108%	100%	95%	138%

## **Control measures taken by the unit to prevent environment pollution:-**

- Combination of High efficiency Electrostatic Precipitators and fabric filters installed for better control of particulate emission from Chimneys.
- Low NOX burner installed ensuring lowest NO2 emissions.
- Flue gas Desulphurization (FGD) during project construction stage to comply with SOX norms. It may be noted that JPL currently is the only power plant in the Delhi-NCR region which has operational FGD since 1<sup>st</sup> Feb, 2019.
- HDPE linings have been provided at the bottom of the ash disposal site, to prevent any leaching into the ground water.
- Monitoring of groundwater in and around the ash disposal site is conducted regularly through piezometers and observation wells. Periodic reports are being submitted to State Pollution Control Board.
- Compaction of ash is done on a continuous basis, to reduce fugitive ash emission.
- Phase wise grassing is carried out over the areas where ash is stored, up to the top of the ash disposal site.
- Manual and automated water sprinkling arrangements have been made, to control fugitive ash emissions.
- Over 18,000 trees have been planted around the ash disposal site periphery, which acts as a natural against fugitive ash emissions.
- Prior to existing the plant premises, all bulkers carrying ash, are cleaned thoroughly at designated cleaning areas. This ensures that any remnants of ash, on the exterior walls of the bulkers, are washed away.
- Ash from the ash disposal site, which is lifted through trailers and dumpers (Hywa), are covered by tarpaulin.
- Periodic training and awareness sessions, on handling and transportation of ash, are conducted within the plant premises.
- Appropriate personal protective equipment is used for carrying our activities associated with ash.

4. (i) That in compliance of Hon'ble court order dated 01.07.2019, M/s Indira Gandhi Super Thermal Power Project (IGSTPP) was visited by concerned field officer and field attendant on 24 & 25.07.2019 and collected the samples of air emissions and ambient air quality of the area of above said unit and as per analysis report released by Board's lab vide report No. 79-80-81 dt. 07.08.2019 as under and within the prescribed norms.

(a) Result of source of Air Emission (Boiler)

Sr. No.	Parameters	Result-79	Result-80	Result-81	Permissible limits
1	Location of the sampling point	Unit-1	Unit-II	Unit-III	-----
2	Suspended Particulate Matter Mg/m3	36.1	40.8	42.6	50.0
3	Sulphur dioxide mg/m3	80.0	120.0	160.0	200.00
4	Oxides of Nitrogen mg/m3	190.0	240.0	250.0	300.0
5	Actual time of sampling	45 mints	----	-----	----
6	Flow rate of SPM (LPM)	24	26	25	
7	Total volume for air sampled for SPM (m3)	1.08	1.17	1.12	
8	Average ambient temperature (0C)	31	31	31	
9	Name of Plant Section	<b>Boiler</b>	<b>Boiler</b>	<b>Boiler</b>	

(b) Results of Ambient Air Quality

Sr. No.	Parameters	Result-82	Result-83	Result-84	Result-85	Result-86	Result-87	Result-88	Result-89	Result-90	Permissible limits
1	Location of the sampling point	Ambient									---
2	Suspended Particulate Matter (PM10) ug/m3	72.9	79.7	72.3	80.0	73.7	79.4	78.1	78.2	74.6	100
3	Suspended Particulate Matter (PM2.5) ug/m3	38.1	----	----	34.0	----	----	40.9	----	----	60.0
4	Sulphur dioxide ug/m3	14.0	16.0	12.0	16.0	10.0	14.0	16.0	18.0	12.0	80.0
5	Oxide of Nitrogen ug/m3	12.0	14.0	12.0	22.0	18.0	20.0	22.0	20.0	16.0	80.0
6	Ozone (O3) ug/m3	25.0	35.0	20.0	35.0	22.0	28.0	32.0	34.0	30	180
7	Ammonia (NH3) ug/m3	30.0	45.0	35.0	48.0	34.0	39.0	48.0	44.0	39.0	400.0
8	Actual time of sampling	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	----
9	Flow rate of SPM (LPM) PM10	120m3/mint	1.175m3/mint	1.18m3.mint	1.0m3/mint	----	----	1.20m3/mint	1.225 m3/min t	1.20m3/mint	
10	Flow rate of SPM (LPM) PM2.5	1.0m3/mint	----	----	1.0m3/mint	----	----	1.0m3/mint	----	----	
11	Total volume for air sampled for SPM (m3) PM 10	576	564	566.4	600	624	566.4	576	588	576	
12	Total volume for air sampled for SPM (m3) PM 2.5	1440.0	---	----	1440.0	----	----	1440.0	----	----	
13	Average ambient temperature (oC)	27	33	----	27	33	----	27	33	----	
14	Name of Plant Section	Ambie nt	Ambient	Ambie nt	Ambient	Ambie nt	Ambie nt	Ambient	Ambie nt	Ambie nt	

Copy of Analysis reports are attached as annexure – 3.

(ii) M/s Jhajjar Power Ltd. (CLP India (P) Ltd) was visited on 25 & 26.07.2019 and collected the samples of air emissions & ambient air quality of area of above said unit and as per analysis reports released by Board's lab vide his report No. 91-92 dt. 07.08.2019 are as under and within prescribed norms.

(a) Result of source of Air Emission (Boiler)

Sr. No.	Parameters	Result-91	Result-92	Permissible limits
1	Location of the sampling point	Unit-1	Unit-II	-----
2	Suspended Particulate Matter Mg/m <sup>3</sup>	38.5	37.0	50.0
3	Sulphur dioxide mg/m <sup>3</sup>	170.0	140.0	200
4	Oxides of Nitrogen mg/m <sup>3</sup>	260.0	210.0	300.0
5	Actual time of sampling	45 mints	45 mints	----
6	Flow rate of SPM (LPM)	30	27	
7	Total volume for air sampled for SPM (m <sup>3</sup> )	1.35	1.215	
8	Average ambient temperature (0C)	30	30	
9	Name of Plant Section	<b>Boiler</b>	<b>Boiler</b>	

