

**BEFORE THE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI**

I.A. NO. 337/2019
In
O.A NO 164/2018
(EARLIER O.A NO. 276/2013)

IN THE MATTER OF:-

ASHWANI KUMAR DUBEY

APPLICANT

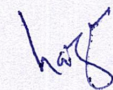
VS.

UNION OF INDIA & ORS.

RESPONDENTS

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**NAZIMUDDIN
SCIENTIST-E
CENTRAL POLLUTION CONTROL BOARD,
PARIVESH BHAWAN, EAST ARJUN NAGAR,
DELHI-110032.**

DATE: 17.07.2019
PLACE: DELHI

Joint Inspection Report

Submitted in Reference to

**Hon'ble National Green Tribunal (NGT) Principal
Bench, New Delhi order dated 21.05.2019**

In the Matter of

I.A. No. 337/2019

In O.A.No.164 of 2018 (Earlier O.A. No. 276/2013)

Ashwani Kumar Dubey

Vs.

Union of India & Ors.

Members of the Team

1. Sh Sunil Kumar Meena Scientist 'D', CPCB, Regional Directorate, Bhopal
2. Sh K L Choudhary, Regional Officer, MPPCB, Singrauli, Madhya Pradesh

Joint Inspection Report in compliance of Hon'ble NGT Principal Bench order dated 20th May 2019 in I.A. 337/2019 (O.A. 164/2018)
Ashwani Kumar Dubey Vs Union of India & Ors.

In compliance with the Hon'ble National Green Tribunal (NGT) Principal Bench (PB) order dated 20.05.2019 in I.A. 337/2019 (O.A. 164/2018) Ashwani Kumar Dubey Vs Union of India & Ors., a joint inspection was carried out by the following officials of CPCB & MPPCB during 4th -5th July 2019 of the M/s Essar Power (M.P.) Ltd – Mahan Power, Singraulli (Madhya Pradesh):

1. Sh Sunil Kumar Meena Scientist 'D', CPCB, Regional Directorate, Bhopal
2. Sh K L Choudhary, Regional Officer, MPPCB, Singraulli, Madhya Pradesh

Representative of M/s Essar Power (M.P.) Ltd Sh M K Sharma, Chief Operating Officer & Sh J S Saran, Head Health, Safety, Environment & Fire (HSEF) were present during the inspection.

The team restricted its inspection to verify the compliance status of consent conditions, mitigation measures adopted for coal transportation & pucca road constructed so far., in compliance of the Hon'ble NGT order viz

"The applicant while seeking permission to continue coal transportation has not pointed out any mitigation measures nor indicated the extent of coal to be transported. We find that in the consent to operate order dated 01.09.2018 of the Madhya Pradesh Pollution Control Board (MPPCB), there is a specific requirement that all internal roads should be made pucca to control emission of particulate matter generated due to coal transportation which has not been done. It is not clear as to how many roads have been made pucca after eight months of the condition imposed while granting consent to operate.

Let the Central Pollution Control Board (CPCB) and the State Pollution Control Board may furnish a report about compliance of consent conditions and by way of response to the prayer of the applicant.”

1. Coal requirement and its transportation

M/s Essar Power (M.P.) Ltd, Bandhora, Singrauli was accorded environmental clearance on 20.4.2007 for 2000MW (4x500MW) capacity thermal power plant from MoEF&CC with the condition to obtain coal through conveyor from Mahan Coal Block which was at a distance of 3-4 kms (Copy enclosed as **Annexure-1a**). Later on the capacity of the plant was changed from 4x500MW to 3x600MW vide MoEF letter dated 10.02.2009 (Copy enclosed as **Annexure-1b**). Vide MoEF letter dated 23.08.2013, industry was allowed to change in source of coal from Indonesia (M/s PT Virema Impex) for an interim period not exceeding 03 years till Mahan Coal Block becomes operational. (Copy enclosed as **Annexure-1c**). Meanwhile, Hon'ble Supreme Court, vide its order dated 24.09.2014 (reported as (2014) 9 SCC 614) cancelled all the coal blocks including Mahan Coal Block. Later on, industry's EC was extended till 19.4.2017 vide MoEF letter dated 8.4.2016; with an amendment in EC to source the coal from captive Tokisud mine & e-auction in addition to the imported coal till 22.08.2016 (Copy enclosed as **Annexure-1d**).

On the day of inspection i.e. 04.07.2019, Unit#2 was in operation on about 250MW load. It was informed by the industrial representative that to operate the plant of 2x600MW capacity they are dependent on the coal which is e-auctioned by Ministry of Coal from various subsidiaries of Coal India Limited; and receiving coal from 12 different locations via road transport only.

As per the coal transportation records of FY 2018-19, industry has received **23,18,686 MT** of coal from following Northern Coalfield Ltd. mines, siding & other places (includes coal from Central Coalfield Ltd & traders i.e. Amera, Tata

kuju, Balrampur, Magadh, Sikni mines etc.) against its full load requirement of 5.5MMT/annum:

S.No.	Name of Mine/siding/others	Road Distance from industry	Coal received in % during FY 2018-19
1.	Amlohri mine	101 KMs	20%
2.	Khadiya mine	110 KMs	22%
3.	Kakri mine	104 KMs	5%
4.	Jhingurda mine	85 KMs	9%
5.	Krishnashila mine	107 KMs	10%
6.	Dudhichua mine	113 KMs	2%
7.	Jayant mine	84 KMs	5%
8.	Bina mine	107 KMs	3%
9.	Gorbi mine	69 KMs	1%
10.	Mahan II CG mine	210 KMs	3%
11.	Mahdeiya coal siding	65 KMs	11%
12.	Gajra Bahra coal siding	16 KMs	6%
13.	Other roads (includes coal from Central Coalfield Ltd & traders i.e. Amera, Tata kaju, Balrampur, Magadh, Sikni mines etc.)	--	3%

During FY 2019-20 (April to June 2019); industry has received **5,99,065MT** coal from various sources as tabulated above. Industry has stopped coal from Mahdeiya coal siding since Feb 2019; whereas lifting coal from nearby coal siding i.e. Gajra Bahra from Dec 2018. Records of coal transportation during FY 2018-19 & FY 2019-20 along with the road map are enclosed as **Annexure-2**. It is pertinent to mention that 82% of the coal is transported through road. Rest of the 18% is transported via railway upto the siding & thereby upto the industry by road. Currently, in absence of linkage coal or dedicated mine; industry needs to obtain total of 5.5MMT coal; if run on full load (2x600MW).

As discussed with industry official, on an average 10000MT/day of coal is transported via road either from mine itself upto the industry or from railway siding upto the industry which requires about 400 trucks fleet daily. Individual truck travel minimum distance of 16kms to 210 kms on the availability of coal.

2. Road used for coal transportation, road constructed and repair so far

M/s Essar Power (M.P.) Ltd, Singraulli is transporting coal through various road routes either from mine area or siding area. Following are few details of road routes which are being used by industry enclosed as **Annexure-2.**:

S.No.	Road Route	Approximate length in Kilometer	Road constructed by/under
1.	Essar Power plant to Rajmilan	12.5 kms	Pradhan Mantri Gramin Sadak Yojna (PMGSY)
2.	Rajmilan to Parsona	12 kms	Public Works Department (PWD)
3.	Garakhand to GajraBahra turn	11 kms	Madhya Pradesh Road Development Corporation (MPRDC)
4.	Bargawa to Parsona to Majan Chowk to Jayant to Shaktinagar to Audi Chowk to Jhingurda	68 kms	National Highway (NH) 39
5.	Shukla chowk to Bargawa	31 kms	State Highway
6.	Shukla chowk to Jayant West stockyard to Jayant	13 kms	State Highway
7.	GajraBahra turn to Gajra Bahra coal siding	1.5 kms	Constructed by industry

All the roads are black topped (bitumen) other than the GajraBahra turn to Gajra Bahra coal siding road which is Water Bound Macadam (WBM) road constructed by industry itself before Sept 2018.

Regarding the road constructed and repaired by industry itself; team had discussion with industrial representatives & it was informed that since the year 2010 till 2018, industry has constructed various roads but no such new road was constructed after the issuance of MPPCB Consent to Operate (CTO) i.e. on 01.09.2018. The details of road construction, widening & repair since 2010 to 2019 are as given below:

Particulars	From	To	Length (Kms)	Width (Mtrs)	Construction Year
Road Construction	Parsona	Rajmilan	12	5.5	2010-11
	Rajmilan	Industry	12.5	5.5	2012-15
Road widening	Parsona	Industry	24.5	7.5	2016-2017 & 2019
Road Repairs	Parsona	Industry	24.5	7.5	2012-2014, 2016 & 2018-19

The details of internal pucca roads construction & repair are as tabulated below:

Particulars	Road constructed area	Length (Kms)	Width (Mtrs)	Construction year
Internal road construction	BTG area, reservoir area, DM plant	3.8	7.5	2010-13
	Gate-2 to WB & Coal transportation road Gate-1 to Gate-2 inside boundary	2.2	7.5	2014-16
	TG-2, AHP	2	7.5	2015-16
	CT, CHP	1.5	7.5	2017-18
Internal road repairs	BTG area	--	--	2011
	TG & ESP, CHP weigh bridge	--	--	2013 & 2015

The details of external & internal road construction, repair, work orders along with the internal road map is enclosed as **Annexure-3**. It is pertinent to mention that internal road from Gate no. 2 (Weigh Bridge) to Coal Handling area & road near ash pond are not pucca; which may generate fugitive dust emission during the movement of trucks during dry season if not kept moist by water sprinkling.

3. Mitigation measure adopted

For the coal transportation industry is majorly using public roads which fall under PWD, PMGSY, MPRDC, State Highway and National Highway. To minimize the dust emission during vehicles movement following mitigation measures are is adopted by industry and same were verified by the team during visit:

i. **External road construction, widening & repair**: Road from Parsona to M/s Essar Power (M.P.) Ltd was earlier constructed by PWD under PMGSY scheme of 24.5 kms length & 5.5mtrs width was constructed by industry during 2010 to 2015. Further it was widened to 7.5mtrs during 2016-17 & 2019. The road repairing work was also carried out during 2012-14, 2016 & 2018-19. Details are enclosed as **Annexure-3**. The entire length of road is bitumen coated which results in minimizing the dust emission during coal transportation.

ii. **Internal road construction & repair**:

Boiler, Turbine, Generator (BTG) area, Reservoir area, DM plant, Weigh bridge to Gate-2, Gate-1 to Gate-2, Ash Handling Area, Coal Handling Plant to cooling tower etc. internal roads of total 9.5Kms length of 7.5mtrs width were constructed between 2010 to 2018. Also the repairing work was done during 2011, 2013 & 2015. Details are enclosed as **Annexure-3**. *The internal roads from Weigh Bridge to Coal Handling Area and road near Ash pond are not concreted; that may results in increased dust emission during vehicle movement in these areas, if measures for dust mitigation are not taken.*

- iii. As informed & verified by team; the trucks carrying coal were covered with tarpaulin. However, ensuring tarpaulin cover all the time is hard to believe.
- iv. Sprinkling of water on road from water tankers on roads from Parsona, Rajmilan & Gadakhand on regular basis to avoid any fugitive emission of dust particle. Water sprinkling was observed near Parsona & Rajmilan road during the visit of the team.
- v. As informed by the representative of industry, around 1500 trees outside the plant area along the road from Parsona to Power plant were planted to minimize the air pollution.

vi. Mitigation measures at Gajra bahra coal siding

The team visited the coal siding at Gajra Bahra which is 16kms from industry. It was observed that following mitigation measure were taken by industry with the co-ordination of Indian Railway:

- i. Wind breaking wall of 680mtrs length & 10ft height of Corrugated Galvanized Iron (CGI) supported by MS angle has been erected around the siding area for containment of dust.
- ii. 68 water sprinkler installed along the length at 10mtrs gap. A water tanker is also engaged for extra water sprinkling requirement.
- iii. Unloading of coal was semi-mechanized. 02 pay-loader & 04 pocklain machines are in use to unload/load the coal
- iv. The GajraBahra turn to Gajra Bahra coal siding road which is Water Bound Macadam (WBM) road constructed by industry itself before Sept 2018 to minimize the dust emission.
- v. Row pattern plantation was under progress; 2-3ft plants were found planted near the wind braking wall.

It was observed that the weigh bridge was not in operation since last 12 days due to lightening, it was informed that meanwhile the records of coal received at industry are being maintained at plant Weigh Bridge. Secondly, no water meter was installed to verify the water used for sprinkling as official were unable to provide daily water use details. No facility was developed to collect the coal containing water i.e. settling tank. Photographs are enclosed as **Annexure-4**.

4. Compliance status of consent conditions

M/s Essar Power (M.P.) Ltd Unit#2 was in operation on about 250MW load during 4th-5th July 2019. The Unit#1 & #2 were commissioned in year 2013 & 2017 respectively of 600MW capacity each. The plant falls under sub-critical TPP having Pulverized Fuel Fire Boiler (PFFB) boiler. As reported by industrial representative; the average coal consumption per KWH was 0.72kg, 0.66kg & 0.63kg during FY 2016-17, 2017-18 and 2018-19 respectively. The ash content varied from 27% to 34% during last 3 financial years. Similarly the % sulphur content varied from 0.2 to 0.4%. The grade of coal as received was G7-G12. Daily water consumption is about 50MLD for process (Ash disposal), cooling, boiler & domestic use. The source of water is Govind Vallabh Pant reservoir (Rihand Reservoir).

Industry is having its valid consent to operate (CTO) under Air (Prevention & Control of Pollution) Act 1981 & Water (Prevention & Control of Pollution) Act 1974 upto 31.08.2019. The Hazardous Waste Authorization is also valid upto 31.12.2020.

The compliance of consent conditions given under CTO of MPPCB issued on 1.09.2018 for 2x600MW electricity generation is as below:

Conditions pertaining to Water (Prevention & Control of pollution) act 1974		
	Conditions	Compliance Status
1	The daily quantity of trade effluent shall not exceed 4320 KL/day, and the daily quantity of sewage shall not exceed 360 KL/day	Complying. As reported the waste water generated from Process, cooling & boiler is about 3700KLD & used in ash disposal. The sewage generation is about 190KLD.
2	Trade Effluent Treatment:- The applicant shall provide comprehensive effluent treatment system as per the proposal submitted to the Board and maintain the same properly to achieve following standards. pH-5.5 -9.0 Suspended Solids < 100 mg/l. BOD 3 Days 27 ⁰ C < 30 mg/l. COD < 250 mg/l. Oil & Grease < 10 mg/l. TDS < 2100 mg/l. Chlorides < 1000 mg/l. For other parameters general standards of discharge as notified under EP Act 1986 shall be applicable.	Complying. Industry has 2000KL capacity guard pond where boiler blow down, DM plant regeneration, Condensate Polishing unit water is treated. The treated effluent is reused in ash disposal. One year (August 2018-June 2019) treated effluent water quality data were assessed. Industry has installed OCEMS of Shimadzu TOC-4000 make & Yokogawa for continuous monitoring of the effluent parameters. The one year data of treated effluent were found in limits. Results are enclosed as Annexure-5.
3	Sewage Treatment: - The applicant shall provide comprehensive sewage treatment system as per the proposal submitted to the Board and maintain the same properly to achieve following standards. pH - 5.5 -9.0 Suspended Solids < 10 mg/l. BOD 3 Days 27 Deg.C < 10 mg/l. COD < 50 mg/l, NH4-N < 5 mg/l, N-Total < 10 mg/l. FC- < 230 (MPN/100 ml) PO4-P < 2 mg/l.	Not Complying. Industry has established 25KLD compact STP; which was found not in operation as the effluent was dark black in color & was smelly as no aeration was going on. Photographs enclosed as Annexure-4.
4	The effluent shall be treated up to prescribed Standards and reuse in the process, for cooling and for green belt devolvement/gardening within premises. Hence zero discharge condition shall be practiced. In no case treated effluent shall be discharged outside of industry/unit premises. As per MoEF&CC Notification No. 3305 (E) dated 7/12/15, the industry shall have to switch its Once Through Cooling (OTC), if any, and install Cooling Tower(s) and achieve specific water consumption up to a maximum of 3.5 m3/MWh with in two years i.e. by 6,December 2017.	Complying. Industry has 2000KL capacity guard pond where boiler blow down, DM plant regeneration, Condensate Polishing unit water is treated. The treated effluent is reused in ash disposal. The industry has installed 4 cooling tower (02 for each unit) & as reported industry has achieved specific water consumption about 2.7L per KWH.

5	Water meter preferably electromagnetic/ultrasonic type with digital flow recording facilities shall be installed separately for category wise consumption of water as Water (Prevention and Control of Pollution) Cess Act 77 for Industrial cooling/boiler feed, mine spray, process & domestic purposes and data shall be submitted online through XGN monthly statements. The industry/unit shall also monitor the treated wastewater flow and report the same online through monthly statements.	Complying. Water meters installed & periodically reports are submitted.
6	Any change in production capacity, process, raw material used etc. and for any enhancement of the above prior permission of the Board shall be obtained. All authorized discharges shall be consistent with terms and conditions of this consent. Facility expansions, production increases or process modifications which result new or increased discharges of pollutants must be reported by submission of a fresh consent application for prior permission of the Board.	-General Statement- Industry ensures that it will comply the condition regularly.
7	All treatment/control facilities/systems installed or used by the applicant shall be regularly maintained in good working order and operate effectively/efficiently to achieve compliance of the terms and conditions of this consent.	-General Statement- Industry ensures that it will comply the condition regularly.
8	The specific effluent limitations and pollution control systems applicable to the discharge permitted herein are set forth as above conditions.	-General Statement- Industry ensures that it will comply the condition regularly.
9	Compilation of Monitoring data:- i. Samples and measurements taken to meet the monitoring requirements shall be representative of the volume and nature of monitored discharge. ii. Following promulgation of guidelines establishing test procedures for the analysis of pollutants, all sampling and analytical methods used to meet the monitoring requirements specified above shall conform to such guidelines unless otherwise specified sampling and analytical methods shall conform to the latest edition of the Indian Standard specifications and where it is not specified the guidelines as per standard methods for the examination of Water and Waste latest edition of the APHA shall be used. iii. The applicant shall take samples and measurement to meet the monthly requirements specified above and report online through XGN the same to the Board.	Complying. Industry submits reports periodically to the board.

10	<p>Recording of Monitoring activities & result:-</p> <p>i. The applicant shall make and maintain online records of all information resulting from monitoring activities by this Consent.</p> <p>ii. The applicant shall record for each measurement of samples taken pursuant to the requirements of this Consent as follows:</p> <p>(i) The date, exact place and time of sampling (ii) The dates on which analysis were performed (iii) Who performed the analysis? (iv) The analytical techniques or methods used and (v) The result of all required analysis</p> <p>iii. If the applicant monitors any Pollutant more frequently as is by this Consent he shall include the results of such monitoring in the calculation and reporting of values required in the discharge monitoring reports which may be prescribed by the Board. Such increased frequency shall be indicated on the Discharge Monitoring Report Form.</p> <p>iv. The applicant shall retain for a minimum of 3 years all records of monitoring activities including all records of Calibration and maintenance of instrumentation and original strip chart regarding continuous monitoring instrumentation. The period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the applicant or when requested by Central or State Board or the court.</p>	<p>Complying. Industry keeps the monitoring records as per the conditions. A copy of format is enclosed as Annexure-6.</p>
11	<p>Reporting of Monitoring Results:-</p> <p>Monitoring Information required by this Consent shall be summarized and reported by submitting a Discharge Monitoring report on line to the Board.</p>	<p>Complying. As informed, inline of the renewal application of CTO, the reports are submitted online.</p>
12	<p>Limitation of discharge of oil Hazardous Substance in harmful quantities:-</p> <p>The applicant shall not discharge oil or other hazardous substances in quantities defined as harmful in relevant regulations into natural water course. Nothing in this Consent shall be deemed to preclude the institution of any legal action nor relive the applicant from any responsibilities, liabilities, or penalties to which the applicant is or may be subject to clauses.</p>	<p>Complying. The Hazardous Waste Authorization is valid upto 31.12.2020.</p>
13	<p>Limitation of visible floating solids and foam:</p> <p>During the period beginning date of issuance the applicant shall not discharge floating solids or visible foam.</p>	<p>Complying. Industry is reusing its treated effluent in ash slurry preparation.</p>

14	<p>Disposal of Collected Solid- All hazardous waste/sludge shall be disposed of as per the Authorization issued under Hazd & other waste Rules 2016. And/other Solids Sludges, dirt, silt or other pollutant separated from or resulting from treatment shall be disposed of in such a manner as to prevent any pollutant from such materials from entering any such water Any live fish, Shall fish or other animal collected or trapped as a result of intake water screening or treatment may be returned to eaters body habitat.</p>	<p>Complying. The Hazardous Waste Authorization is valid upto 31.12.2020. Industry is reusing its treated effluent in ash slurry preparation.</p>
15	<p>Provision for Electric Power Failure- The applicant shall assure to the consent issuing authority that the applicant has installed or provided for an alternative electric power source sufficient to operate all facilities utilized by the applicant to maintain compliance with the terms and conditions of the Consent.</p>	<p>Complying.</p>
16	<p>Prohibition of Bypass of treatment facilities system- The diversion or by-pass of any discharge from facilities utilized by the applicant to maintain compliance with the terms and conditions of this Consent in prohibited except: i. where unavoidable to prevent loss of life or severe property damage, or ii. Where excessive storm drainage or run off would damage any facilities necessary for compliance with the terms and conditions of this Consent. The applicant shall immediately notify the consent issuing authorities in writing of each such diversion or by-pass in accordance with the procedure specified above for reporting non-compliance</p>	<p>-General Statement- Industry ensures that it will comply the condition regularly.</p>
17	<p>Industry shall submit the information online through XGN in reference to compliance of consent conditions.</p>	<p>Complying.</p>
<p>Additional Water condition:- (if any) :-</p>		
1	<p>All the recommendations made in the Charter on Corporate Responsibilities for Environment Protection (CREP) for thermal power sector shall be strictly implemented.</p>	<p>Complying. Industry ensures that it will comply the condition regularly.</p>

2	Industry shall comply with the parameters notified in the Environment (Protection) Rules, 1986 notified by G.S.R. 3305(E) 7/12/15 for Thermal Power Plants.	Complying. Industry ensures that it will comply the condition regularly.
3	The effluent will be treated in ETP and be used in ash slurry preparation, dust suppression and plantation. The domestic effluent of plant and colony will be treated through sewage treatment plant and will be used within factory premises. Zero discharge condition shall be maintained.	Complying.
4	Industry shall provide adequate facility for the treatment of industrial (including the bleed from boiler house) and domestic waste water to ensure that the treated effluent quality meets the standards prescribed by M. P. Pollution Control Board published in notification of Govt. of M. P. Gazette dated: 25/03/88.	Complying.
5	Industry shall maintain closed cycle system with cooling tower. Once through cooling if any shall not be used. All the cooling tower blow down shall be reused in fire fighting, service water, coal handling plant and ash handling after proper treatment.	Complying.
6	Regular reports for proximate and ultimate analysis of the coal for all parameters including mercury shall be submitted to the Board.	Complying. Copy of the report is enclosed Annexure-7.
7	The industry shall operate & maintain Ash Water Recirculation System (AWRS) to ensure 100% recirculation of overflow of the ash dyke. Industry shall make arrangement for transportation of fly ash to ash pond in the form of medium slurry mode system having 38% ash and 62% water as per MoEF directives.	Complying. Industry has AWRS in place and use the recirculating water in disposing the ash slurry in high slurry mode i.e. 60:40.
8	Water table depletion study in and around the project area shall be carried out by the project. All possible efforts including rain water harvesting to recharge ground water shall be taken up for the ground water enrichment in consultation with the Central Ground Water Authority.	Partially Complying. It was informed that presently unit has not carried out any GW depletion study around the plant as water table is just on the depth of 4-5mtrs. Secondly, as informed efforts are being made for rainwater harvesting.

9	Fly ash shall be collected in dry form and shall explore the possibility that storage facility (silo) of fly ash should be at least for one day. Un-utilized fly ash shall be disposed off in the ash pond in the form of high concentration slurry disposal. Industry shall also monitor mercury and other heavy metals (As, Hg, Cr, Pb etc.) in the bottom ash as also in the effluents from the ash pond. For disposal of ash in low lying area/mine for void filling prior permission from the Board be obtained, and conditions stipulated therein shall be followed.	Partially Complying. Unit has provided 6x1000MT capacity fly ash silo's along with 2x800MT bottom ash silo's to collect fly ash in dry form. As informed by RO, MPPCB, Singraulli, unit has not made communication for permission to fill the low-lying area with ash.
10	As per the MoEF & CC notification dated 2015, the unit shall have to convert the Once Through Cooling (OTC) if any, to Cooling Tower (CT) by 6th of December 2017, and shall have to achieve specific water consumption upto maximum of 3.5 m3/MWh.	Complying.
11	Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Ash pond water shall be re-circulated and utilized in the process or other beneficial purposes in the plant.	Complying.
12	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new peizometers in the vicinity of ash pond site.	Not complying. Unit has informed that are yet to establish the peizometers in the vicinity of ash pond site.
13	Industry shall regenerate the village ponds/surface water bodies located within 5 km radius of the project site as a part of its social welfare activities	Comply. Industry ensures that it will comply the condition regularly.
14	Industry shall make arrangement for transportation of fly ash to ash pond in the form of medium slurry mode system having 38% ash and 62% water as per MoEF amendment.	Complying. Industry is transporting fly ash in high concentration slurry form to ash pond.

Conditions pertaining to air (prevention & control of pollution) act 1981																					
CONDITIONS	COMPLIANCE STATUS																				
<p>1</p> <p>The applicant shall provide comprehensive air pollution control system consisting of control equipments as per the proposal submitted to the Board with reference to generation of emission and same shall be operated & maintained continuously so as to achieve the level of pollutants to the following standards:-</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Name of section</th> <th style="text-align: center;">Stack height (meters)</th> <th style="text-align: center;">Fuel</th> <th style="text-align: center;">Control equipment to be installed</th> <th style="text-align: center;">P.M, SOX, NOX(mg/NM3)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Boiler</td> <td style="text-align: center;">275 (Twin Flue)</td> <td style="text-align: center;">COAL</td> <td style="text-align: center;">Bag Filter, Dust Collector, Dust Suppressor, E.S.P, Green Belt, Low NO_x Burner, Water Sprinkler, Wind Breaking Wall.</td> <td style="text-align: center;">50, 200, 300 & 0.03 respectively to be achieved as notified by G.S.R. 3305 (E) dated: 07/12/2015 for Thermal Power Plants.</td> </tr> <tr> <td style="text-align: center;">Process Stack Attached to With Auxiliary Boiler</td> <td style="text-align: center;">42</td> <td style="text-align: center;">FO</td> <td style="text-align: center;">Green Belt, Stack Height</td> <td style="text-align: center;">---</td> </tr> <tr> <td style="text-align: center;">Fly Ash Handling, Loading-unloading, Haul road, Transportation, CHP etc</td> <td style="text-align: center;">---</td> <td style="text-align: center;">---</td> <td style="text-align: center;">Dust Extraction System comprising of Bag Filters, Dust Suppression System, Water sprinklers etc</td> <td style="text-align: center;">As per CPCB/MoEF guidelines.</td> </tr> </tbody> </table>	Name of section	Stack height (meters)	Fuel	Control equipment to be installed	P.M, SOX, NOX(mg/NM3)	Boiler	275 (Twin Flue)	COAL	Bag Filter, Dust Collector, Dust Suppressor, E.S.P, Green Belt, Low NO _x Burner, Water Sprinkler, Wind Breaking Wall.	50, 200, 300 & 0.03 respectively to be achieved as notified by G.S.R. 3305 (E) dated: 07/12/2015 for Thermal Power Plants.	Process Stack Attached to With Auxiliary Boiler	42	FO	Green Belt, Stack Height	---	Fly Ash Handling, Loading-unloading, Haul road, Transportation, CHP etc	---	---	Dust Extraction System comprising of Bag Filters, Dust Suppression System, Water sprinklers etc	As per CPCB/MoEF guidelines.	<p>Complying. Industry has provided 36 fields ESP in each unit (2x600MW) with Boiler stack of 275mtrs height.</p> <p>Dust extraction system & dust suppression system installed in coal handling plant.</p> <p>The industries OCEMS (ABB make) data for the year (August 2018-July 2019) are reporting the exceedance level of SOX. (Copy of the reports is enclosed as Annexure-8a.</p> <p>Industry is in process to install FGD system as per the MoEF notification/timeline.</p> <p>As informed Green belt is developed covering 95 ha area.</p>
Name of section	Stack height (meters)	Fuel	Control equipment to be installed	P.M, SOX, NOX(mg/NM3)																	
Boiler	275 (Twin Flue)	COAL	Bag Filter, Dust Collector, Dust Suppressor, E.S.P, Green Belt, Low NO _x Burner, Water Sprinkler, Wind Breaking Wall.	50, 200, 300 & 0.03 respectively to be achieved as notified by G.S.R. 3305 (E) dated: 07/12/2015 for Thermal Power Plants.																	
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<p>2</p> <p>Industry shall comply with the parameters notified in the Environment (Protection) Rules, 1996 notified by G.S.R.3305 (E) dated: 07/12/2015 for Thermal Power Plants and ensure the compliance of the emission standards latest by 6/12/17.</p>	<p>FGD installation is to be done as per revised MOEF timeline.</p>																				
<p>2</p> <p>Ambient air quality at the boundary of the industry/unit premises shall be monitored and reported to the Board regularly on quarterly basis: The Ambient air quality norms are prescribed in MoEF gazette notification no. GSR/826(E), dated:16/11/09. Some of the parameters are as follows:</p> <p>a. Particulate Matter (less than 10 micron) - 100 µg/m³ (PM10 µg/ m³24 hrs. basis)</p> <p>b. Particulate Matter (less than 2.5 micron) - 60 µg/ m³ (PM2.5 µg/ m³ 24 hrs. basis)</p> <p>c. Sulphur Dioxide (24 hrs. Basis) - 80 µg/ m³</p> <p>d. Nitrogen Oxides (24 hrs. Basis) - 80 µg/ m³</p> <p>e. Carbon Monoxide (8 hrs. Basis) - 2000 µg/ m³</p>	<p>Complying. Industry has installed 04 CAAQMS in plant boundary. (Details are enclosed as Annexure-9.</p>																				
<p>3</p> <p>The industry shall take adequate measures for control of noise level generated from industrial activities within the premises less than 75 dB(A) during day time and 70 dB(A) during night time.</p>	<p>Complying. Industry ensures that it will comply the condition regularly.</p>																				

4	Industry/Unit shall provide with each stack port hole with safe platform of 1 meter width with support & spiral ladder/Stepped ladder with hand rail up to monitoring platform as per specifications given in part-III emission regulation of CPCB. In no case monkey ladder shall be allowed as stack monitoring facility.	Complying.
5	The industry/unit shall make the necessary arrangements for control of the fugitive emission from any source of emission/section/activities.	Complying. Wetting of the surface during vehicle movement is in practice.
6	All other fugitive emission sources such as leakages, seepages, spillages etc. shall be ensured to be plugged or sealed or made airtight to avoid the public nuisance.	Complying. Industry ensures that it will comply the condition regularly.
7	The industry/ unit shall ensure all necessary arrangements for control of odour nuisance from the industrial activities or process within premises	Complying. Industry ensures that it will comply the condition regularly.
8	All the internal roads shall be made pucca to control the fugitive emissions of particulate matter generated due to transportation and internal movements. Good housekeeping practices shall be adopted to avoid leakages, seepages, spillages etc.	Partially Complying. Boiler, Turbine, Generator (BTG) area, Reservoir area, DM plant, Weigh bridge to Gate-2, Gate-1 to Gate-2, Ash Handling Area, Coal Handling Plant to cooling tower etc. internal roads of total 9.5Kms length of 7.5mtrs width were constructed 2010 to 2018. Also the repairing work was done during 2011, 2013 & 2015. Details are enclosed as Annexure-3 . <i>The internal roads from Weigh Bridge to Coal Handling Area and road near Ash pond are not concreted; that may results in increased dust emission during vehicle movement in these areas.</i>
9	Industry shall take effective steps for extensive tree plantation of the local tree species within or around the industry/unit premises for general improvement of environmental conditions and as stated in additional condition.	Complying. As informed by the representative of industry, around 1500 trees outside the plant area along the road from Parsona to Power plant were planted to minimize the air pollution. As informed Green belt is developed covering 95 ha area.