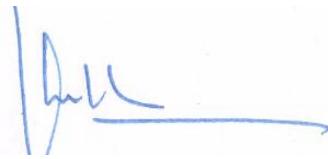
(b) Result of Ambient Air Quality

Sr. No.	Parameters	Result-93	Result-94	Result-95	Result-96	Result-97	Result-98	Result-99	Result-100	Result-101	Permissible limits
1	Location of the sampling point	AAQ									---
2	Suspended Particulate Matter (PM10) ug/m <sup>3</sup>	60.8	71.0	75.6	77.3	78.7	83.3	78.3	76.9	66.0	100
3	Suspended Particulate Matter (PM2.5) ug/m <sup>3</sup>	42.3	----	----	34.0	----	----	36.8	----	----	60.0
4	Sulphur dioxide ug/m <sup>3</sup>	8.0	12.0	16.0	10.0	14.0	18.0	18.0	14.0	10.0	80.0
5	Oxide of Nitrogen ug/m <sup>3</sup>	10.0	18.0	22.0	12.0	18.0	20.0	20.0	18.0	12.0	80.0
6	Ozone (O <sub>3</sub> ) ug/m <sup>3</sup>	25.0	32.0	35.0	28.0	34.0	38.0	33.0	29.0	22.0	180
7	Ammonia (NH <sub>3</sub> ) ug/m <sup>3</sup>	34.0	42.0	48.0	32.0	38.0	44.0	46.0	38.0	32.0	400.0
8	Actual time of sampling	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	----
9	Flow rate of SPM (LPM) PM10	1.3m <sup>3</sup> /mint	1.32 m <sup>3</sup> /mint	1.35m <sup>3</sup> /mint	1.4m <sup>3</sup> /mint	1.35m <sup>3</sup> /mint	1.4m <sup>3</sup> /mint	1.25m <sup>3</sup> /mint	1.3m <sup>3</sup> /mint	1.325 m <sup>3</sup> /mint	
10	Flow rate of SPM (LPM) PM2.5	1.0m <sup>3</sup> /mint	----	----	1.0m <sup>3</sup> /mint	----	----	1.0m <sup>3</sup> /mint	----	----	
11	Total volume for air sampled for SPM (m <sup>3</sup> ) PM 10	624	633.6	648	672	648	672	600	624	636	
12	Total volume for air sampled for SPM (m <sup>3</sup> ) PM 2.5	1440.0	---	----	1440.0	----	----	1440.0	----	----	
13	Average ambient temperature (oC)	29	33	----	29	33	----	29	33	----	
14	Name of Plant Section	Ambient	Ambient	Ambient	Ambient	Ambient	Ambient	Ambient	Ambient	Ambient	

Copy of Analysis reports are attached as annexure – 4.

It is further intimated that both the units have installed proper air pollution control measures to control the air emission effectively. Copy of analysis reports are enclosed as **Annexure- 3 & 4.**

The report is submitted accordingly for kind consideration. It is undertaken to comply with the directions passed by this Hon'ble Tribunal.



Regional Officer, Bahadurgarh Region  
Haryana State Pollution Control Board

Place: Bahadugarh  
Date: 22.10.2019

**Report pertaining to IGSTPP(3x500 MW),APCPL, Jhajjar on the current status of fly ash disposal, management and action plan along with time lines**

**Introduction**

Indira Gandhi Super Thermal Power Project (IGSTPP), Jhajjar at village Jharli, Haryana is a 3x500 MW coal based station owned by Aravali Power Company Private Limited (APCPL). APCPL is a joint venture of NTPC (50%),IPGCL(25%)&HPGCL(25%). Environment protection & management is an inherent feature of the company and since the inception of its project IGSTPP, all efforts are being made to minimize the impact of its plant operations on surrounding environment and concerned ecosystem. The efforts made by the company to control Air Emission, water pollution and Real Time Environment Monitoring Systems are listed as under:

- Zero Liquid Discharge plant
- ESP with 99.9% efficiency in all three units ensuring emission of particulate matter in stack emission well within the specified emission limit
- About 700 Acres of green cover all along the plant.
- On line Continuous Emission Monitoring System(OCEMS)with remote calibration facility made available to CPCB & HSPCB. Ambient Air Quality Monitoring Station (AAQMS) data made available on public domain

An album of photographs giving a glimpse of lush green IGSTPP is enclosed for ready reference please.

**Ash Disposal at IGSTPP**

Ash generated in course of power production may be categorised as Fly Ash and Bottom Ash which are in the ratio of approx. 80% and 20% respectively.

**Fly Ash :** Fly Ash i.e. 80% part is normally being evacuated from Silos and is being filled in bulkers. There is provision for disposal of unutilized fly ash in Ash Pond in the form of high concentration slurry and the dried slurry is disposed from there subsequently for its utilization.

**Bottom Ash :** The bottom ash i.e. 20% part is being disposed in ash ponds in the form of water mixed slurry and once the same is dried up, it is disposed from there for its utilization.

There are three ponds i.e. pond for discharging bottom ash and HCSD fly ash in IGSTPP i.e. Pond – I, Pond – IIA, and Pond – III. The evacuation of Fly Ash from silos started in August 2013 through bulkers. Prior to this, the entire produced Ash (Fly Ash and Bottom Ash) was being disposed into ash pond. Resultantly, old stored ash is available in the Ponds (Namely as pond ash).

The existing ash available in these ponds has been discharged in slurry form. Ash stored in Pond I & Pond III are in moist condition and are mostly covered with water and vegetation which prevent ash contained in them to become air borne. The ash evacuation is being carried out from Ash Pond II A taking every precautions that environment is not affected during the evacuation. Trucks are allowed to exit only after properly covering with tarpaulin and tying up with ropes, water spraying in the pond ash loading area and on connecting roads are carried out on continuous basis to ensure against ash getting air borne to contiguous area during loading and transportation. More than 30,000 trees are standing around ash pond which are also working as screen for any dust movement.

**Current Status of Ash Disposal :**

- The ash utilized in financial year 2017-18 is 68.93%.
- The ash utilization in financial year 2018-19 is 103.40%.
- The ash utilization in financial year 2019-20 (as on 30th. June, 2019) is shown in table below:

**Table-1 Ash utilization in FY 2019-20 till 30th June**

Sl. No	Period	Ash Generation (Lakh MT)			Ash Utilization (Lakh MT)			Total Ash utilization i.e. Fly Ash and stored pond Ash. (%)
		Fly Ash	Bottom Ash (sent to pond)	Total	Fly Ash	Pond ash	Total	
1	FY2019-20 (As on 30th June 2019)	1.59	0.39	1.98	1.59	1.72	3.31	167%  (it includes 100% of fly ash being generated and backlog of pond ash)

### Action plan for pond ash utilization with Time Lines:

**Pond-I** is presently in service and partially filled up with approx. 18 Lakh MT ash. Hence, it is not possible to evacuate this ash right now. It will be evacuated in the financial year 2022-23 after changing over the discharge of ash slurry to another pond i.e. pond -III and when the slurry therein get dried up.

**Pond-IIA** This pond contains approx 10.5 Lakh MT HCSD fly ash out of which 3 LMT ash is required along inner periphery of dyke bund for preventing erosion of bund base. The evacuation of ash is under progress by agencies listed in Annexure-A and expected to be completed by March, 2021.

**Pond-III** has approx 28 Lakh MT mixed ash. As 03 Lakh MT ash is to be kept along inner periphery of dyke bund for preventing erosion of bund base, hence issuable ash is approx. 25 Lakh MT only. LOAs for evacuation of 10 Lakh MT have been awarded to different agencies listed in Annexure-B. Balance 15 Lakh MT of Pond-III ash evacuation is being tied-up with NHAI for different road projects. Evacuation completion is expected by August, 2021.

Thus it is apparent that as on 30.06.2019, out of available 56.5 Lakh MT ash in IGSTPP ponds,  $18+3+3=24$  Lakh MT cannot be disposed because Pond I containing 18 Lakh MT is in service and 3 Lakh MT ash in Pond II A and Pond III shall be required along inner periphery of dyke bund for preventing erosion of bund base . As such IGSTPP needs to dispose balance  $32.5(56.5-24)$  Lakh MT Ash. The available disposable Ash quantity and its disposal plan are brought out in table below:

**Table-2 Pond Ash Quantity Disposal Plan (Disposable Ash approx 32.5 Lakh MT)**

Sl. No.	Pond	Qty (Lakh MT)	Expected Evacuation	Remarks
1.	Pond-I	18	<ul style="list-style-type: none"><li>In Service, hence evacuation will be started in financial year 2022-23, when the pond is isolated from the service.</li></ul>	<ul style="list-style-type: none"><li>Disposal of 18LakhMT is not immediately feasible as this Pond is in service</li></ul>
2.	Pond-IIA	10.5	<ul style="list-style-type: none"><li>3 Lakh MT ash is required along inner periphery of dyke bund for preventing erosion of bund base.</li><li>The evacuation of remaining</li></ul>	<ul style="list-style-type: none"><li>7.5LakhMT is being disposed by 28 number agencies as per Annexure-A</li><li>Expected evacuation by</li></ul>

			<p>7.5 Lakh MT is under progress by 28 number agencies as per Annexure-A</p> <ul style="list-style-type: none"> <li>• Expected evacuation by March, 2021.</li> </ul>	<p>March, 2021</p>
3.	Pond-III	28	<ul style="list-style-type: none"> <li>• Out of 28 Lakh MT, 3 Lakh MT ash is required along inner periphery of dyke bund for preventing erosion of bund base.</li> <li>• For the evacuation of remaining 25 Lakh MT <ul style="list-style-type: none"> <li>a) Contracts for evacuating 10 Lakh MT have been awarded to 20 number agencies as per Annex-B and</li> <li>b) Tie up for 15 Lakh MT ash evacuation by NHAI is under process for different NHAI road projects.</li> </ul> </li> <li>• Evacuation completion is expected by August, 2021.</li> </ul>	<ul style="list-style-type: none"> <li>• 25 Lakh MT is to be disposed by 20 number agencies as per Annexure-B and NHAI</li> <li>• Expected evacuation by August, 2021</li> </ul>

### Action plan for Fly ash utilization

Fly Ash is being evacuated in real time basis, simultaneously with the production. It is being evacuated mainly from Silos and is being filled in bulkers of various agencies to be taken by them for their use. Contracts have been awarded for this purpose to 33 agencies as per Annexure-C for entire estimated yearly production.

## Air Quality Management

IGSTPP has taken adequate measures for controlling Air Quality, mainly as given below:

### **Coal handling plant Area**

- High efficiency Electrostatic Precipitators with 99.9% efficiency are installed in all three units to ensure minimal particulate emission from Chimneys.
- Dry Fog Dust Suppression systems (DFDS) and Dust Extraction Systems (DES) are installed and in use to control the coal dust in CHP area.
- Dust suppression systems are installed and in use in coal handling area including coal stock yard area for control of coal dust.
- Road vacuum cleaner is deployed regularly for cleaning of road

### **Ash handling plant Area**

- Sprinkling of water regularly in dust prone area of the plant like ESP, AHP etc.
- Fly ash being transported through piping to Ash Silos.

### **Ash Utilization Area**

- **Disposal of Fly Ash:** Dry Fly ash is disposed from Silo to different agencies on sale/free basis by directly discharging ash from silos into Bulkers wherein chance of spillage of ash is nominal. Ash loading area below the silos have been surrounded by screens to ensure against any ash getting air borne to contiguous area during loading of the Ash Bulkers
- Most of the area of Ash Pond is kept covered with water and vegetation so that pond ash does not become air borne.
- **Disposal of Pond Ash:** Pond Ash is disposed through trucks after properly covering with tarpaulin and tying up with ropes to avoid any chance of spillage of ash during transportation.
- Water spraying is done on Fly ash dropping from silos. These are collected and disposed in ash ponds.
- Sprinkling of water is being done daily at regular intervals in the Ash pond, Silo area etc.
- Wheels of vehicles are being washed by water in routine.

**ANNEXURE-A**  
**Pond Ash Allocation from POND-IIA**  
**CRN - 3016, LOA Dated :- 11.09.2018**

Sr. No.	Party Name	LOA No.	Qty. in MT
1	Ashok Fly Ash Bricks Industries	3205	10000
2	Fincrete Eco Blocks Pvt. Ltd.	3206	36000
3	HIL Limited	3207	36000
4	Jai Shivam Industries	3208	10000
5	Jakhar Construction	3209	6290
6	Khanak Blocks & Bricks	3210	4000
7	J. K. Cement Works Jharli	3211	25000
8	JK Lakshmi Cement Ltd.	3212	25000
9	Ronak Brick Industry	3213	5000
10	Magicrete Building Solutions Pvt. Ltd.	3214	150000
11	Sai Cement Product	3215	10000
12	Shiv Shakti Enterprises	3216	10000
13	Shree Balaji Fly Ash Bricks and Interlocking Tiles	3217	50000
14	Shree Cement Limited	3218	10000
15	Shri Balaji Enterprises	3219	10000
16	Singla Bricks industries	3220	5000
17	Srishti Colonisers & Developers Pvt. Ltd.	3221	15000
18	SS Fly Ash Bricks	3222	5000
19	Ultratech Cement Limited (Kotputli)	3223	180000
20	Ultratech Cement Limited (Jhajjar)	3224	80000
21	Galaxy Bricks & Tiles	3225	36000
22	Nuvoco Vistas Corp. Ltd.	3226	75000
23	Daksh Enterprises	3227	15000
24	Shree Ram Traders & Manufacturing	3228	10000
25	S.K. Enterprises	3229	6000
	Total		824290

**CRN – 3134, LOA Dated :- 17.05.2019**

1	NEW DERIVATIVES CHEMICALS PRIVATE LIMITED	3402	6000
2	LAKSHMI BRICKS UDHOG	3403	10000
3	DAKSH ENTERPRISES	3404	50000
	Total		66000
	Grand Total		890290

*[Handwritten Signature]*

*[Handwritten Signature]*

(Approx. 8.90 LAKH MT)

**ANNEXURE-B****Pond Ash Allocation from Pond I & III****CRN - 2859, Dated :- 22.06.2018**

Sr.No.	Party Name	LOA No	Pond Ash Qty. 3Year
1	New Derivaties Chemicals Private Limited	3134	18000
2	Daksh Enterprises	3135	45000
3	Singla Brick Industries	3136	15000
4	Srishti Coloniser & Developers Pvt. Ltd.	3137	60000
5	S S Fly Ash Bricks	3138	30000
6	Shiv Shakti Enterprises	3139	45000
7	Sai Cement Product	3140	45000
8	Jai Shivam Industries	3141	21000
9	Magicrete Building Solution Pvt. Ltd.	3142	50000
10	J K Lakshmi Cement Ltd.	3143	150000
11	J K Cement Works	3144	150000
12	Lakshmi Bricks Udyog	3145	30000
13	Naresh Contractor	3146	30000
14	Bharat Trading Company	3147	30000
15	T G Enterprises	3148	126000
16	Rajesh Trading Company	3149	60000
17	Bala Ji Bhatha Company	3150	30000
18	Padam Logistics	3151	21000
19	Jai Baba Bhagwan Dass Enterprises	3152	30000
20	Anil Buildtech	3135	15000
	<b>Total</b>		<b>1001000</b>