<i>Additional Air condition: for Control of Air Pollution</i>		
1	The industry shall have to ensure compliance of the directions issued by CPCB under section 5 of the EP Act, 1986 vide letter no. B-33014/07/2017-18/IPC-II/TPP/15895 dated 11/12/17 regarding compliance of emission standards pertaining to PM, SOx & NOx . FGD shall have to be installed within the time limits specified for the boiler. Immediate measures shall be taken by installation of low NOx burners, providing Over Fire Air (OFA) etc. for progressive reduction of NOx emission up to the specified limits by the year 2022. The PM emission has to be complied immediately.	FGD installation is to be done as per revised MOEF timeline
2	Industry should make appropriate arrangement for protection of the green belt. Massive plantation shall be undertaken under the guidance of forest Department/Horticulture expert. Local Species shall be planted all around the periphery of the industry as well as the ash dyke.	Complying. As informed by the representative of industry, around 1500 trees outside the plant area along the road from Parsona to Power plant were planted to minimize the air pollution. As informed Green belt is developed covering 95 ha area
3	Industry shall install CAAQMS stations at suitable locations to monitor ambient air quality and stack emission. The management shall provide and ensure uninterrupted connectivity of CAAQMS with Environment Surveillance Centre at the HQ of M.P. Pollution Control Board for monitoring and data transmission purpose. Similarly CEMS shall be provided to monitor the emissions at each stack and CEQMS shall be provided for the monitoring of treated effluent quality and uninterrupted connectivity with Environment Surveillance Centre at the HQ of M.P shall be provided.	Complying. Industry has installed 04 CAAQMS in plant boundary. (Details are enclosed as Annexure-9 . CEMS for emission & effluent are connected with CPCB & MPPCB server.
4	Access shall be provided to Environment Surveillance Centre of MPPCB for the remote calibration of the CAAQMS and CEMS within one month's time.	Not complying. Industry has established the remote calibration system of SWAN but yet to provide server connectivity for remote calibration.
5	The Industry shall install Outdoor HD Industrial grade IP(Internet Protocol) Cameras with pan-Tilt-Zoom(PTZ) feature, minimum focal length 5X with night vision facility and temper proof mechanism at suitable location to display all emission sources / stacks, coal yards coal conveyors / crushers and effluent discharge point and connect the same with Environment Surveillance Centre, MP Pollution control board Bhopal, and ensure its uninterrupted connectivity for remote Surveillance.	Complying.

6	Industry shall have to provide & operate adequate pollution control arrangement at all points and non-point sources. Suitable air pollution control equipment shall be installed for the control of fugitive emission during the handling/transportation of raw material and fly ash etc.	Partially Complying. The fugitive dust control system at Coal Handling area is not adequate. The internal road is not pucca as well as the Dust Suppression System at coal hopper area are not adequate.
7	In case of coal being imported industry shall install sulphur recovery system for control of sulphur dioxide emission. Provision for installation of sulphur recovery plant in future shall be made in the plant layout by leaving open space reserved for this purpose and Flue Gas Desulfurization Plant has to be installed in case the level of SO ₂ emissions do not meet the prescribed norms.	Not Applicable. Industry is obtaining coal from NCL, CCL etc. Coal is not imported.
8	Regular monitoring of ground level concentration of SO ₂ , NO _x , PM _{2.5} and PM ₁₀ and Hg shall be carried out in the impact zone and records shall be maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be taken immediately.	Complying.
9	Coal transportation to the plant site shall be undertaken by rail and no road transportation shall be undertaken as far as possible. The entire internal roads should be made pucca and good housekeeping practices shall be adopted.	During FY 2019-20 (April to June 2019); industry has received 5,99,065MT coal from various sources as tabulated above. Industry has stopped coal from Mahdeiya coal siding since Feb 2019; whereas lifting coal from nearby coal siding i.e. Gajra Bahra from Dec 2018. Records of coal transportation during FY 2018-19 & FY 2019-20 along with the road map are enclosed as Annexure-2 . It is pertinent to mention that 82% of the coal is transported through road. Rest of the 18% is transported via railway & road. Currently, in absence of linkage coal or dedicated mine; industry needs to obtain total of 5.5MMT coal via road only if run on full load (2x600MW). Boiler, Turbine, Generator (BTG) area, Reservoir area, DM plant, Weigh bridge to Gate-2, Gate-1 to Gate-2, Ash Handling Area, Coal Handling Plant to cooling tower etc. internal roads of total 9.5Kms length of 7.5mtrs width were constructed 2010 to 2018. Also the repairing work was done during 2011, 2013 & 2015. Details are enclosed as Annexure-3 . <i>The internal</i>

		<i>roads from Weigh Bridge to Coal Handling Area and road near Ash pond are not concreted; that may results in increased dust emission during vehicle movement in these areas.</i>
10	Industry shall install adequate dust extraction and dust suppression system to control fugitive emissions from the crushing house, dumper, conveyor belt, moving vehicles, pneumatic compressors, raw material handling and other vulnerable dusty areas.	Partially Complying. The fugitive dust control system at Coal Handling area is not adequate. The internal road is not pucca as well as the Dust Suppression System at coal hopper area are not adequate.
11	The industry shall ensure that any railway siding used / developed by it shall have proper dust control arrangements as well as consent under Water (P&CP)Act, 1974 & Air (P&CP)Act, 1981 from this Board. Coal handling, loading and unloading at the sidings shall be strictly as per the guidelines prepared by CPCB. The transportation of coal shall be done in fully mechanized trucks covered with tarpaulin. The roads for transportation shall be properly maintained and avenue plantation along it shall be undertaken.	Complying.
12	Rain water Harvesting shall be practiced in consultation with Central/State Ground Water authority and the scheme of the same shall be submitted to this office also.	It was informed that rain water harvesting is under Process
13	All other conditions provided by the GOI, MoEF&CC in the EC given to the industry, shall have to be complied with in toto.	Complying. Industry ensures that it will comply the condition regularly.
	GENERAL CONDITIONS:	COMPLIANCE STATUS
1	The industry management shall ensure all the compliances regarding disposal and utilization of fly ash from its TPP as stipulated in MoEF&CC notifications no. S.O. 763(E) dated 14/9/99 and its amendments vide notification no. s.o. 979(e) dated 27/8/03, s.o. 2804(e) dated 03/03/09 and s.o. 254(e) dated 25/1/16.	Partially Complying. As per the FY 2018-19 records, industry generated 0.56MMT ash out of which 86.42% was utilized in Brick manufacturing (0.003MMT), cement industries (0.17MMT), low lying area filling (0.11MMT) & ash dyke raising (0.2MMT). Details of Ash utilization are enclosed as Annexure-8.
2	For ensuring free delivery of fly ash within the radius of 100 km and up to 300 km radius to the prospective users as per respective clauses 2(10) & 2(14) of the Fly ash Notification, the industry management shall procure / make provision of the Bulkers / closed transport vehicles under its control to ensure fast and quick delivery of fly ash.	As per the FY 2018-19 records, industry generated 0.56MMT ash out of which 86.42% was utilized in Brick manufacturing (0.003MMT), cement industries (0.17MMT), low lying area filling (0.11MMT) & ash dyke raising (0.2MMT). Details of Ash utilization are enclosed as Annexure-8.

3	The industry management shall keep / maintain and update the record of all the prospective users of fly ash within the radius of 100 km, keep constant liaison with them, provide fly ash to them in a timely manner and will submit 3 monthly compliance report to the Board.	Complying. It was informed that records are being maintained and constant liaison is made with the prospective users.
4	Industry shall submit concrete time bound action plan for utilization of fly ash in compliance of fly ash notification as amended up to date. Other alternatives like setting up of clinker grinding unit, encouragement of ancillary units for ensuring use of fly ash for other building products. . Dry fly ash collection system shall be installed for regular disposal of generated fly ash in dry form. The filling of low lying area inside the premises shall be undertaken strictly in accordance with the permission granted by the MPPCB	Partially Complying. As per the FY 2018-19 records, industry generated 0.56MMT ash out of which 86.42% was utilized in Brick manufacturing (0.003MMT), cement industries (0.17MMT), low lying area filling (0.11MMT) & ash dyke raising (0.2MMT) Details of Ash utilization are enclosed as Annexure-8.
5	The non hazardous solid waste arresting in the industry/unit/unit premises sweeping, etc. be disposed off scientifically so as not to cause any nuisance/pollution. The applicant shall take necessary permission from civic authorities for disposal to dumping site. If required.	Complying. The Hazardous Waste Authorization is valid upto 31.12.2020.
6	The applicant shall allow the staff of Madhya Pradesh Pollution Control Board and/or their authorized representative, upon the representation of credentials: a. To inspect raw material stock, manufacturing processes, reactors, premises etc to perform the functions of the Board. b. To enter upon the applicant's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this Consent. c. To have access at reasonable times to any records required to be kept under the terms and conditions of this Consent. d. To inspect at reasonable times any monitoring equipment or monitoring method required in this Consent: or, e. To sample at reasonable times any discharge or pollutants.	Complying. Industry ensures that it will comply the condition regularly.
7	This consent/authorisation is transferable, in case of change of ownership/management and addresses of new Owner/partner/Directors/proprietor should immediately apply for the same.	Complying. Industry ensures that it will comply the condition regularly.

8	The issuance of this Consent does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorise any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.	Complying. Industry ensures that it will comply the condition regularly.
9	Industry shall install separate electric metering arrangement for running of pollution control devices and this arrangement shall be made in such fashion that any non functioning of pollution control devices shall immediately stop electric supply to the production and shall remain tripped till such time unless the pollution control device/devices are made functional. The record of electricity consumption for running of pollution control equipment shall be maintained and submitted to the Board every month	Partially Complying. Electric meter installed with ESP. Interlocking of APCDs with process was not verified. Monthly electric consumption records are not submitted to Board. Industry ensures that it will comply the condition regularly.
10	This consent is granted in respect of Water pollution control Act 1974 or Air Pollution Control act, 1981 or Authorization under the provisions of Hazardous and other Waste (Management & Transboundary movement) Rules 2016 only and does not relate to any other Department/Agencies. License required from other Department/Agencies have to be obtained by the unit separately and have to comply separately as per there Act / Rules.	-General Statement- Industry ensures that it will comply all the condition regularly.
11	Balance consent/authorisation fee, if any shall be recoverable by the Board even at a later date.	
12	The applicant shall submit such information, forms and fees as required by the board not letter than 180 day prior to the date of expiration of this consent/authorisation	
13	The industry/unit shall establish a separate environmental cell, headed by senior officer of the unit for reporting the environmental compliances. The industry/ Unit shall submit environmental statement for the previous year ending 31st March on or before 30th September every year to the Board.	
14	Industry shall obtain membership of Emergency Response Center of the Board if needed.	
15	Knowingly making any false statement for obtaining consent or compliance of consent conditions shall result in the imposition of criminal penalties as provided under the section 42(g) of the Water Act or section 38 (g) of the Air Act.	

16	<p>After notice and opportunity for the hearing, this consent may be modified, suspended or revoked by the Board in whole or in part during its term for cause including, but not limited to, the following:</p> <p>(a) Violation of any terms and conditions of this Consent.</p> <p>(b) Obtaining this Consent by misrepresentation or failure to disclose fully all relevant facts.</p> <p>(c) A change in any condition that requires temporary or permanent reduction or elimination of the authorized discharge.</p>	
17	<p>On violation of any of the above-mentioned conditions the consent granted will automatically be taken as canceled and necessary action will be initiated against the industry.</p>	

5. Specific observations related to compliance of consent conditions:

- i. The industry is non-complying with the regular operations of STP, piezometers establishment in periphery of ash pond & remote calibration assess to MPPCB.
- ii. The industry is partially complying on following conditions:
 - a. Ground water depletion study not yet carried out.
 - b. Not yet informed MPPCB regarding the low-lying area filling with ash.
 - c. Fly ash utilization upto 86.42% by FY 2018-19
 - d. Flue-gas-desulfurization plant installation is under progress.
 - e. Internal roads of weighbridge to coal handling area & ash pond area are not yet pucca. However, other major lengths of road have been made pucca.
 - f. Fugitive dust control system (water mist spray) is inadequate at CHP area.
 - g. Interlocking of the process with APCDs.

6. Opinion of the team on coal transportation via road:


M/s Essar Power (M.P.) Ltd, Bandhora, Singraulli is still to wait for the allocation of the Mahan Coal Block due to cancellation of the coal block vide *Hon'ble Supreme Court, vide its order dated 24.09.2014 (reported as (2014) 9 SCC 614)* &


was permitted for e-auctioned coal in addition to the imported coal till 22.08.2016. Since the plant was already established by the year 2013 but its coal block was cancelled in 2014, thus industry is dependent on the coal which is e-auctioned by Ministry of Coal from various subsidiaries of Coal India Limited; and receiving coal from 12 different locations via road transportation. By 12 different locations, public roads are being used as haul roads which are passing through various villages due to which the vulnerability of population to dust emission, vehicle pollution & chances of road accidents increases. The nearest place from where industry is lifting coal is Gajra Bahra siding which is 16kms far from the plant. For this industry is using MPRDC road as haul road this path passes through less habited & forest area. It is also pertinent to mention that having 24x7 vigils over the trucks for their tarpaulin cover & speed is not possible.

Considering the above & electricity generation as public interest (as prayed by applicant) the team is opined that permission to M/s Essar Power (M.P.) Ltd to transport the coal only from Gajra Bahra siding to plant may be considered till the time a new coal block is allotted or establishment of the coal conveyor system. Also industry need to ensure compliance of CPCB guideline on coal siding which is presently controlled by Indian Railway. However, in such case, the industry may face serious set-back in running the plant at an economically viable capacity. Industry on the other hand has prayed for allowing it to continue to transport coal by road from all available sources.

Secondly, Oversight Committee (constituted under Hon'ble NGT order in O.A. 164/2018) in its meeting on 1.03.2019, considering the interest of the nation & public interest allowed companies to transport the coal through road for 60days as an interim measure. The interim measure period ended on 30.04.2019. The team observed that on the day of visit i.e. 4th July 2019, industry was hauling coal

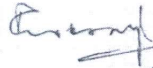
through road transport; which is in serious violation of the Oversight Committee directions. In this regard, in compliance of the Hon'ble NGT earlier directions in OA 110 (THC)/2012 dated 4.1.2019, OA 95/2018 dated 11.01.2019, OA 606/2018 dated 16.01.2019 and OA 601/2018 dated 24.01.2019, financial penalty as environmental compensation for 65days (1.05.2019 to 4.07.2019) @ 30,000/- per day comes out to be **Rs. 19,50,000.00/- (Nineteen lacs fifty thousand rupees only)**., which the Hon'ble NGT may order to impose based on the present facts & findings.


(K L Choudhary)
RO, MPPCB, Singrauli


(Sunil Kumar Meena)
Sci 'D', CPCB, Bhopal

cc for A.K. Srivastava M.D.
Mohan ofhi

Annexure - 1a

 23.4.07

By Speed Post

No.J-13011/56/2006-IA.II(T)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
CGO Complex, Lodi Road,
New Delhi-11003.

Dated 20th April, 2007

To

The Vice President
M/s Essar Power (M.P.) Ltd.,
21, Feroze Gandhi Road,
Lajpat Nagar-III, New Delhi-110 024.

Sub: Mahan Super Thermal Power Project (4x500 MW) at Singrauli Tehsil, Sidhi District, Madhya Pradesh by M/s Essar Power (M.P.) Ltd. – Environmental Clearance regarding.

Sir,

The undersigned is directed to refer to your communication no. nil dated 1st November, 2006 regarding the subject mentioned above. Subsequent information furnished vide letter no. Essar/Mahan/MoEF/07 dated 15.01.2007 has also been considered.

2. It is noted that the proposal is for grant of environmental clearance under the provisions of EIA Notification, 1994 to set up a thermal power station of 2000 MW (4x500 MW) in two stages of 1000 MW of each. Coal for this project will be obtained from Mahan Coal Block at a distance of about 3-4 km through conveyor. The coal will have an ash content of 35% and sulphur content of 0.5%. The total land requirement is estimated as 744 ha including 70 ha forestland. Out of the total land 40 ha is for colony, 4 ha for coal conveyor and 14 ha for water pipeline. It is estimated that 192000 m³/day of water will be required for consumptive use and will be sourced from Govind Ballabh Pant Reservoir. COC of 5 will be adopted. Closed circuit cooling with induced draft cooling towers will be adopted. It is estimated that 8740 m³/day of effluents will be generated which will be discharged outside the plant premises into Bhalea nallah. There will be 771 project displaced families. Mohan Ban Reserve Forest is at 4 km distance. No National Park/Wildlife Sanctuary is reported within 10 km area. Public hearing was held on 9th September, 2006. Total cost of the project is Rs. 8800.00 crores which includes Rs 100.00 crores for environmental protection measures.