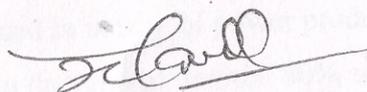
*[Handwritten Signature]*

*[Handwritten Signature]*

(10 Lakh MT)

**ANNEXURE-C****Fly Ash Allocation****CRN - 3132, Dated :- 24.06.2019**

SL. NO.	AGENCY NAME	ALLOCATED QUANTITY(IN MT)	LOA NO
1	ANIL BUILDTECH	17842	3431
2	ARIHANT ENTERPRISES	53527	3447
3	ASHTCH ENTERPRISES	16058	3437
4	ASHTECH INDIA PRIVATE LIMITED	133819	3425
5	ASHTECH INDUSTRIES PRIVATE LIMITED	44606	3436
6	BALAJI TRADERS	10705	3448
7	BHARAT TRADING COMPNAY	10705	3433
8	GAHLAWAT ENTERPRISES	22303	3441
9	GOLYAN BUILDERS	10705	3442
10	GOYAT ENTERPRISES	17842	3451
11	JAGRITI BRICKS PRIVATE LIMITED	22303	3450
12	JDC FLYASH LLP	10705	3449
13	KANAHIYA LAL ENTERPRISES	10727	3457
14	LG FLYASH BRICKS	10705	3445
15	NARESH CONTRACTORS	10705	3434
16	POWERMECH ENGINEERING SOLUTIONS	10705	3452
17	R/S DAYAL ENTERPRISES	26763	3443
18	ROSHAN ENTERPRISES	10705	3453
19	S.K. TRADERS	10705	3455
20	SAINATH ENTERPRISES	35685	3438
21	SANDEEP WATER SUPPLY	13381	3444
22	SANWAL ENTERPRISES	10705	3440
23	SHREE ASHTECH PRIVATE LIMITED	133819	3427
24	SHREE CEMENT LIMITED	53527	3426
25	SHREE RAM CONCRETE	31224	3446
26	SHREE SHYAM ENTERPRISES	11597	3454
27	SHRI DEV ENTERPRISES	107055	3432
28	SILVER ARROW	17842	3435
29	SR ENTERPRISES	13381	3429
30	VERMA CONSTRUCTION COMPANY	44606	3428
31	VERMA ENTERPRISES	53527	3430
32	VERMA TRADING COMPANY	22303	3456
33	VIJAYSTAMBH TRADERS PRIVATE LIMITED	89213	3439
		1100000	



(11 Lakh MT)



Our Ref : JPL/HSPCB/ENV/09916

Date : July 24, 2019

Annexure-2

The Regional Officer  
Haryana State Pollution Control Board  
Regional Office, SCF No. 42 & 43, Shopping Centre,  
Sector-6, Huda, Bahadurgarh.  
E-mail: [hspcbrobdh@gmail.com](mailto:hspcbrobdh@gmail.com)

**Subject:** Report on the current status of the fly ash disposal and management and action plan along with timelines, in line with the directions of the Honorable National Green Tribunal vide its order dated July 01, 2019 in Original Application no.834/2018.

**Ref:** Order passed by the National Green Tribunal in Original Application no.834/2018, dated July 01, 2019(Order), a copy of which is attached herewith.

Dear Sir,

In furtherance to the directions of the Order passed by the Hon'ble National Green Tribunal, we, Jhajjar Power Limited, hereby submit our report in relation to the current status of fly ash disposal and management action plan, along with timelines.

At the outset, we, Jhajjar Power Limited, are conversant with the challenges faced in the meeting the national interest of generating electricity, versus sustainable development. Pursuant thereof, we at Jhajjar Power Limited, have always and continue to be fastidious in our environmental endeavors.

We draw your attention to the various correspondences and documents shared by us periodically with your good office, to apprise you about the status of the ash generated, utilized and storage at our power plant, as well as the steps taken by us to ensure ash utilizations and the challenges faces in relation to the same.

We would like to bring to your kind attention that, Jhajjar Power Limited has utilized 100 % of ash generated from the power plant, right from inception up to July 15, 2019. Further, JPL's successful efforts and the corresponding results, have been elaborated in the aforementioned report.

We hereby request that this representation, is considered to be the fulfillment of the requirements of the Order. We assure you that Jhajjar Power Limited accords high priority to all matter concerning the environment, including all instructions/guidelines provided by your good office.

Further, we are willing to provide any other document or clarification, that may be required by your good office, in relation to the subject matter hereof.

We humbly submit this letter for your kind perusal and onward transmission to the Honorable National Green Tribunal at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in).

Thanking you.

Yours sincerely,

Jhajjar Power Limited

Atanu Ghosh Chowdhury  
Sr. Vice President - Operations

Enclosed: Annexure I - Report on the current status of the fly ash disposal and management and action plan along with timelines.

Jhajjar Power Limited (A CLP India Company)

Registered Office: Village Khanpur, Tahsil Matenhail, District Jhajjar, Haryana 124 142, India

T: +91 1251 270 100 F: +91 1251 270 105

Corporate Office: 7th Floor, Fulcrum, Sahar Road, Andheri (East), Mumbai - 400 099, India

T: +91 22 6758 8888 F: +91 22 6758 8811/8833 W: [www.clpgroup.com](http://www.clpgroup.com), [www.clpindia.in](http://www.clpindia.in)

CIN No. : U40104HR2008SGC037809

A Member of CLP Group



## ANNEXURE I

### Report on Current Status of Fly Ash Disposal and Management Action Plan Along with Timelines

#### Introduction:

Jhajjar Power Limited (JPL), has set up the Mahatma Gandhi Thermal Power Plant (MGTPP), comprising of 1,320 MW (2 x 660 MW) coal-based power project, located at Village Khanpur, Dist. Jhajjar, Haryana. This project was built under the Case-2 bidding guidelines of Ministry of Power, where Haryana Power Generation Corporation Limited (HPGCL) acting as a bid process coordinator on behalf of the Procurers of power (Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) & Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL)) arranged, inter alia, environmental clearance, land, water and coal linkage. Parent company of JPL, CLP India was the successful bidder by quoting the lowest tariff and was awarded the contract.

From the very inception of the power plant, JPL has always committed to and endeavors to meet the norms laid down by the Ministry of Environment, Forest and Climate Change (MOEF). A few key highlights of our endeavors are provided below; Additionally, as seem below, a few were beyond the norms applicable at the time of commission of the power plant:

- Boilers with supercritical technology for higher efficiency,
- Zero Liquid discharge from the plant,
- A combination of ESP and Fabric Filters for better control of SPM,
- Low NO<sub>x</sub> burner ensuring one of the lowest NO<sub>2</sub> emission in the country.
- Flue Gas Desulphurization (FGD) during project construction stage to comply with SO<sub>x</sub> norms, as and when required. It may be noted that JPL currently is the only power plant in the NCR which has an operational FGD.

Jhajjar Power Limited accords high priority to all matter concerning the environment, including all instructions/guidelines provided by your good office, as well as the MOEF norms.. Our efforts in this regard, have been captured below.

#### Current Status of Ash Disposal:

Jhajjar Power Limited has utilized 100 % of ash generated from the power plant, right from inception up to July 15, 2019. For the ash generated beyond the said date, JPL has undertaking various measures as detailed in the following sections, to meet the norms laid by the MOEF, in relation to ash utilization.

#### Ash Disposal Action Plan:

1. JPL has operational contracts with cement companies, for the utilization of dry fly ash. The fly ash is being evacuate directly from the ash silo. Kindly note that the total contracted quantity, exceeds the estimated generation from JPL's power plant.
2. JPL regularly allocates quantities of ash to brick manufacturers and cement companies.
3. JPL has two operational agreements with road and other construction companies, for the offtake of ash .



### Management of Ash at JPL:

In addition to the above, the temporary residual stock of ash (rolling stock) , if any, is being stored safely in a scientific manner. JPL has undertaken the following measures, to ensure scientific storage of the ash, within the Ash Disposal Site:

- a) HDPE linings have been provided at the bottom of the ash disposal site, to prevent any leaching into the ground water;
- b) Monitoring of groundwater in and around the ash disposal site is conducted regularly through piezometers and observation wells. Periodic reports are being submitted to State Pollution Control Board;
- c) Compaction of ash is done on a continuous basis, to reduce fugitive ash emission;
- d) Phase wise grassing is carried out over the areas where ash is stored, up to the top of the ash disposal site;
- e) Manual and automated water sprinkling arrangement have been made, to control fugitive ash emission;
- f) Over 18,000 trees have been planted around the ash disposal site periphery, which acts as a natural against fugitive ash emission;
- g) Fly ash from the ash silos, is transported through enclosed bulkers. Further, dust extraction systems are operated during loading, to arrest fugitive ash emissions;
- h) Prior to exiting the plant premises, all bulkers carrying ash, are cleaned thoroughly at designated cleaning areas. This ensures that remnants of ash, on the exterior walls of the bulkers, are washed away;
- i) Ash from the ash disposal site, which is lifted through trailers and dumpers (Hywa), are covered by tarpaulin.
- j) Periodic training and awareness sessions, on handling and transportation of ash, are conducted within the plant premises;
- k) Appropriate personal protective equipment is used for carrying our activities associated with ash.

### Continuous Efforts Towards 100% Ash utilization

JPL always endeavors to ensure environmental care during the operations of the power plant. JPL is taking the following measures, to achieving 100% Ash utilization:

- a) JPL regularly coordinates with various Government authorities, including the State Public Works Department (PWD) and National Highway Authority of India (NHAI), to keep them apprised of the availability of ash. JPL regularly places requests before such authorities, to connect JPL with interested third parties, to utilize the ash stored in the ash disposal site, including on free of cost basis for construction of road or fly over bridges. As on result of



these efforts, JPL has entered into an agreement with a third party, to utilize ash which is expected to be generated from the power plant during next year, in the construction of a *road over bridge* project, near Rewari, Haryana.

- b) As on date, JPL has tied-up with various cement manufacturers, for 100% fly ash generated from the power plant.
- c) JPL has tie-ups with a few traders, who are engaged in the business of supplying fly ash to ready mix concrete plants.
- d) Lastly, JPL has allocated ash to various brick manufacturers within the vicinity of the power plant, who have been off-taking ash, as per their requirement.

#### Timelines

As Jhajar Power Limited has utilized 100 % of ash generated from the power plant, up to July 15, 2019, we shall continue to be compliant with the timelines provided in the MOEF norms.

For Jhajar Power Ltd.  
Authorized Signatory



PREVENT  
POLLUTION

Annexure - 03

Form IV  
(See Rule 14)

Report No: - 91-92

Dated: - 07.08.2019

I hereby, certify that I **Ramniwas Sharma**, Board Analyst duly appointed under sub section (2) of section 29 of the Air (Prevention and Control of Pollution) Act 1981 (14 of 1981) received on the 26<sup>th</sup> day of July 2019 from **Sh.Ranbir Singh, (SC-B)** a sample of Air emission of **M/S Jhajjar Power Ltd., (CLP India (P) Ltd.) Vill-Khanpur, Distt. Jhajjar**. Collected on 25.07.2019 from stack attached to **Boiler** for analysis. The sample was in a condition fit for analysis reported below--

I have certify that I have analyzed the above mentioned sample from 26.07.2019 to 07.08.2019 and declare the result of analysis to be as follows:

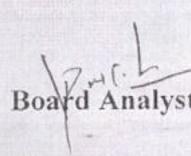
Sr. No.	Parameters	Result-91	Result-92	Permissible Limit	Test Method
1.	Location of the sampling point & Time	Unit-I 12:15pm	Unit-II 1:25pm	----	As per relevant parts of IS: 5182 (Part-II, IV, VI) and Emission regulation part-III of CPCB.
2.	Suspended Particulate Matter mg/m <sup>3</sup>	38.5	37.0	50.0	
3.	Sulphur dioxide mg/m <sup>3</sup>	170.0	140.0	200	
4.	Oxides of Nitrogen mg/m <sup>3</sup>	260.0	210.0	300	
5.	Actual time of Sampling	45 mints	45 mints	----	
6.	Flow rate of SPM (LPM)	30	27		
7.	Total volume for air sampled for SPM (m <sup>3</sup> )	1.35	1.215		
8.	Average ambient temperature (°C)	30	30		
9.	Name of Plant Section	<b>Boiler</b>	<b>Boiler</b>		

The Conditions of the seals, listening and container on receipt was as follows:

Container had its seal found intact and in order, slip on the container had the signature of the representative of the industry and the Board.

Signed this, 07<sup>th</sup> August 2019.

Laboratory of the  
Haryana State Pollution Control Board,  
Bays No. B-7-8, Urban Estate-II, Hisar  
Hisar Laboratory, Hisar

  
Board Analyst

To  
The Member Secretary,  
Haryana State Pollution Control Board,  
Panchkula

CC- Regional Office, HSPCB, Bahadurgarh.