3. The proposal has been considered in accordance with para 12 of the EIA Notification dated 14th September, 2006 read with para 2.2.1 (i) (a) of the circular no. J-11013/41/2006-IA.II(I) dated 13th October, 2006 and environmental clearance is hereby accorded under the provisions there of subject to implementation of the following terms and conditions:

- (i) The total land requirement shall not exceed 744 ha for all the activities / facilities of the power project put together.
- (ii) Forestry clearance for diversion of 70 ha forestland involved in the project shall be obtained before starting construction on the forestland.
- (iii) R&R in sufficient detail shall be finalized before award of the project and a copy of the detailed R&R shall be submitted to MoEF within three months of the issue of this letter or before the award of the project whichever is earlier.
- (iv) The PAFs/PAPs losing their homesteads or a major portion of the land shall not be ousted from the land till they are settled at the alternate sites.
- (v) Ash and sulphur content in the coal to be used in the project shall not exceed 35% and 0.5% respectively.
- (vi) Two bi-flue stacks of 275 m height each shall be provided with continuous online monitoring equipments. Exit velocity of at least 25 m/sec shall be maintained.
- (vii) High Efficiency Electrostatic Precipitators (ESPs) with efficiency not less than 99.9% shall be installed to ensure that particulate emission does not exceed 100 mg/Nm³.
- (viii) Space provision shall be made for Flue Gas De-sulphurisation (FGD) unit, if required at a later stage.
- (ix) Low NO_x burners shall be provided.
- (x) Adequate dust extraction system such as bag filters and water spray system in dusty areas such as coal and ash handling areas, transfer areas and other vulnerable areas shall be provided.
- (xi) Fly ash shall be collected in dry form and ash generated shall be used in a phased manner as per provisions of the notification on Fly Ash Utilization issued by the Ministry in September, 1999 and its amendment. By the end of 9th year full fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry.

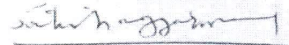
- (xii) Ash pond shall be lined with HDPE geo synthetic membrane to avoid leaching. Adequate safety measures shall also be implemented to protect the ash pond bund from getting breached.
- (xiii) A conservation plan for Schedule-I animals reported in the study area of the project, shall be prepared in consultation with an expert organization like Wildlife Institute of India at Dehradun and duly approved by State Wildlife Department of Madhya Pradesh. A copy of the same shall be submitted to the Ministry and the Regional Office at Bhopal within six months of the date of issue of this letter. The plan so prepared shall be implemented effectively. Necessary allocation of funds for the same shall be made and will be included as project cost.
- (xiv) Rain water harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority / State Ground Water Board and a copy of the same shall be submitted within three months to the Ministry.
- (xv) The treated effluents conforming to the prescribed standards only shall be discharged in the Bhalea nallah.
- (xvi) Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and periodic reports shall be furnished to the Regional Office of this Ministry.
- (xvii) A 100 m wide greenbelt shall be developed all around the plant area and 20 m wide green belt shall be developed all around the ash pond and township covering a total area of 211 ha.
- (xviii) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xix) Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in high noise areas, personal protection devices should be provided.
- (xx) Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry.
- (xxi) The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the

vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board / Committee and may also be seen at website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>.

- (xxii) A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.
 - (xxiii) A half yearly report on the status of implementation of the stipulated conditions and environmental safeguards should be submitted to this Ministry, its Regional Office at Bhopal, CPCB and SPCB.
 - (xxiv) Regional Office of the Ministry of Environment & Forests located at Bhopal will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.
 - (xxv) Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. This cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.
 - (xxvi) Full cooperation should be extended to the Scientists / Officers from the Ministry / Regional Office of the Ministry at Bhopal/ the CPCB / the SPCB who would be monitoring the compliance of environmental status.
4. The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.
 5. The environmental clearance accorded shall be valid for a period of 5 years to the start of operations by the power plant.
 6. In case of any deviation or alteration in the proposed project from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
 7. The above stipulations shall be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, the Public Liability Insurance Act,

1991 and rules there under and the EIA Notification, 2006 and the amendments made therein from time to time.

Yours faithfully,



(Dr. S.K. Aggarwal)
Director

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110 001.
2. The Secretary (Environment), Government of Madhya Pradesh, Bhopal-462 004.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110 066.
4. The Chairman, Madhya Pradesh Pradushan Niwaran Mandal, Paryavaran Parisar, Sector E-5, Arera Colony, Bhopal-462 016 - **with a request to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days.**
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110 032.
6. The Chief Conservator of Forests (C), Regional Office (WZ), Ministry of Environment & Forests, Kendriya Paryavaran Bhawan, Link Road No.-3, E-5, Arera Colony, Bhopal - 462 016.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

(Dr. S.K. Aggarwal)
Director

Annexure - 1b

No. J-13011/56/2006-IA.II(T)
Government of India
Ministry of Environment & Forests

Paryavaran Bhavan,
CGO Complex, Lodhi Road,
New Delhi 110003.

February 10, 2009

To
M/s Essar Power(M.P.) Ltd.,
21, Feroze Gandhi Road,
Lajpat Nagar-III,
New Delhi 110024.

SUB: Change in capacity and unit size from 4x500 MW to 3x600 MW Mahan Thermal Power Project at Singrauli Tehsil, Sidhi District, Madhya Pradesh by M/s Essar Power (MP) Ltd. – Environmental clearance – Regarding.

The undersigned is directed to refer to your communication No. Essar/Mahan/MoEF/08-09/01 dated 17th December, 2008 regarding the change in capacity and unit size from 4x500 MW to 3x600 MW for the above mentioned project which was accorded environmental clearance vide letter of even number dated 20.04.2007.

The request has been considered and it has been noted that due to change in capacity and in configuration, the land requirement will come down from 744 ha to 700 ha. Coal consumption and water consumption will also be reduced by 1.5 million TPA and 15,600 m³/day respectively. There will also be corresponding reduction in the ash generation.

In accordance with the recommendation of the Expert Appraisal Committee, this Ministry has no objection for the change in capacity and unit size from 4x500 MW to 3x600 MW subject to strict implementation of all the conditions contained in the environment clearance letter of even number dated 20th April, 2007.

This issues with the approval of the competent authority.

Yours faithfully;



(G.K. Pandey)
Adviser

-2-

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110 001.
2. The Secretary (Environment), Government of Madhya Pradesh, Bhopal-462 004.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110 066.
4. The Chairman, Madhya Pradesh Pradushan Niwaran Mandal, Paryavaran Parisar, Sector E-5, Arera Colony, Bhopal-462 016 - with a request to display a copy of this letter at the Regional Office, District Industries Centre and Collector's office for 30 days.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD- cum-Office Complex, East Arjun Nagar, Delhi-110 032.
6. The Chief Conservator of Forests (C), Regional Office (WZ), Ministry of Environment & Forests, Kendriya Paryavaran Bhawan, Link Road No.-3, E-5, Arera Colony, Bhopal - 462 016.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.



(G.K. Pandey)
Adviser



J-13011/56/2006 - IA. II (T)
Government of India
Ministry of Environment & Forests

Tel no: 011- 2436 4067
 Paryavaran Bhavan, C.G.O. Complex,
 Lodi Road, New Delhi -110003.

Dated: 23.08.2013

OFFICE ORDER

Sub: Mahan Super Thermal Power Project (3x600 MW) at Singrauli Tehsil, Sidhi District, in Madhya Pradesh - Change in source of coal - reg.

Sir,

This has reference to your letter dated 17.03.2012, 27.09.2012 and 21.11.2012 on the above mentioned subject.

2. It is informed that your request for amendment in the environmental clearance accorded for the above mentioned power project has been examined and was placed before the Expert Appraisal Committee (Thermal Power) in its 52nd, 62nd, 64th and 66th Meetings held during July 2-3, 2012, December 4, 2012, January 7-8, 2013 and February 5-6, 2013 respectively.

3. It is hereby now informed that in acceptance of the recommendation of the Expert Appraisal Committee (Thermal Power) the following amendment shall be made in this Ministry's letter of even no. dated 20.04.2007 and its amendment dated 10.02.2009.

a) At para no. 2, the sentence 'Coal for this project will be obtained from Mahan Coal Block at a distance of about 3-4 km through conveyer', shall be now substituted by the following:

'Coal requirement of about 5.5 MTPA for this project will be obtained from Indonesia from M/s PT Virema Impex ("Virema") having its registered office at Level 9, The City Tower, Jl. M.H. Thamrin No.81, Jakarta - 10 310, Indonesia, for an interim period not exceeding three years till Mahan Coal Block becomes operational'.

b) Under para no.3, the condition no. (v) read as "Ash and sulphur content in coal to be used in the project shall not exceed 35% and 0.5% respectively", shall be now read as under:

"Ash and sulphur content in imported coal to be used in the project shall not exceed 12 % and 0.8 % respectively".

- c) Under para no.3, the condition no. (vii) read as "*High Efficiency Electrostatic Precipitators (ESPs) with efficiency not less than 99.9% shall be installed to ensure that particulate emission does not exceed 100 mg/Nm³*", shall be now read as under:

"High Efficiency Electrostatic Precipitators (ESPs) with efficiency not less than 99.9% shall be installed to ensure that particulate emission does not exceed 50 mg/Nm³".

- d) Under para no.3, the condition no. (xi) read as "*Fly ash shall be collected in dry form and ash generated shall be used in a phased manner as per provisions of the notification on Fly Ash Utilisation issued by the Ministry in September, 1999 and its amendment. By the end of 9th year full fly ash utilization should be ensured. Unutilised ash shall be disposed off in the ash pond in the form of High Concentration slurry*", shall be now read as under:

"Fly ash shall be collected in dry form and ash generated shall be used in a phased manner as per provisions of the notification on Fly Ash Utilisation issued by the Ministry in September, 1999 and its amendment. 100% fly ash utilization should be ensured at the end of 4th year. Unutilised ash shall be disposed off in the ash pond in the form of High Concentration Slurry".

- e) After clause no. (xxvi), under para no.3 of this Ministry's letter of even no. dated 03.10.2008, the following shall be added:

- (xxvii) The project proponent shall upload the status of compliance of the conditions stipulated in the environmental clearance issued vide this Ministry's letter of even no. dated 20.04.2007, in its website and updated periodically and also simultaneously send the same by e-mail to the Regional Office of the Ministry of Environment and Forests.
- xxviii) Criteria pollutants levels including NO_x, RSPM (PM₁₀ & PM_{2.5}), SO_x (from stack & ambient air) shall be regularly monitored and results displayed in your website and also at the main gate of the power plant.
- xxix) Avenue plantation along the route (both sides of the road) of imported coal transportation from railway siding at Mahadiya/Singrauli Railway Siding to Rajmilan-Bandhoura- Power Plant site, over a distance of 63 kms shall be raised by the project proponent at its own cost. The status of implementation shall be submitted to the Regional Office of the Ministry.
- xxx) It shall be ensured that only mechanized covered trucks are used for imported coal transportation.
- xxxi) A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute once the power plant becomes operational. Thereafter mechanism for an

in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.


xxxii) The recommendation of the Central Electricity Authority issued vide its letter no. 159/100/TP&I/CEA/2011, dated 01.02.2013, on the feasibility of transportation of coal from Mahadiya Railway Siding to Mahan TPP site shall be implemented.

(xxxiii) The project proponent shall maintain a long book of imported coal and Bill of Imports for coal to establish that the coal used for the power project are additional coal coming to the country. These documents shall be submitted to the Regional Office of the Ministry from time to time.

4. All other conditions mentioned in this Ministry's aforesaid letter of even no. 20.04.2007 shall remain the same.

This issues with the approval of the Competent Authority.


Yours faithfully,


(Dr. Saroj)
Director

M/s Essar Power (M.P) Ltd.
Essar House
11 K.K. Marg, Mahalaxmi
Mumbai - 400 034.

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Environment Department, Government of Madhya Pradesh, Bhopal.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Madhya Pradesh State Pollution Control Board, Paryavaran Prisar, E-5 Arera Colony, Bhopal - 462 016
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Ravishankar Nagar, Bhopal - 462016.
7. The District Collector, Sidhi District, Madhya Pradesh.
8. Guard file.


(Dr. Saroj)
Director

Annexure - 1d



J-13011/56/2006-IA.II (T)
Government of India
Ministry of Environment, Forest and Climate Change

3rd Floor, Vayu Block,
Indira Paryavaran Bhawan, Jor Bagh Road,
Aliganj, New Delhi-110003

Dated: 08.04.2016

To

M/s. Essar Power M.P. Ltd.
Prakash Deep Building,
10th Floor, 7 Tolstoy Marg,
New Delhi- 110001
Tel. No. 011-43501000; Fax: 011-43501046/47

Sub: 3x600 MW Mahan Super Thermal Power Plant at Tehsil Mada, District Singrauli, Madhya Pradesh by M/s. Essar Power (M.P.) Ltd. – reg. amendment and extension of validity of EC.

Sir,

This has reference to your letter & online application dated 13.05.2015 on the above subject. It is noted that the Environmental Clearance for the said project (4x500 MW) was accorded on 20.04.2007 and the same was amended for change in capacity & Unit size (3x600 MW) on 10.02.2009. Further, an amendment to the EC for change in source of coal from domestic to imported and road transportation of coal for an *interim period not exceeding three years* was accorded on 23.08.2013. COD of Unit I was declared on 29.04.2013 and COD of Unit II was expected by December, 2015.

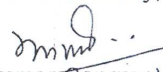
2. The matter was placed before the Expert Appraisal Committee (Thermal Power) in its 38th Meeting held during 25th -26th June, 2015. In acceptance of the recommendation of the EAC and in view of the information/clarifications furnished by you, with respect to the above mentioned power project, the Ministry accords amendment in *EC to source the coal from captive Tokisud mine & e-auction in addition to the imported coal till 22.08.2016 and extension of validity of EC by 5 years i.e. till 19.04.2017 to start the production/operations by all the three Units subject to stipulation of the following additional conditions.*

- xxxiv) *The Sulphur and ash contents of domestic coal shall not exceed 0.5% and 35 % respectively. The coal shall be sourced through e-auction only in case of emergency and non viability of imported coal. In case of variation of quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to the environmental clearance. However, for the imported coal, the ash and sulphur contents will be as specified in the earlier order.*
- xxxv) *The road transportation shall be restricted to the route as approved earlier vide amendment dated 23.08.2013.*
- xxxvi) *The transportation by road shall be through mechanically covered trucks to the extent feasible, else through tarpaulin covered trucks so as to prevent coal dust dispersion in the atmosphere.*
- xxxvii) *Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.*
- xxxviii) *Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry*

regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.

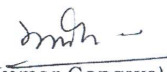
- xxxix) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.
- xl) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.
- xli) For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.
- xlii) An Environmental Cell comprising of at least one expert in environmental science/ engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
- 3 All other conditions mentioned in this Ministry's letters of even no. dated 20.04.2007, 10.02.2009 and 23.08.2013 shall remain the same, as applicable.
4. This issues with the approval of the Competent Authority.

Yours faithfully,


(Manoj Kumar Gangeya)
Director

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Secretary, Environment and Forests Department, Government of Madhya Pradesh, Bhopal.
5. The Chairman, Madhya Pradesh Pollution Control Board, E-5, Arera Colony, Paryavaran Parisar, Bhopal-462016, Madhya Pradesh.
6. The Additional Principal Chief Conservator of Forests (C), Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, Arera Colony, Ravishankar Nagar, Bhopal - 462016.
7. The District Collector, Singrauli District, Madhya Pradesh
8. Guard file/ Monitoring File.
9. Website of MoEF&CC.


(Manoj Kumar Gangeya)
Director

EPMPL COAL TRANSPORTATION DETAILS FOR FY 18-19

Month	Amlohri	Khadia	Kakri	Jhingurda	Krishnas hila	Dudhich ua	Jayant	Bina	Gorbi	Mahdeiya Siding	Gajra Bahra Siding	Mahan II (CG)	Others Road*	TOTAL ROAD	TOTAL RAIL**	GRAND TOTAL	% Road	% Rail
Approx Distance from plant (KM)	101	110	104	85	107	113	84	107	69	65	16	210						
Apr-18	63059	34218	9438	13613	9512	0	0	0	0	4653	0	34238	73	164152	4653	168805	97%	3%
May-18	46906	65108	16672	13586	8729	0	0	0	0	7597	0	0	3882	154882	7597	162479	95%	5%
Jun-18	1591	27190	10886	20580	33161	0	9963	11810	0	27873	0	18735	10402	144119	27873	171992	84%	16%
Jul-18	29023	47139	15870	15810	15810	0	9978	26333	1952	23556	0	13196	4051	178988	23556	202544	88%	12%
Aug-18	52906	30835	15844	27567	14897	0	0	4828	9187	26059	0	0	6935	163000	26059	189059	86%	14%
Sep-18	28371	62914	14332	18304	41774	7636	12525	2101	1045	20069	0	0	1613	190616	20069	210685	90%	10%
Oct-18	49307	81438	13144	32808	55073	27349	60456	13988	60	43001	0	0	10334	343956	43001	386957	89%	11%
Nov-18	52763	11986	3201	0	0	0	0	6568	4940	44392	0	0	2268	159464	44392	203856	78%	22%
Dec-18	58688	13483	0	11646	0	0	0	7250	0	45817	3414	0	5929	96996	49231	146227	66%	34%
Jan-19	39052	55877	0	7134	15842	0	0	28	0	19324	35410	0	6400	124335	54734	179069	69%	31%
Feb-19	28430	46856	4692	22792	2268	0	0	0	0	27	54791	0	9765	114803	54818	169621	68%	32%
Mar-19	14668	25957	6490	18713	0	0	0	0	0	0	53071	0	8493	74320	53071	127392	58%	42%
TOTAL	464765	503000	110369	202379	229650	49731	123331	72907	17183	262369	146687	66169	70145	1909630	409055	2318686	82%	18%
%	20%	22%	5%	9%	10%	2%	5%	3%	1%	11%	6%	3%	3%	82%	18%	100%		

* Others road includes coal from CCL & traders i.e. Amera mine, Tata kujju, Balrampur mine, Magadh mine, Sikri mine etc.
 ** For coal coming through Rail, earlier Mahdeiya siding was being used(65 KM from Plant) which now have been shifted at Gajra behra goods shed which is at approx 16 KM distance from plant and
 This coal transportation of 2.3 MMT is given for FY 18-19 which is for part load operation, however at full loading will be requiring around 5.5 MMT/Annum.

Coal Transportation Details.

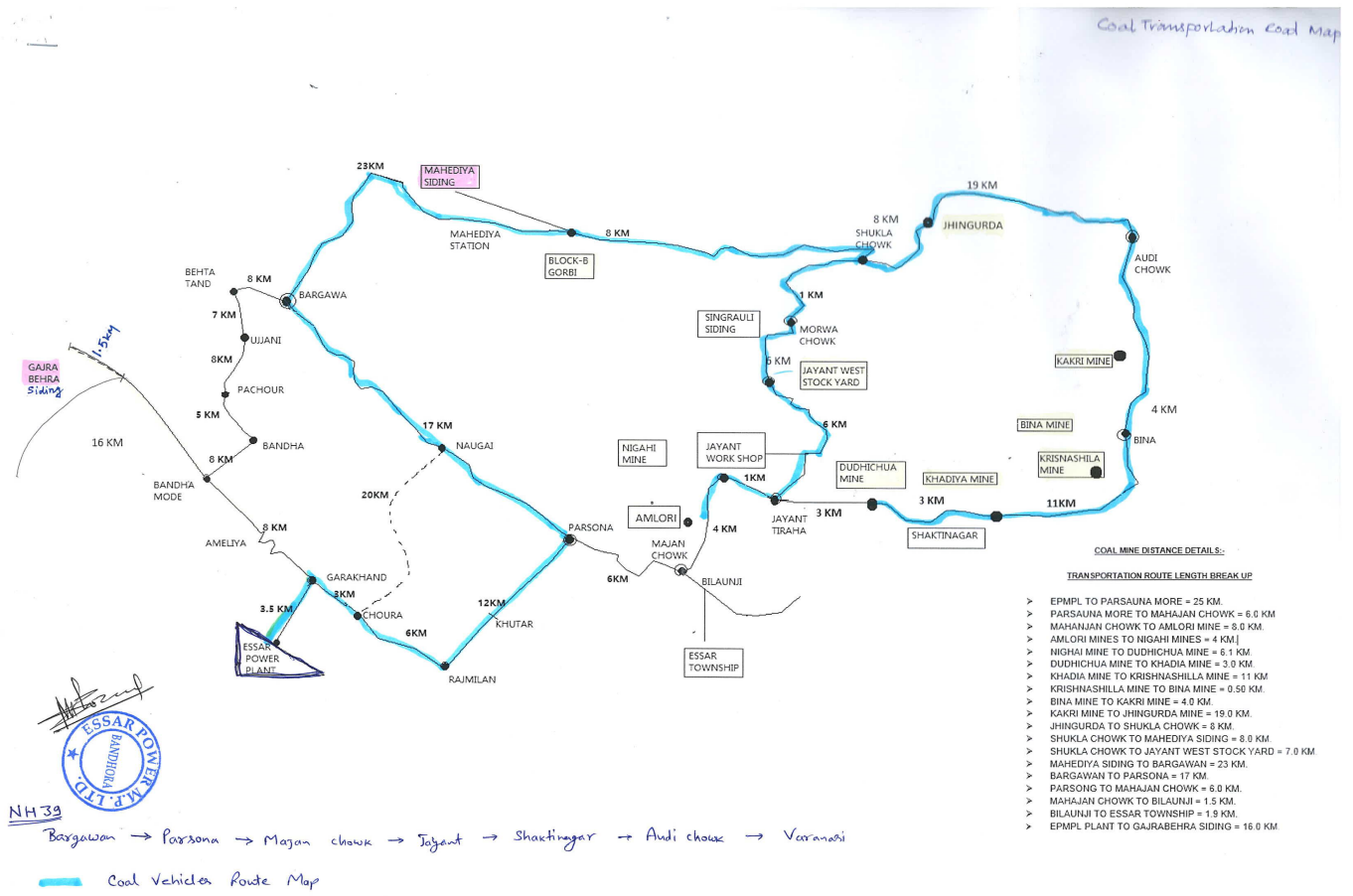
EPMPL COAL TRANSPORTATION DETAILS FOR FY 19-20

Month	Amlohri	Khadiya	Kakri	Jhingurda	Krishnas hila	Dudhich ua	Jayant	Nigahi	Gajra Bahra Siding	Others Road*	TOTAL ROAD	TOTAL RAIL**	GRAND TOTAL	% Road	% Rail
Approx Distance from plant (KM)	101	110	104	85	107	113	84	100	16						
Apr-19	45032	27699	10334	24644	19905	0	0	0	30966	4780	132395	30966	163361	81%	19%
May-19	92891	39400	5957	30106	8628	1335	2067	3837	44985	631	184554	44985	229539	80%	20%
Jun-19	15230	26945	10660	10071	18638	31539	20238	43249	29596	0	176569	29596	206166	86%	14%
Jul-19															
Aug-19															
Sep-19															
Oct-19															
Nov-19															
Dec-19															
Jan-20															
Feb-20															
Mar-20															
TOTAL	152853	94044	26951	64821	47172	32874	22305	47086	105547	5411	493517	105547	599065	82%	18%
%	26%	16%	4%	11%	8%	5%	4%	8%	18%	1%	82%	18%	100%		

* Others road includes coal from CCL mines

** For coal coming through Rail, earlier Mahdheyia siding was being used(65 KM from Plant) which now have been shifted at Gajra behra goods shed which is at approx 16 KM distance from plant and coal is being transported via road upto plant from there.





ANNEXURE 3

Construction & repairs Detail of External Road

Date :- 05-Jul-19

Particular	From	To	Length (Km)	Width (Mtr)	Constructed by	Const. Year	Cost (In Cr)	Remarks
Road Construction	Parsauna	Rajnilan	12	5.5	Essar	2010-11	9.52	
	Rajnilan	Plant	12.5	5.5		2012-15	14.09	
Road Widening	Parsauna	Plant	24.5	7.5	Essar	2016-17-19	7.34	
Road Repairs	Parsauna	Plant	24.5	7.5	Essar	2012	0.21	
						2013	0.08	
						2014	0.06	
						2016	0.09	
						2018	0.14	
Total (In Cr)							31.65	
						2019	0.09	

Handwritten signature and blue circular stamp of Essar Power Limited, Bandhokra.

External Road Construction & Repair work Order Detail

Doc-Date	Short Text	O/I	C/W/R	Item	Uln	Quantity	Net Value (in Rs)	Vendor/supplying plant
23-11-2010	RAJNILAN-PARSONA ROAD	Outside	Cons	10	AU	1	5,31,600	R.K.SINGH
20-12-2010	ROAD FROM BANDHORA TO RAJNILAN	Outside	Cons	10	AU	1	2,65,000	VINDHYA CONSTRUCTION
11-05-2011	BITUMEN 60/70,150MM/2/5,1PERCENT,175DEG.C	Outside	Cons	10	KG	39220	16,76,858	200081 Essar Oil Limited
11-05-2011	BITUMEN 60/70,150MM/2/5,1PERCENT,175DEG.C	Outside	Cons	20	KG	19910	8,61,712	200081 Essar Oil Limited
11-05-2011	BITUMEN 60/70,150MM/2/5,1PERCENT,175DEG.C	Outside	Cons	30	KG	140870	65,19,430	200081 Essar Oil Limited
11-05-2011	BITUMEN 60/70,150MM/2/5,1PERCENT,175DEG.C	Outside	Cons	40	KG	169390	78,39,329	200081 Essar Oil Limited
11-05-2011	BITUMEN 60/70,150MM/2/5,1PERCENT,175DEG.C	Outside	Cons	50	KG	19770	8,97,840	200081 Essar Oil Limited
11-05-2011	BITUMEN 60/70,150MM/2/5,1PERCENT,175DEG.C	Outside	Cons	60	KG	10840	4,89,507	200081 Essar Oil Limited
11-05-2011	BITUMEN 60/70,150MM/2/5,1PERCENT,175DEG.C	Outside	Cons	70	KG	300000	1,35,47,254	200081 Essar Oil Limited
21-11-2011	Construction of Road	Outside	Cons	10	AU	1	5,46,26,730	116713 DEVI ENTERPRISES LTD
21-11-2011	CC Road (frm persona to rajnilan)	Outside	Cons	20	AU	1	29,83,255	116713 DEVI ENTERPRISES LTD
21-11-2011	PWD Road(Final Amendment)	Outside	Cons	80	AU	1	50,11,373	116713 DEVI ENTERPRISES LTD
							9.52	

Doc-Date	Short Text	O/I	C/W/R	Item	Uln	Quantity	Net Value (in Rs)	Vendor/supplying plant
20-02-2012	ROAD WORK RAJNILAN TO BANDHORA	Outside	Cons	10	AU	1	1,20,67,760	116713 DEVI ENTERPRISES LTD
14-06-2012	WBM Road - Coal Corridor	Outside	Cons	10	AU	1	18,75,150	119028 S.P.SINGH
16-07-2012	WBM ROAD FOR COAL TRANSPORTATION	Outside	Cons	10	AU	1	20,00,625	119028 S.P.SINGH
16-07-2012	WBM ROAD FOR COAL TRANSPORTATION	Outside	Cons	20	AU	1	1,03,07,456	119028 S.P.SINGH
21-06-2014	PMGSY ROAD-Rajnilan-Bandhora	Outside	Cons	10	AU	1	4,47,76,057	133664 SHAARC PROJECTS LIMITED
21-06-2014	PMGSY ROAD-Rajnilan-Bandhora	Outside	Cons	20	AU	1	91,98,025	133664 SHAARC PROJECTS LIMITED
15-04-2013	Road from Rajnilan to Bandhoura	Outside	Cons	20	AU	1	5,96,38,146	133664 SHAARC PROJECTS LIMITED
14-02-2014	RCC Road at Gaddakhand	Outside	Cons	10	AU	1	10,57,410	118159 PAWAN ASSOCIATES
							7.34	

Doc-Date	Short Text	O/I	C/W/R	Item	Uln	Quantity	Net Value (in Rs)	Vendor/supplying plant
16-11-2016	Road widening works	Outside	Widening	10	AU	1	19,38,615	126714 AR CONSTRUCTION COMPANY
24-12-2016	Road widening works	Outside	Widening	10	AU	1	19,24,285	126714 AR CONSTRUCTION COMPANY
14-08-2017	Road - External	Outside	Widening	220	AU	1	6,54,83,650	163297 SHAARC PROJECTS LIMITED
03-11-2017	Topographical Survey of Road widening	Outside	Widening	10	AU	1	4,13,000	163297 SHAARC PROJECTS LIMITED
29-01-2019	Construction of RCC RETAINING WALL & ro	Outside	Widening	10	AU	1	36,76,713	163297 SHAARC PROJECTS LIMITED
							0.69	

Doc-Date	Short Text	O/I	C/W/R	Item	Uln	Quantity	Net Value (in Rs)	Vendor/supplying plant
24-04-2012	Patch-work in Road	Outside	Repair	10	AU	1	21,28,750	126714 A.R. CONSTRUCTION COMPANY
11-02-2014	Road repair from Parson to Rajnilan	Outside	Repair	10	AU	1	2,26,090	118159 PAWAN ASSOCIATES
02-09-2014	Concreting of Road dividers	Outside	Repair	10	AU	1	3,71,250	118159 PAWAN ASSOCIATES
24-05-2016	Road strengthening at Kherahi	Outside	Repair	10	AU	1	8,14,400	133664 SHAARC PROJECTS LIMITED
26-05-2016	Road repair from Parsona to Rajnilan	Outside	Repair	10	AU	1	1,20,899	133664 SHAARC PROJECTS LIMITED
29-06-2018	Road marking works from Parsona to Bandh	Outside	Repair	10	AU	1	6,19,500	130008 SHIVAM CONSTRUCTION COMPANY
29-06-2018	Road marking works at Road Junctions	Outside	Repair	10	AU	1	7,53,961	165742 AAS ENGINEERING
09-08-2018	Hard barricating work at Road Junctions	Outside	Repair	10	AU	1	59,000	162238 A T S AND COMPANY
15-02-2019	Road Repair Plant to Parssaula	Outside	Repair	10	AU	1	9,42,287	163297 SHAARC PROJECTS LIMITED
17-06-2013	May'13-Sept'13(PWD road)	Outside	Repair	20	AU	1	2,23,350	120726 V.P. PANDEY
17-06-2013	May'13-Sept'13(PWD road)	Outside	Repair	30	AU	1	5,93,000	120726 V.P. PANDEY

Construction & Repairs Detail of Internal Road

Date :- 05-Jul-19

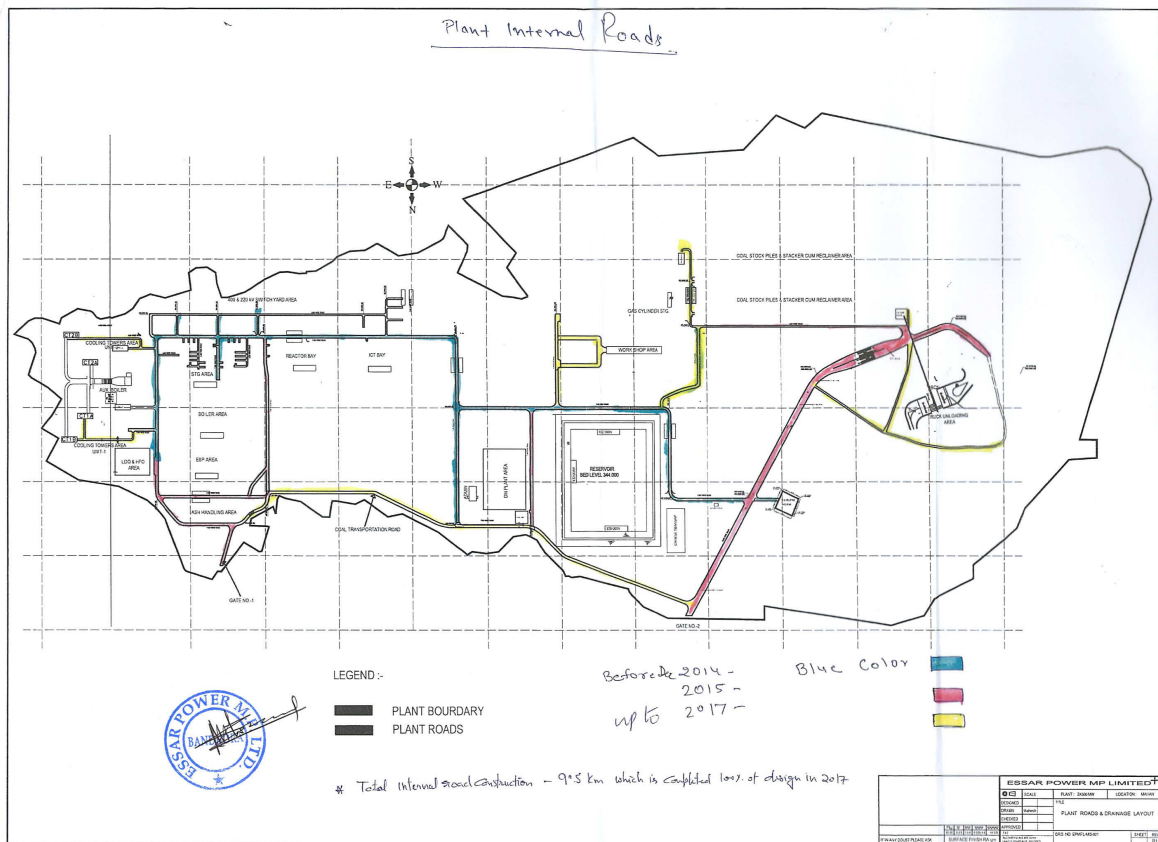
Particular	From	To	Length (Km)	Width (Mtr)	Constructed by	Const. Year	Cost (In Cr)	Remarks
Internal Road Construction	BTG area, Reservoir area, DM Plant		3.8	7.5	ESSAR	2010-13	3.14	Temporary Road
	Gate-2 to WB & Coal Transportation Road Gate-1 to Gate-2 Inside Boundary		2.2	7.5	ESSAR	2014-16	5.83	RCC Road 700 mtr x 10 Mtr Road - 1500 Mtr - 7.5 Mtr
	TG-2, AHP		2	7.5	ESSAR	2015-16	2.00	
	CT, CHP		1.5	7.5	ESSAR	2017-18	1.62	
Internal road Repairs	BTG area					2011	0.33	
	TG & ESP, CHP weigh bridge					2013	0.07	
			4	7.5		2015	0.82	Semi-dense Bituminous Concrete - 4 KM
Total (In Cr)							13.81	