This test report relate only to the particular sample submitted for testing

Page 01 of 04



**Form IV**  
(See Rule 14)

Report No: - 93-94-95

Dated: - 07.08.2019

I hereby, certify that I **Ramniwas Sharma**, Board Analyst duly appointed under sub section (2) of section 29 of the Air (Prevention and Control of Pollution) Act 1981 (14 of 1981) received on the **26<sup>th</sup> day of July 2019** from **Sh.Ranbir Singh, (SC-B)** a sample of Air emission of **M/S Jhajjar Power Ltd, (CLP Indra (P) Ltd.,) Vill-Khanpur, Distt. Jhajjar**. Collected on 25.07.2019 from **Ambient** for analysis. The sample was in a condition fit for analysis reported below--

I have certify that I have analyzed the above mentioned sample from **26.07.2019 to 07.08.2019** and declare the result of analysis to be as follows:

Sr. No.	Parameters	Result-93	Result-94	Result-95	Permissible Limit	Test Method
1.	Location of the sampling point & Time	AAQ (9:30am on words for 24 hours)			-----	As per relevant parts of IS: 5182 (Part-II, IV, VI) and Emission regulation part-III of CPCB.
2.	Suspended Particulate Matter (PM10)ug/m <sup>3</sup>	60.8	71.0	75.6	100.0	
3.	Suspended Particulate Matter (PM2.5) ug/m <sup>3</sup>	42.3	-----	-----	60.0	
4.	Sulphur dioxide ug/m <sup>3</sup>	8.0	12.0	16.0	80.0	
5.	Oxides of Nitrogen ug/m <sup>3</sup>	10.0	18.0	22.0	80.0	
6.	Ozone ( O <sub>3</sub> ) ug/m <sup>3</sup>	25.0	32.0	35.0	180.0	
7.	Ammonia (NH <sub>3</sub> ) ug/m <sup>3</sup>	34.0	42.0	48.0	400.0	
8.	Actual time of Sampling	8 hours	8 hours	8 hours	-----	
9.	Flow rate of SPM (LPM) PM <sub>10</sub>	1.3m <sup>3</sup> /mint	1.32m <sup>3</sup> /mint	1.35m <sup>3</sup> /mint		
10.	Flow rate of SPM (LPM)PM <sub>2.5</sub>	1.0m <sup>3</sup> /mint	-----	-----		
11.	Total volume for air sampled for SPM (m3) PM <sub>10</sub>	624	633.6	648		
12.	Total volume for air sampled for SPM (m3) PM <sub>2.5</sub>	1440.0	-----	-----		
13.	Average ambient temperature (°C)	29	33	-----		
14.	Name of Plant Section	<b>Ambient</b>	<b>Ambient</b>	<b>Ambient</b>		

The Conditions of the seals, listening and container on receipt was as follows:

Container had its seal found intact and in order, slip on the container had the signature of the representative of the industry and the Board.

Signed this, **07<sup>th</sup> August 2019**,

Laboratory of the  
Haryana State Pollution Control Board,  
Bays No. B-7-8, Urban Estate-II, Hisar  
Hisar Laboratory, Hisar

*Ramniwas Sharma*  
**Board Analyst**

To  
The Member Secretary,  
Haryana State Pollution Control Board,  
Panchkula

CC- Regional Office, HSPCB, Bahadurgarh.



**Form IV**  
(See Rule 14)

Report No: - 96-97-98

Dated: - 07.08.2019

I hereby, certify that I **Ramniwas Sharma**, Board Analyst duly appointed under sub section (2) of section 29 of the Air (Prevention and Control of Pollution) Act 1981 (14 of 1981) received on the 27<sup>th</sup> day of July 2019 from **Sh.Ranbir Singh, (SC-B)** a sample of Air emission of **M/S Jhajjar Power Ltd, (CLP Indra (P) Ltd.,) Vill-Khanpur, Distt. Jhajjar**. Collected on 25.07.2019/26.07.2019 from Ambient for analysis. The sample was in a condition fit for analysis reported below--

I have certify that I have analyzed the above mentioned sample from 27.07.2019 to 07.08.2019 and declare the result of analysis to be as follows:

Sr. No.	Parameters	Result-96	Result-97	Result-98	Permissible Limit	Test Method
1.	Location of the sampling point	AAQ (10:15am onwards for 24 hours)			-----	
2.	Suspended Particulate Matter (PM10)ug/m <sup>3</sup>	77.3	78.7	83.3	100.0	As per relevant parts of IS: 5182 (Part-II, IV, VI) and Emission regulation part-III of CPCB.
3.	Suspended Particulate Matter (PM2.5) ug/m <sup>3</sup>	34.0	-----	-----	60.0	
4.	Sulphur dioxide ug/m <sup>3</sup>	10.0	14.0	18.0	80.0	
5.	Oxides of Nitrogen ug/m <sup>3</sup>	12.0	18.0	20.0	80.0	
6.	Ozone ( O <sub>3</sub> ) ug/m <sup>3</sup>	28.0	34.0	38.0	180.0	
7.	Ammonia (NH <sub>3</sub> ) ug/m <sup>3</sup>	32.0	38.0	44.0	400.0	
8.	Actual time of Sampling	8 hours	8 hours	8 hours	-----	
9.	Flow rate of SPM (LPM) PM <sub>10</sub>	1.4m <sup>3</sup> /mint	1.35 m <sup>3</sup> /mint	1.4 m <sup>3</sup> /mint		
10.	Flow rate of SPM (LPM) PM <sub>2.5</sub>	1.0m <sup>3</sup> /mint	-----	-----		
11.	Total volume for air sampled for SPM (m3) PM <sub>10</sub>	672	648	672		
12.	Total volume for air sampled for SPM (m3) PM <sub>2.5</sub>	1440.0	-----	-----		
13.	Average ambient temperature (°C)	29	33	-----		
14.	Name of Plant Section	<b>Ambient</b>	<b>Ambient</b>	<b>Ambient</b>		

The Conditions of the seals, listening and container on receipt was as follows:  
Container had its seal found intact and in order, slip on the container had the signature of the representative of the industry and the Board.

Signed this, 07<sup>th</sup> August 2019.  
Laboratory of the  
Haryana State Pollution Control Board,  
Bays No. B-7-8, Urban Estate-II, Hisar  
Hisar Laboratory, Hisar

*Ramniwas Sharma*  
Board Analyst

To  
The Member Secretary,  
Haryana State Pollution Control Board,  
Panchkula

CC- Regional Office, HSPCB, Bahadurgarh.



**Form IV**  
(See Rule 14)

Report No: - 99-100-101

Dated: - 07.08.2019

I hereby, certify that I **Ramniwas Sharma**, Board Analyst duly appointed under sub section (2) of section 29 of the Air (Prevention and Control of Pollution) Act 1981 (14 of 1981) received on the **27<sup>th</sup> day of July 2019** from **Sh.Ranbir Singh, (SC-B)** a sample of Air emission of **M/S Jhajjar Power Ltd, (CLP Indra (P) Ltd.,) Vill-Khanpur, Distt. Jhajjar**. Collected on 25.07.2019/26.07.2019 from **Ambient** for analysis. The sample was in a condition fit for analysis reported below--

I have certify that I have analyzed the above mentioned sample from **27.07.2019 to 07.08.2019** and declare the result of analysis to be as follows:

Sr. No.	Parameters	Result-99	Result-100	Result-101	Permissible Limit	Test Method
1.	Location of the sampling point	AAQ (11:05am onwards for 24 hours)			-----	As per relevant parts of IS: 5182 (Part-II, IV, VI) and Emission regulation part-III of CPCB.
2.	Suspended Particulate Matter (PM10)ug/m <sup>3</sup>	78.3	76.9	66.0	100.0	
3.	Suspended Particulate Matter (PM2.5) ug/m <sup>3</sup>	36.8	-----	-----	60.0	
4.	Sulphur dioxide ug/m <sup>3</sup>	18.0	14.0	10.0	80.0	
5.	Oxides of Nitrogen ug/m <sup>3</sup>	20.0	18.0	12.0	80.0	
6.	Ozone ( O <sub>3</sub> ) ug/m <sup>3</sup>	33.0	29.0	22.0	180.0	
7.	Ammonia (NH <sub>3</sub> ) ug/m <sup>3</sup>	46.0	38.0	32.0	400.0	
8.	Actual time of Sampling	8 hours	8 hours	8 hours	-----	
9.	Flow rate of SPM (LPM) PM <sub>10</sub>	1.25m <sup>3</sup> /mint	1.3 m <sup>3</sup> /mint	1.325 m <sup>3</sup> /mint		
10.	Flow rate of SPM (LPM) PM <sub>2.5</sub>	1.0m <sup>3</sup> /mint	-----	-----		
11.	Total volume for air sampled for SPM (m3) PM <sub>10</sub>	600	624	636		
12.	Total volume for air sampled for SPM (m3) PM <sub>2.5</sub>	1440.0	-----	-----		
13.	Average ambient temperature (°C)	29	33	-----		
14.	Name of Plant Section	<b>Ambient</b>	<b>Ambient</b>	<b>Ambient</b>		

The Conditions of the seals, listening and container on receipt was as follows:

Container had its seal found intact and in order, slip on the container had the signature of the representative of the industry and the Board.

Signed this, **07<sup>th</sup> August 2019**.

Laboratory of the  
Haryana State Pollution Control Board,  
Bays No. B-7-8, Urban Estate-II, Hisar  
Hisar Laboratory, Hisar

*[Signature]*  
**Board Analyst**

To

The Member Secretary,  
Haryana State Pollution Control Board,  
Panchkula

CC- Regional Office, HSPCB, Bahadurgarh.



**PREVENT  
POLLUTION**

*Annexure - 04*

**Form IV  
(See Rule 14)**

Report No: - 79-80-81

Dated: - 07.08.2019

I hereby, certify that I **Ramniwas Sharma**, Board Analyst duly appointed under sub section (2) of section 29 of the Air (Prevention and Control of Pollution) Act 1981 (14 of 1981) received on the 25<sup>th</sup> day of July 2019 from **Sh.Ranbir Singh, (SC-B)** a sample of Air emission of **M/S Indira Gandhi Super Thermal Power Station APCPL, Distt. Jhajjar**. Collected on 24.07.2019 from stack attached to Boiler for analysis. The sample was in a condition fit for analysis reported below--

I have certify that I have analyzed the above mentioned sample from 25.07.2019 to 07.08.2019 and declare the result of analysis to be as follows:

Sr. No.	Parameters	Result-79	Result-80	Result-81	Permissible Limit	Test Method
1.	Location of the sampling point & time	Unit-I 5:10pm	Unit-II 7:00pm	Unit-III 8:15	-----	As per relevant parts of IS: 5182 (Part-II, IV, VI) and Emission regulation part-III of CPCB.
2.	Suspended Particulate Matter mg/m <sup>3</sup>	36.1	40.8	42.6	50.0	
3.	Sulphur dioxide mg/m <sup>3</sup>	80.0	120.0	160.0	200.0	
4.	Oxides of Nitrogen mg/m <sup>3</sup>	190.0	240.0	250.0	300.0	
5.	Actual time of Sampling	45 mints	-----	-----	-----	
6.	Flow rate of SPM (LPM)	24	26	25		
7.	Total volume for air sampled for SPM (m <sup>3</sup> )	1.08	1.17	1.12		
8.	Average ambient temperature (°C)	31	31	31		
9.	Name of Plant Section	<b>Boiler</b>	<b>Boiler</b>	<b>Boiler</b>		

The Conditions of the seals, listening and container on receipt was as follows:

Container had its seal found intact and in order, slip on the container had the signature of the representative of the industry and the Board.

Signed this, **07<sup>th</sup> August 2019**.

Laboratory of the  
Haryana State Pollution Control Board,  
Bays No. B-7-8, Urban Estate-II, Hisar  
Hisar Laboratory, Hisar

*[Signature]*  
**Board Analyst**

To

The Member Secretary,  
Haryana State Pollution Control Board,  
Panchkula

CC- Regional Office, HSPCB, Bahadurgarh.

This test report relate only to the particular sample submitted for testing



Form IV  
(See Rule 14)

Report No: - 82-83-84

Dated: - 07.08.2019

I hereby, certify that I **Ramniwas Sharma**, Board Analyst duly appointed under sub section (2) of section 29 of the Air (Prevention and Control of Pollution) Act 1981 (14 of 1981) received on the **26<sup>th</sup> day of July 2019** from **Sh.Ranbir Singh, (SC-B)** a sample of Air emission of **M/S Indira Gandhi Super Thermal Power Station APCPL, Distt. Jhajjar**. Collected on **24.07.2019/25.07.2019** from **Ambient** for analysis. The sample was in a condition fit for analysis reported below--

I have certify that I have analyzed the above mentioned sample from **26.07.2019 to 07.08.2019** and declare the result of analysis to be as follows:

Sr. No.	Parameters	Result-82	Result-83	Result-84	Permissible Limit	Test Method
1.	Location of the sampling point & Time	<b>Ambient (11:40am on words for 24 Hours)</b>			----	As per relevant parts of IS: 5182 (Part-II, IV, VI) and Emission regulation part-III of CPCB.
2.	Suspended Particulate Matter (PM10)ug/m <sup>3</sup>	72.9	79.7	72.3	100.0	
3.	Suspended Particulate Matter (PM2.5) ug/m <sup>3</sup>	38.1	----	----	60.0	
4.	Sulphur dioxide ug/m <sup>3</sup>	14.0	16.0	12.0	80.0	
5.	Oxides of Nitrogen ug/m <sup>3</sup>	12.0	14.0	12.0	80.0	
6.	Ozone ( O <sub>3</sub> ) ug/m <sup>3</sup>	25.0	35.0	20.0	180.0	
7.	Ammonia (NH <sub>3</sub> ) ug/m <sup>3</sup>	30.0	45.0	35.0	400.0	
8.	Actual time of Sampling	8 hours	8 hours	8 hours	----	
9.	Flow rate of SPM (LPM)PM <sub>10</sub>	1.20m <sup>3</sup> /mint	1.175m <sup>3</sup> /mint	1.18. m <sup>3</sup> /mint		
10.	Flow rate of SPM (LPM) PM <sub>2.5</sub>	1.0m <sup>3</sup> /mint	----	----		
11.	Total volume for air sampled for SPM (m3) PM <sub>10</sub>	576	564	566.4		
12.	Total volume for air sampled for SPM (m3) PM <sub>2.5</sub>	1440.0	----	----		
13.	Average ambient temperature (°C)	27	33	----		
14.	Name of Plant Section	<b>Ambient</b>	<b>Ambient</b>	<b>Ambient</b>		

The Conditions of the seals, listening and container on receipt was as follows:

Container had its seal found intact and in order, slip on the container had the signature of the representative of the industry and the Board.