Internal Road Construction & Repair Work Order Detail

Doc-Date	Short Text	O/I	C/W/R	Item	Qun	Quantity	Net Value (in Rs)	Vendor/supplying plant
23-11-2010	TEMPORARY ROAD WORK	Inside	Cons	10	AU	1	31,96,920	DEV ENTERPRISES LTD
30-11-2010	WBMI for Temporary Road	Inside	Cons	20	AU	1	3,31,888	DEV ENTERPRISES LTD
04-12-2010	INTERNAL PLANT ROAD	Inside	Cons	10	AU	1	3,00,300	DEV ENTERPRISES LTD
20-12-2010	Internal Plant Road	Inside	Cons	10	AU	1	81,648	DEV ENTERPRISES LTD
20-12-2010	WBMI ROAD AT BANDHORA POWER PLANT	Inside	Cons	10	AU	1	11,70,132	NATIONAL PRESTIGE CONSTRUCTION COMP
10-11-2011	Making of Approach Road with Slag	Inside	Cons	10	AU	1	18,00,000	J K ENTERPRISES
10-11-2011	Making of Approach Road with Slag	Inside	Cons	20	AU	1	54,37,350	J K ENTERPRISES
10-11-2011	Making of Approach Road with Slag	Inside	Cons	30	AU	1	1,20,82,650	J K ENTERPRISES
24-11-2011	Temporary approach road	Inside	Cons	10	AU	1	4,99,500	R.K.SINGH
24-11-2011	Temporary Approach Road	Inside	Cons	10	AU	1	4,99,500	DEV ENTERPRISES LTD
23-04-2012	BITUMEN ROAD WORK @ 400KV GIS SWITCHYARD	Inside	Cons	10	AU	1	14,25,800	JANAK BUILDCON PVT. LTD.
02-05-2012	ROAD SAFETY SIGN BOARD FIXING	Inside	Cons	10	AU	1	2,13,750	B. N. ENTERPRISES
26-05-2012	BITUMEN ROAD WORK @ 400KV GIS SWITCHYARD	Inside	Cons	10	AU	1	8,79,006	JANAK BUILDCON PVT. LTD.
26-05-2012	BITUMEN ROAD WORK @ 400KV GIS SWITCHYARD	Inside	Cons	20	AU	1	12,50,550	JANAK BUILDCON PVT. LTD.
26-05-2012	BITUMEN ROAD WORK @ 400KV GIS SWITCHYARD	Inside	Cons	30	AU	1	2,48,250	JANAK BUILDCON PVT. LTD.
04-06-2012	CONST. OF ROAD BY BOULDER SOLING	Inside	Cons	10	AU	1	4,81,500	VINDHYA CONSTRUCTION
04-06-2012	CONST. OF ROAD BY BOULDER SOLING	Inside	Cons	20	AU	1	4,81,500	VINDHYA CONSTRUCTION
03-07-2012	Road cross drainage	Inside	Cons	10	AU	1	7,00,460	R P SINGH & BROTHERS
14-10-2013	Construction of road at weighn bridge CHP	Inside	Cons	10	AU	1	3,58,241	SHAARC PROJECTS LIMITED
5.84								
Doc-Date	Short Text	O/I/Road	C/W/R	Item	Unit	Qty	Net Order Value (in R	Vendor/supplying plant
17-07-2014	Construction of RCC road at CHP	Inside	Cons	10	AU	1	1,74,03,178	SHAARC PROJECTS LIMITED
17-07-2014	Road - Gate No.-2 to CHP WB	Inside	Cons	10	AU	1	1,80,96,950	SHAARC PROJECTS LIMITED
25-11-2014	Road - Inside plant area	Inside	Cons		AU	1	2,28,51,770	SHAARC PROJECTS LIMITED
2.00								
Doc-Date	Short Text	O/I	C/W/R	Item	Qun	Quantity	Net Value (in Rs)	Vendor/supplying plant
28-03-2015	Plant Internal Roads & Drains.	Inside	Cons	20	AU	1	2,00,00,000.00	SHAARC PROJECTS LIMITED
1.62								
Doc-Date	Short Text	O/I/Road	C/W/R	Item	Unit	Qty	Net Order Value (in R	Vendor/supplying plant
14-08-2017	Road - Internal	Inside	Cons		AU	1	1,62,44,620.00	SHAARC PROJECTS LIMITED





Annexure-4**Photographs**

**Hon'ble National Green Tribunal (NGT) Principal Bench, New Delhi order dated
21.05.2019 (I.A. No. 337/2019)**



Gajra Bahra Coal siding (680mtrs length & 10ft heightened wind breaking wall)



Water sprinkling system at Gajra Bahra Coal siding



View of Wind Braking Wall



Machinery used for loading & unloading of the coal at Gajra Bahra Coal siding



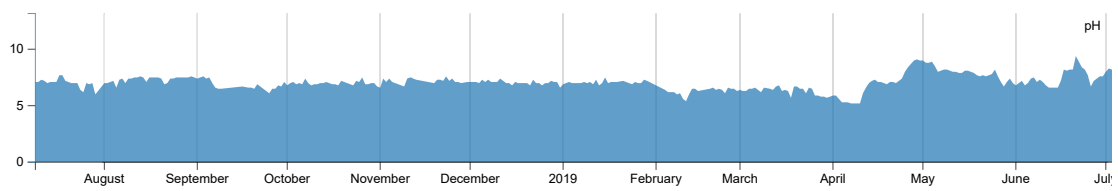
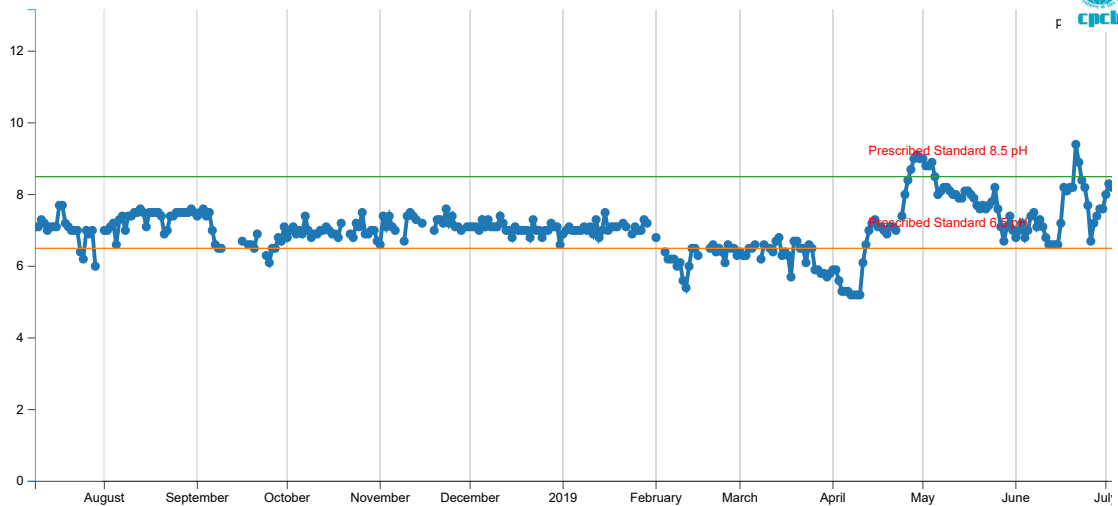
Non operational Sewage Treatment Plant (Compact)

Essar Power M.P. Ltd. ETP_OUTLET

Village - Bandhaura, Post-Karsualal, Tehsil-Mada, Dist-Singrauli, Waidhan-486886 Bandhaura Madhya Pradesh 486886

Time Dimension - 1 Year Ago
Average - daily

1=U (Usable Data), 4=C (Calibration Data),5=F (Faulty Data), 6=Z (ZeroCal Data)

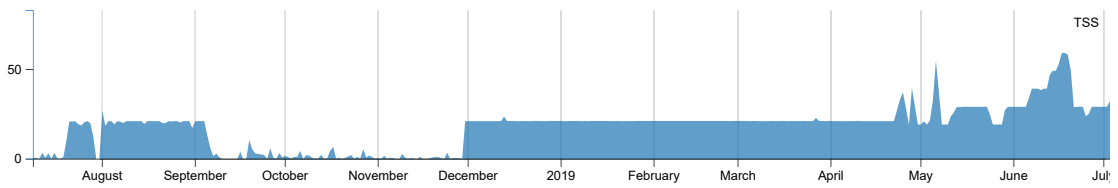
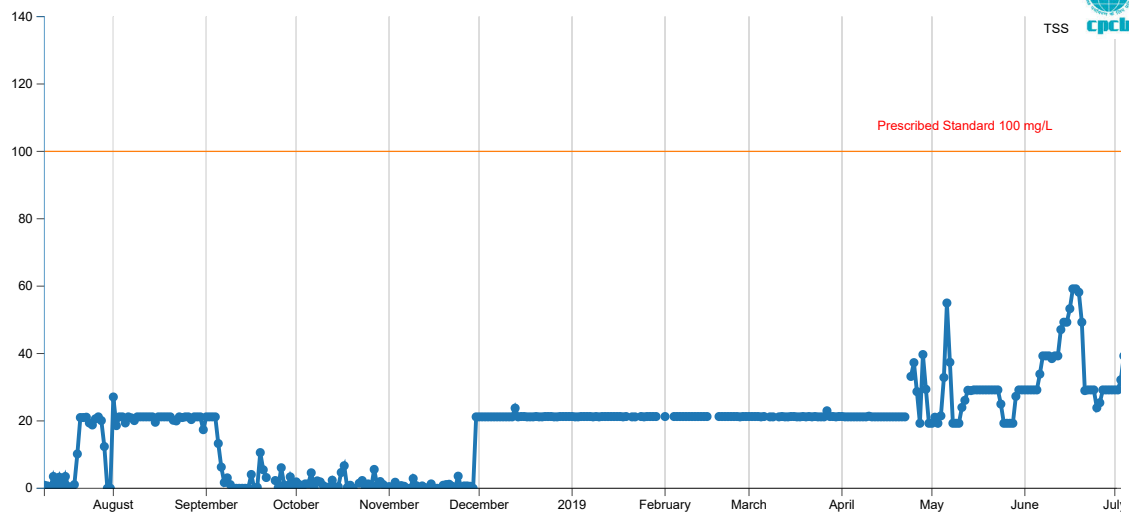


Essar Power M.P. Ltd. ETP_OUTLET

Village - Bandhaura, Post-Karsualal, Tehsil-Mada, Dist-Singrauli, Waidhan-486886 Bandhaura Madhya Pradesh 486886

Time Dimension - 1 Year Ago
Average - daily

1=U (Usable Data), 4=C (Calibration Data), 5=F (Faulty Data), 6=Z (ZeroCal Data)

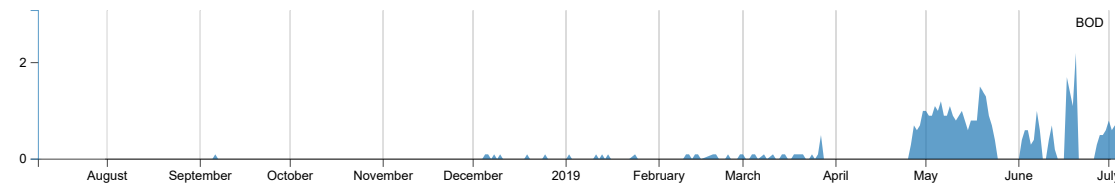
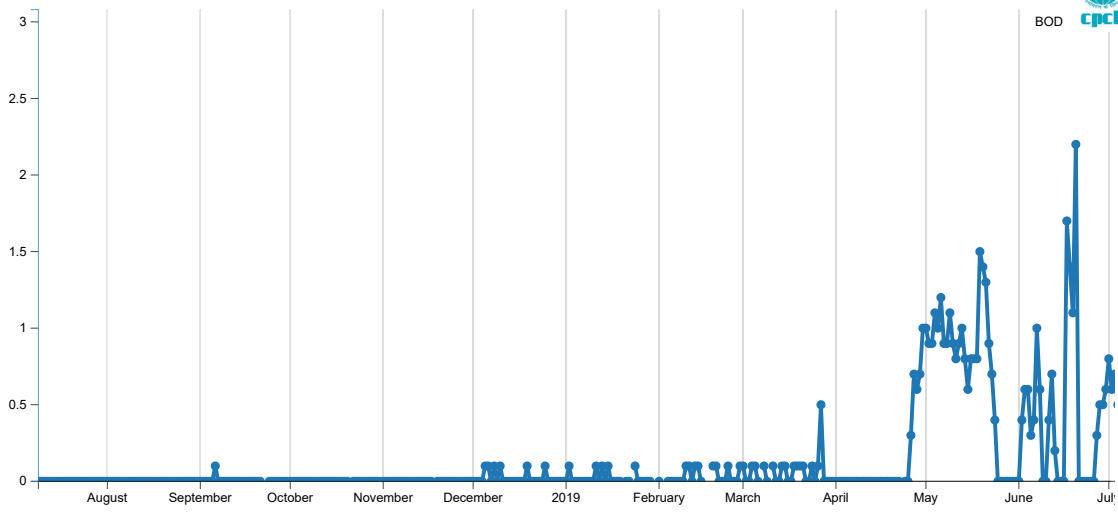


Essar Power M.P. Ltd. ETP_OUTLET

Village - Bandhaura, Post-Karsualal, Tehsil-Mada, Dist-Singrauli, Waidhan-486886 Bandhaura Madhya Pradesh 486886

Time Dimension - 1 Year Ago
Average - daily

1=U (Usable Data), 4=C (Calibration Data),5=F (Faulty Data), 6=Z (ZeroCal Data)

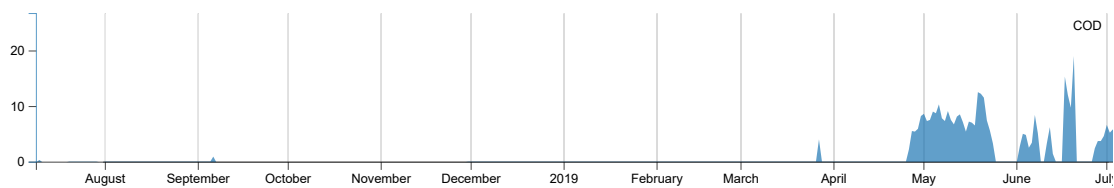
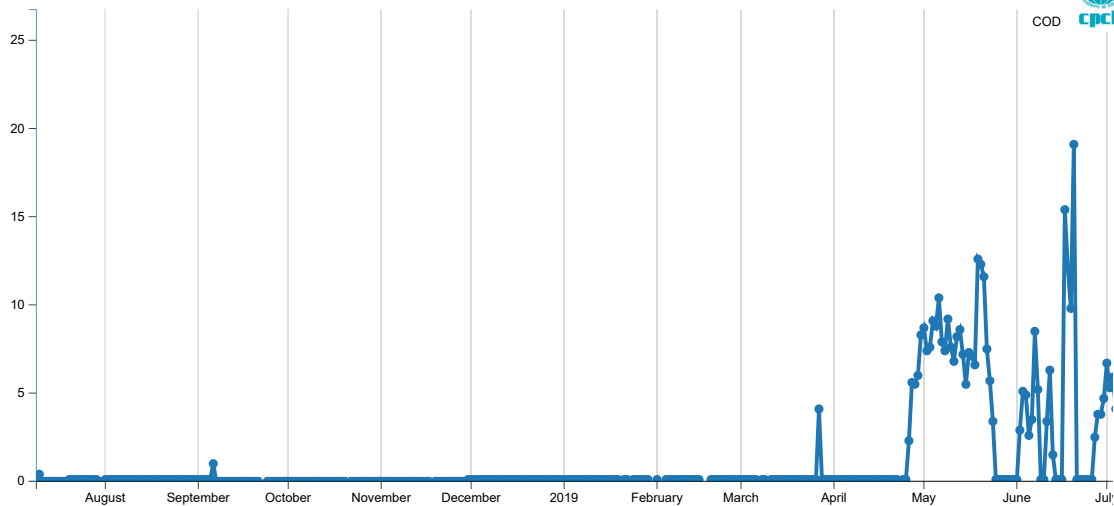


Essar Power M.P. Ltd. ETP_OUTLET

Village - Bandhaura, Post-Karsualal, Tehsil-Mada, Dist-Singrauli, Waidhan-486886 Bandhaura Madhya Pradesh 486886

Time Dimension - 1 Year Ago
Average - daily

1=U (Usable Data), 4=C (Calibration Data),5=F (Faulty Data), 6=Z (ZeroCal Data)



Anacon Laboratories Pvt.Ltd

Plot No.FP-34,35, Food Park,
Butibori 5 Star Industrial Estate,
Nagpur-441 122.

Quality Management System:-ISO 9001:2008

Phone No.(0712) 2242077, 9373287475

19-20/MON-A-

QR: LAB : 02

ANqr 1A-2

REVIEW OF REQUEST

Name of Party :- M/s Essar Power M.P.Ltd.

Address :- Village :-Bandhaura, Karsualal, Tehsil :-Mada-486 886, Distt :- Singrauli (M.P)

Name/Phone :- Mr. Jay Shanker Saran (08959593568)

Sample Type :- Air,Stack,Noise Monitoring & Water Sampling

Sampled By :- Anacon Representative Mr. Adesh Hirekhan

Sample Details & Analysis Parameters:-

Sr.No.		Location Name	Date of Sampling	Parameter's
1	Air Monitoring	Admin. Building	11.04.2019	PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO, Pb, Ni, As, O ₃ , NH ₃ , C ₆ H ₆ , BaP
		Near Gate No.1	11.04.2019	
		Near Gate No.2	10.04.2019	
		Near Gate No.3	10.04.2019	
		Near Ash Pond west side	12.04.2019	
		Near Ash Pond south side	12.04.2019	
2	Noise Monitoring	Admin. Building	11.04.2019	Day & Night
		Near Gate No.1	11.04.2019	
		Near Gate No.2	10.04.2019	
		Near Gate No.3	10.04.2019	
3	Stack Monitoring	Chimney (Stack-1&2)	11.04.2019	SPM, SO ₂ ,NO _x
Water Sampling				
A)	Ground Water (Borewell Water)	Nagwa Village	11.04.2019	pH, Total Hardness, Fe, Cl, F, Ca, Mg, Cu, Mn, SO ₄ , NO ₃ , Hg, Cd, Se, As, Pb,CN, Zn, Cr, Al, B
		Gadakhad Village	11.04.2019	
		Karsualal Village	11.04.2019	
		Rajmilan Village	11.04.2019	
		Gram Panchayat Bandhaura Village	11.04.2019	
		Gram Panchayat Railla Village	11.04.2019	
B)	Surface Water	Near Gate No. 1	11.04.2019	pH, TSS, Hg, Total Kjeldahi Nitrogen, PO ₄ , BOD (at 27 ^o C for 3 days),COD, O&G, Total Coliform.
		Near Gate No. 2		
		Raw Water reservoir	11.04.2019	
		Near Gate No. 3	11.04.2019	

W.O.NO.:--EPMPL/SFS/9610007143; Ref Date:-

W.O.Validity :- 01.04.2018 to 31.03.2019

Signature

Adesh
12.04.19

For Anacon Laboratories Pvt.Ltd. Ngp.

You are requested to carry out analysis for mentioned parameters.

Sample Particulars :			
Sample Inward No.	19-20/MON-	Date of Sample Received :	
Location of Sample :	--	Due Date :	
No.of Sample :		Category :	Monitoring
Quantity of Sample :	---	Mode of Dispatch	Hard Copy
Mode of Payment :		Email :	jay.saran@essar.com
Invoice No.:		Invoice Amount :	54

ADDITIONAL SAMPLE :-**Anacon Laboratories Pvt.Ltd**

Plot No.FP-34,35, Food Park,
Butibori 5 Star Industrial Estate,
Nagpur-441 122.
Quality Management System:-ISO 9001:2008
Phone No.(0712) 2242077, 9373287475

19-20/MON-

QR: LAB : 02
ANqr 1A-2

REVIEW OF REQUEST

Name of Party :- M/s Essar Power M.P.Ltd.
Address :- Village :-Bandhaura, Karsualal, Tehsil :-Mada-486 886, Dist :- Singrauli (M.P)
Name/Phone :- Mr.J.S.Saran (08959593568)
Sample Type :- Water

Sample Details & Analysis Parameters:-

Sr.No.	Particulars	Location Name	Date of Sampling
Water Sampling			
1.	Ground water sample	Near Ash Pond (West Side)	12.04.2019
2.	Ground water sample	Near Ash Pond (North Side)	12.04.2019
3.	Effluent Water	Inside the Plant	12.04.2019
4.	Sewage Water	Inside the Plant	12.04.2019
5.	RO Inlet (Drinking water)	Bachelors Building 1 st Floor	11.04.2019
6.	RO Outlet (Drinking water)	Bachelors Building 1 st Floor	11.04.2019
7.	RO Outlet (Drinking water)	Admin Building	11.04.2019
8.	RO Outlet (Drinking water)	Engineers Room	11.04.2019
9.	RO Outlet (Drinking water)	Canteen Gate No.1	11.04.2019

Note:- All drinking water, ground water & Raw water reservoir samples to be done as per parameters of IS-10500.

Receiver Name:----S.Bakde-----.

Adesh
12-04-19
Signature

For Anacon Laboratories Pvt.Ltd. Ngp.

You are requested to carry out analysis for mentioned parameters.

Sample Particulars : As above

Sample Inward No.	19-20/MON-	Date of Sample Received :	
Location of Sample :	As above	Due Date :	
No.of Sample :		Category :	---
Quantity of Sample :	2 Ltrs. each	Mode of Dispatch	---
Mode of Payment :		Email :	jay.saran@essar.com
Invoice No.:		Invoice Amount :	

> All Test Methods comply IS/APHA

Mitra S. K. Private Limited

Above United Bank of India
 Maihar Road, NH-7
 Kuthia, Katni-483501 (M.P.)
 CIN : U51909WB1956PTC023037
 T : 07622-240651, 240919
 E : katni@mitrask.co.in



MSK/KTN/17-18/269 CERTIFICATE OF ANALYSIS

13.03.2018

Ref. No.

Date

Sample No.

We hereby certify that Four no. of samples described as Coal submitted to us by the client **Essar Power M.P Limited, Bandhora, Karsualal, Tehsil-Waidhan (M.P.)** for examination on **09.03.2018** have been analysis with the following results:-

Sample Analysed on Air Dried Basis.

Sl. No.	Location	Sample ID	Date Of Sampling	Date of Analysis	ADL	RM	ARB TM	ADB				ARB	
					%	%	%	IM %	ASH %	VM %	GCV K/cal	ASH %	GCV K/cal
1	FEEDER COMPOSITE, DT. 07.03.2018	-----	09.03.2018	10.03.2018 & 12.03.2018	4.69	8.63	12.92	3.90	29.25	27.78	5004	26.50	4534



Prepared by: *[Signature]*

For Mitra S.K. Private Limited

[Signature]
 Authorised Signatory

Mitra S. K. Private Limited

Shrachi Center, 5th Floor, 74B, A.J.C. Bose Road, Kolkata-70016
 Tel. : +91 33 40143000/2265000
 Email : info@mitrask.com Website : www.mitrask.com



Certificate No. : MSK/SS/KAT/2018-19/000036

Date : 30/05/2018

CERTIFICATE OF ANALYSIS

We hereby certify that, sample submitted to us by client Essar Power M.P. Limited is analysed in our laboratory with the following findings:

General Information	
Job Ref. No.:	SJ/KAT/CO-2018/00004
Commodity:	Coal
Client Sample Mark:	Sample Mark - F
Sample Receipt Date:	09/05/2018
Condition of Sample:	Crushed Sealed Marked Ready to Analyse

*** Sample not drawn by us

Chemical Analysis		
Parameter	Result	Unit
C (ADB)	29.00	%
H (ADB)	2.73	%
N (ADB)	0.71	%
S (ADB)	0.31	%
O (ADB)	10.92	%
SiO ₂	61.43	%
Al ₂ O ₃	27.95	%
Fe ₂ O ₃	4.68	%
TiO ₂	1.95	%
CaO	0.70	%
MgO	0.62	%
P ₂ O ₅	0.29	%
Mn ₃ O ₄	0.05	%
Na ₂ O	0.17	%
K ₂ O	1.19	%
SO ₃	0.28	%

Remarks: Sample Analysed on Air Dried Basis

Client Details:

Essar Power M.P. Limited
 Village - Bandhora, Karsuairal,
 Taluk - Wardhan,
 Dist. - Singrauli Madhya Pradesh India Pin 486886

Certificate Checked By:



For Mitra S. K. Private Limited

Authorized Signatory

Page 1 of 1

MITRA S. K. PRIVATE LTD.

Above United Bank, Malhar Road, NH-7
 Kuthia, KATNI-83501 (M.P.)
 ☎-07622-240511, 240919

ANNEXURE 8

Ash Balance Sheet FY 2018-19

Name & Address of the Station: Essar Power (M.P.) Ltd., Bandhaura, PO-Karsual, Distt.-Singrauli (M.P.)
 Production Capacity: 2 X 600 MW (Operational) Total Capacity- 1200 MW (2x600 MW)

SN	Month	Total Coal Consumption (MT)	Ash (%)	Total Ash Generation (MT)	Total Fly Ash Generation (MT)	Total Bottom Ash Generation (MT)	Total Fly Ash Utilization				Total Bottom Ash Utilization	Summary of Ash Utilization			
							Cement Quantity (MT)	Bricks Quantity (MT)	In ash dyke raising (MT)	Others Quantity (MT)		In Land Filling Work (MT)	In Low Laying Area (MT)	Fly Ash (MT)	Bottom Ash (MT)
1	Apr-18	148787	28.2%	41884	33507	8377	6685	0	15000	0	0	6120	21685	6120	27805
2	May-18	182709	28.0%	51177	40941	10235	3570	40	15000	0	0	6240	18610	6240	24850
3	Jun-18	151592	31.4%	47524	38019	9505	2660	0	17000	0	0	3180	19660	3180	22840
4	Jul-18	151787	28.7%	43563	34850	8713	18900	140	8000	0	0	3560	27040	3560	30600
5	Aug-18	161368	27.3%	44053	35243	8611	16485	320	12000	540	0	5240	29345	5240	34585
6	Sep-18	238133	27.7%	65963	52770	13193	18760	340	16000	360	0	5740	39460	5740	41200
7	Oct-18	307970	28.1%	86540	69232	17308	19870	380	17500	0	0	6240	37550	6240	43790
8	Nov-18	185167	25.7%	47588	38070	9518	15925	380	19000	0	0	6800	35305	6800	42105
9	Dec-18	138133	23.52%	32489	25991	6498	11585	280	29750	0	10500	12580	52095	12580	64675
10	Jan-19	147765	23.91%	35330	28264	7066	21840	240	42350	0	11200	14240	75630	14240	89870
11	Feb-19	121265	24.12%	29249	23399	5850	18057	360	12400	0	0	5850	30817	5850	36667
12	Mar-19	142284	26.35%	37492	29994	7498	19539	280	0	0	0	7600	19819	7600	27419
Total		2076958	27.10%	562851	450281	112570	173676	2740	204000	900	21700	83390	403016	83390	486406
													89.50%	74.1%	86.42%

1. Cement Industries : Prism Johnson, KIS, Ultratech, RCCPL, Jaypee etc.
2. Brick Plant : N K Bricks
3. Low lying area : details attached



TIN - 23739064184

Mob: 9009533132
9425180127

नन्दकिशोर शाह

फ्लाई ऐश ब्रिक्स निर्माता एवं विक्रेता

ग्राम-रैला, पो.-रजमिलान, जिला-सिंगरौली (मप्र)



पत्रांक.....

दिनांक.....12.04.2019.....


सेवा में,

संरक्षा एवं पर्यावरण अधिकारी,
एस्सार पॉवर एम0पी0 लि0, बन्धौरा

महोदय,

हम यह आपको सूचित करना चाहता हूँ कि हम आपके प्लांट से ब्रिक्स बनाने के लिए फ्लाई ऐस्स माह फरवरी, 2019 में 18 गाड़ी ले गये हैं। जिसका वजन लगभग 360 टन है। एवं माह मार्च, 2019 में भी 14 गाड़ी ले गये हैं। जिसका वजन लगभग 280 टन है।

यह हम अभिलेख (Record) के लिए प्रेषित कर रहे हैं।

भवदीय
मेसर्स नन्द किशोर शाह

प्रोप्राइटर



Toll: 23739094124

Mob: 9009593132
9425130127

गण्दकिशोर शाह

फ्लाई ऐश ब्रिक्स निर्यात एवं विक्रेता

(ग्राम-देसा, पो.-रजमिदान, जिला-द्विगरीली (मप्र))



पत्रांक.....

दिनांक..... 12.04.2019.....


सेवा में,

संरक्षा एवं पर्यावरण अधिकारी,
एस्सार पॉवर एम0पी0 लि0, बन्धौरा

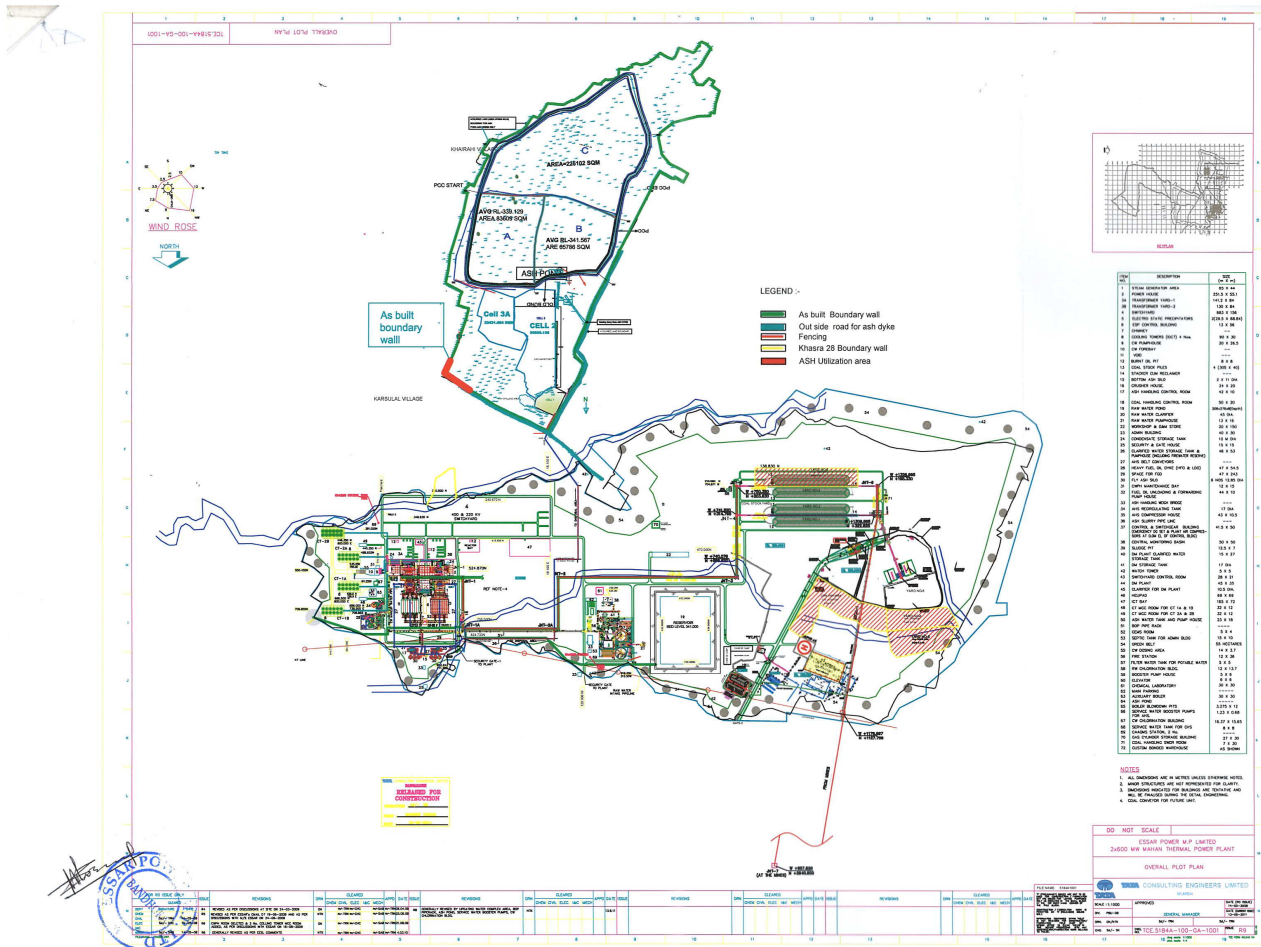
महोदय,

हम यह आपको सूचित करना चाहता हूँ कि हम आपके प्लांट से ब्रिक्स बनाने के लिए फ्लाई ऐस्स माह फरवरी, 2019 में 18 गाड़ी ले गये हैं। जिसका वजन लगभग 360 टन है। एवं माह मार्च, 2019 में भी 14 गाड़ी ले गये हैं। जिसका वजन लगभग 280 टन है।