Signed this, **07<sup>th</sup> August 2019**.

Laboratory of the  
Haryana State Pollution Control Board,  
Bays No. B-7-8, Urban Estate-II, Hisar  
Hisar Laboratory, Hisar

*Ramniwas Sharma*  
Board Analyst

To

The Member Secretary,  
Haryana State Pollution Control Board,  
Panchkula

CC- Regional Office, HSPCB, Bahadurgarh.



**Form IV**  
(See Rule 14)

Report No: - 85-86-87

Dated: - 07.08.2019

I hereby, certify that I **Ramniwas Sharma**, Board Analyst duly appointed under sub section (2) of section 29 of the Air (Prevention and Control of Pollution) Act 1981 (14 of 1981) received on the 26<sup>th</sup> day of July 2019 from **Sh.Ranbir Singh, (SC-B)** a sample of Air emission of **M/S Indira Gandhi Super Thermal Power Station APCPL, Distt. Jhajjar**. Collected on 24.07.2019/25.07.2019 from Ambient for analysis. The sample was in a condition fit for analysis reported below--

I have certify that I have analyzed the above mentioned sample from 26.07.2019 to 07.08.2019 and declare the result of analysis to be as follows:

Sr. No.	Parameters	Result-85	Result-86	Result-87	Permissible Limit	Test Method
1.	Location of the sampling point & Time	Ambient (11:00am on words for 24 Hours)			----	As per relevant parts of IS: 5182 (Part-II, IV, VI) and Emission regulation part-III of CPCB.
2.	Suspended Particulate Matter (PM10)ug/m <sup>3</sup>	80.0	73.7	79.4	100.0	
3.	Suspended Particulate Matter (PM2.5) ug/m <sup>3</sup>	34.0	----	----	60.0	
4.	Sulphur dioxide ug/m <sup>3</sup>	15.0	10.0	14.0	80.0	
5.	Oxides of Nitrogen ug/m <sup>3</sup>	22.0	18.0	20.0	80.0	
6.	Ozone ( O <sub>3</sub> ) ug/m <sup>3</sup>	35.0	22.0	28.0	180.0	
7.	Ammonia (NH <sub>3</sub> ) ug/m <sup>3</sup>	48.0	34.0	39.0	400.0	
8.	Flow rate of SPM (LPM) PM <sub>10</sub>	1.25m <sup>3</sup> /mint	1.30m <sup>3</sup> /mint	1.18m <sup>3</sup> /mint		
9.	Flow rate of SPM (LPM) PM <sub>2.5</sub>	1.0m <sup>3</sup> /mint	-----	-----		
10.	Actual time of Sampling	8 hours	8 hours	8 hours	----	
11.	Total volume for air sampled for SPM (m3) PM <sub>10</sub>	600	624	566.4		
12.	Total volume for air sampled for SPM (m3) PM <sub>2.5</sub>	1440.0	-----	-----		
13.	Average ambient temperature (°C)	27	33	-----		
14.	Name of Plant Section	Ambient	Ambient	Ambient		

The Conditions of the seals, listening and container on receipt was as follows:

Container had its seal found intact and in order, slip on the container had the signature of the representative of the industry and the Board.

Signed this, 07<sup>th</sup> August 2019.

Laboratory of the  
Haryana State Pollution Control Board,  
Bays No. B-7-8, Urban Estate-II, Hisar  
Hisar Laboratory, Hisar

*[Signature]*  
**Board Analyst**

To  
The Member Secretary,  
Haryana State Pollution Control Board,  
Panchkula

CC- Regional Office, HSPCB, Bahadurgarh.

This test report relate only to the particular sample submitted for testing



**Form IV**  
(See Rule 14)

Report No: - 88-89-90

Dated: - 07.08.2019

I hereby, certify that I **Ramniwas Sharma**, Board Analyst duly appointed under sub section (2) of section 29 of the Air (Prevention and Control of Pollution) Act 1981 (14 of 1981) received on the **26<sup>th</sup> day of July 2019** from **Sh.Ranbir Singh, (SC-B)** a sample of Air emission of **M/S Indira Gandhi Super Thermal Power Station APCPL, Distt. Jhajjar**. Collected on **24.07.2019/25.07.2019** from **Ambient** for analysis. The sample was in a condition fit for analysis reported below--

I have certify that I have analyzed the above mentioned sample from **26.07.2019 to 07.08.2019** and declare the result of analysis to be as follows:

Sr. No.	Parameters	Result-88	Result-89	Result-90	Permissible Limit	Test Method
1.	Location of the sampling point & Time	<b>Ambient (12:30am on words for 24 Hours)</b>			----	As per relevant parts of IS: 5182 (Part-II, IV, VI) and Emission regulation part-III of CPCB.
2.	Suspended Particulate Matter (PM10)ug/m <sup>3</sup>	78.1	78.2	74.6	100.0	
3.	Suspended Particulate Matter (PM2.5) ug/m <sup>3</sup>	40.9	----	----	60.0	
4.	Sulphur dioxide ug/m <sup>3</sup>	16.0	18.0	12.0	80.0	
5.	Oxides of Nitrogen ug/m <sup>3</sup>	22.0	20.0	16.0	80.0	
6.	Ozone ( O <sub>3</sub> ) ug/m <sup>3</sup>	32.0	34.0	30.	180.0	
7.	Ammonia (NH <sub>3</sub> ) ug/m <sup>3</sup>	48.0	44.0	39.0	400.0	
8.	Actual time of Sampling	8 hours	8 hours	8 hours	----	
9.	Flow rate of SPM (LPM) PM <sub>10</sub>	1.20m <sup>3</sup> /mint	1.225m <sup>3</sup> /mint	1.20m <sup>3</sup> /mint		
10.	Flow rate of SPM (LPM) PM <sub>2.5</sub>	1.0m <sup>3</sup> /mint	-----	-----		
11.	Total volume for air sampled for SPM (m3) PM <sub>10</sub>	576	588	576		
12.	Total volume for air sampled for SPM (m3) PM <sub>2.5</sub>	1440.0	-----	-----		
13.	Average ambient temperature (°C)	27	33	----		
14.	Name of Plant Section	<b>Ambient</b>	<b>Ambient</b>	<b>Ambient</b>		

The Conditions of the seals, listening and container on receipt was as follows:

Container had its seal found intact and in order, slip on the container had the signature of the representative of the industry and the Board.

Signed this, **07<sup>th</sup> August 2019**.

Laboratory of the  
Haryana State Pollution Control Board,  
Bays No. B-7-8, Urban Estate-II, Hisar  
Hisar Laboratory, Hisar

*Ramniwas Sharma*  
**Board Analyst**

To  
The Member Secretary,  
Haryana State Pollution Control Board,  
Panchkula

CC- Regional Office, HSPCB, Bahadurgarh.

This test report relate only to the particular sample submitted for testing

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