यह हम अभिलेख (Record) के लिए प्रेषित कर रहे हैं।

भवदीय
मेसर्स गण्द किशोर शाह

प्रोप्राइटर





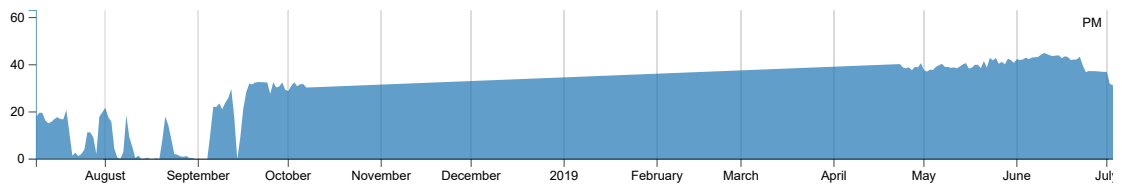
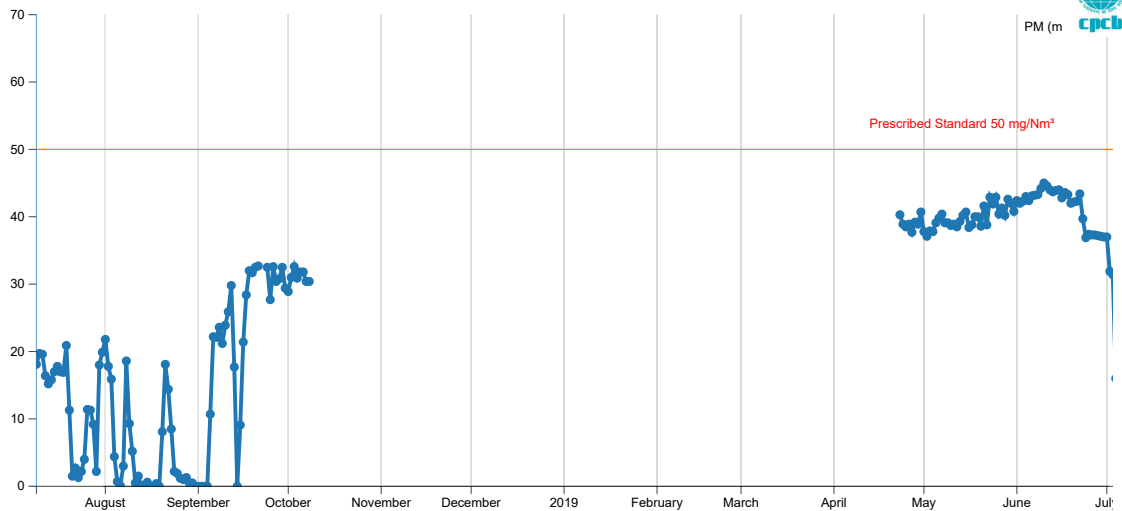
Essar Power M.P. Ltd. Stack_1

Annexure 8a

Village - Bandhaura, Post-Karsualal, Tehsil-Mada, Dist-Singrauli, Waidhan-486886 Bandhaura Madhya Pradesh 486886

Time Dimension - 1 Year Ago
Average - daily

1=U (Usable Data), 4=C (Calibration Data),5=F (Faulty Data), 6=Z (ZeroCal Data)



Essar Power M.P. Ltd. Stack_1

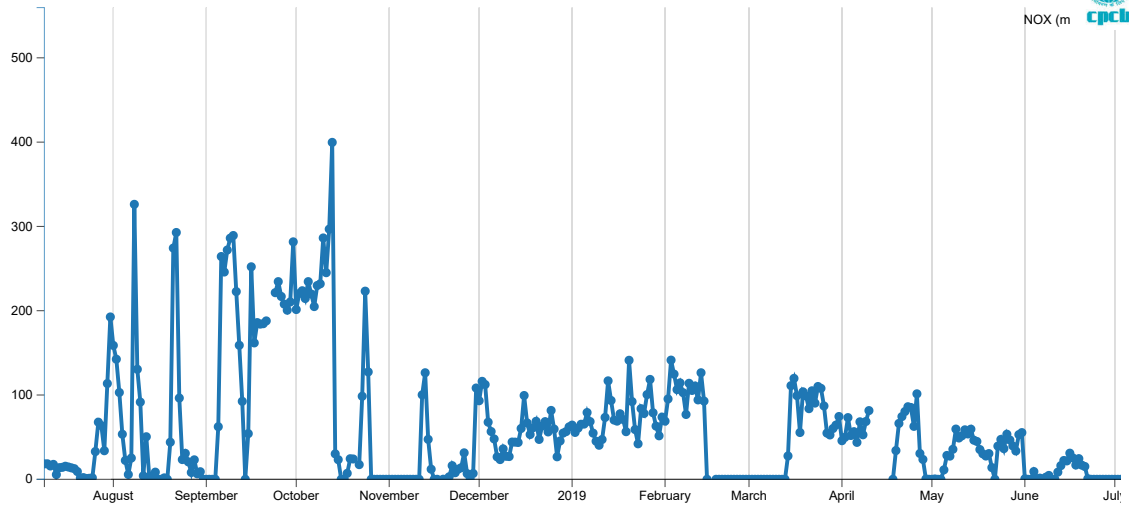
Village - Bandhaura, Post-Karsualal, Tehsil-Mada, Dist-Singrauli, Waidhan-486886 Bandhaura Madhya Pradesh 486886

Time Dimension - 1 Year Ago
Average - daily

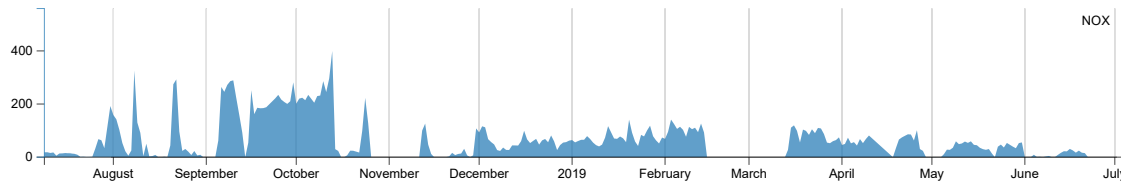
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NOX (m)



NOX

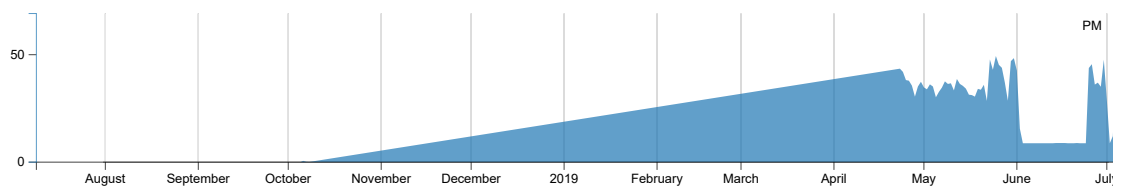
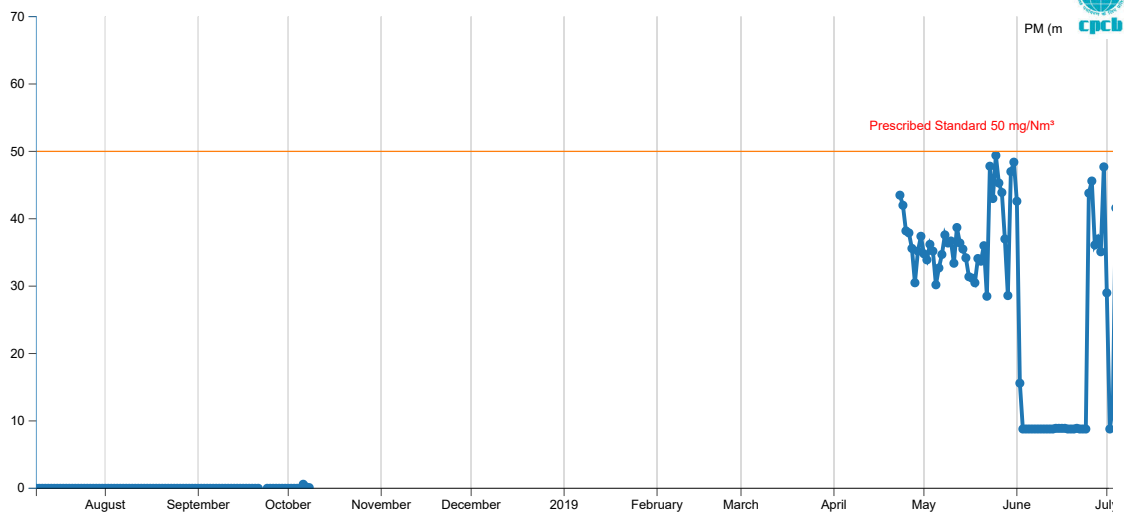


Essar Power M.P. Ltd. Stack_2

Village - Bandhaura, Post-Karsualal, Tehsil-Mada, Dist-Singrauli, Waidhan-486886 Bandhaura Madhya Pradesh 486886

Time Dimension - 1 Year Ago
Average - daily

1=U (Usable Data), 4=C (Calibration Data),5=F (Faulty Data), 6=Z (ZeroCal Data)

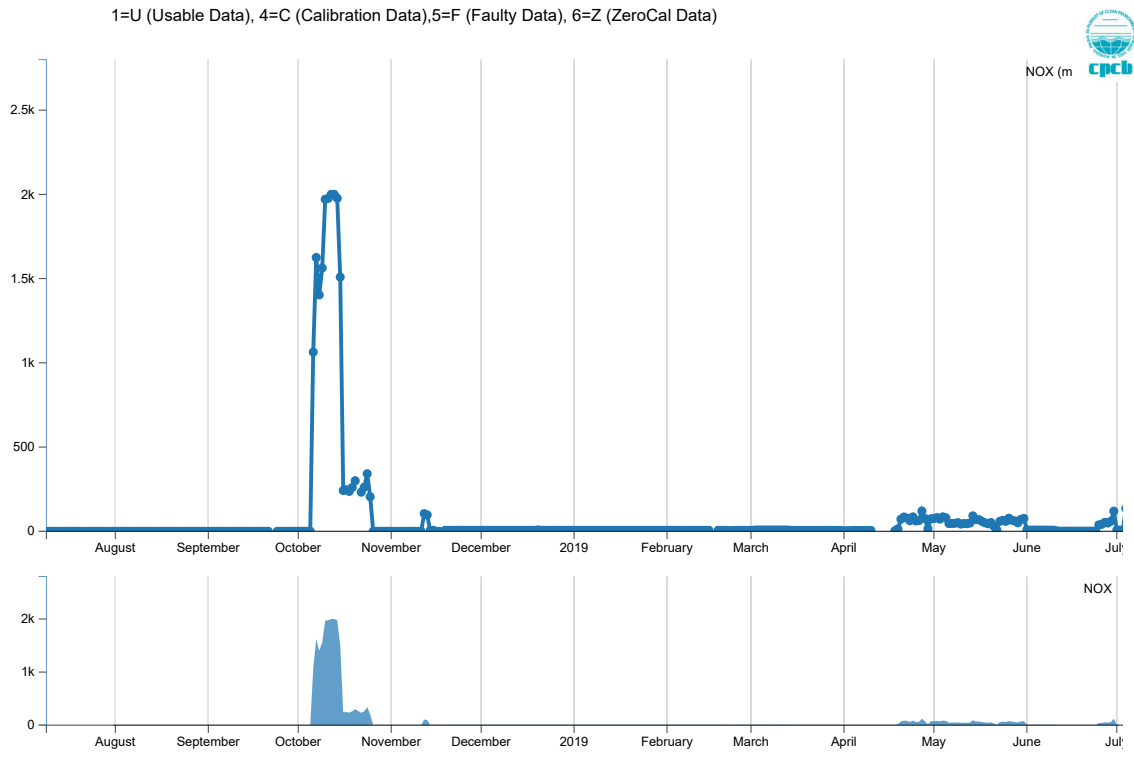


Essar Power M.P. Ltd. Stack_2

Village - Bandhaura, Post-Karsualal, Tehsil-Mada, Dist-Singrauli, Waidhan-486886 Bandhaura Madhya Pradesh 486886

Time Dimension - 1 Year Ago
Average - daily

1=U (Usable Data), 4=C (Calibration Data),5=F (Faulty Data), 6=Z (ZeroCal Data)

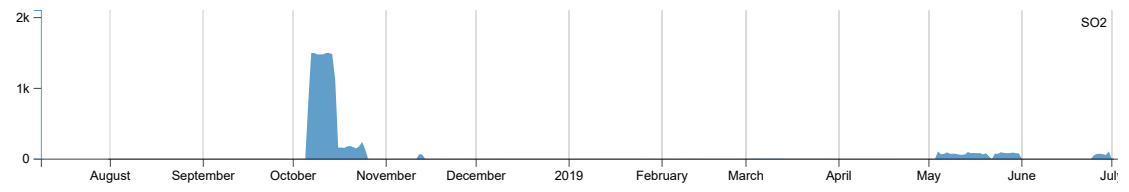
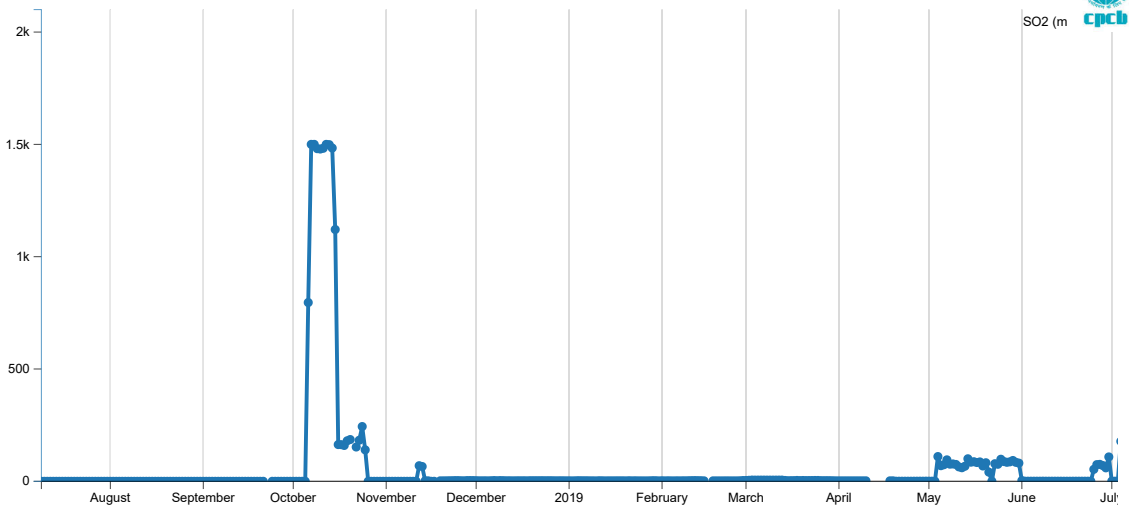


Essar Power M.P. Ltd. Stack_2

Village - Bandhaura, Post-Karsualal, Tehsil-Mada, Dist-Singrauli, Waidhan-486886 Bandhaura Madhya Pradesh 486886

Time Dimension - 1 Year Ago
Average - daily

1=U (Usable Data), 4=C (Calibration Data),5=F (Faulty Data), 6=Z (ZeroCal Data)



Ref No : EP MPL/LA/3457/10
Date : 15/4/2016



Dr. Reeta Kori
Chief Scientific Officer
MPPCB, Bhopal

Essar Power M.P Limited
Village: Bandhora,
Post Karsualal,
Tehsil Mada,
Dist. - Singrauli,
Waidhan - 486 886
Madhya Pradesh,
India

Subject: Mapping of CAAQMS in Madhya Pradesh state
Reference: Your letter No.23/HOPCB/ESC, dated 26th February'2016

Dear Sir,

T +91 75090 61540 / 89669 02954

We are in receipt of your letter No. 23/HOPCB/ESC, dated 26th February'2016
Please find our point wise reply as under.

1. **4 Nos. CAAQMS** have been installed at our Mahan site.
2. Name of the parameters as under:
PM-10, PM-2.5, SO₂, NO, NO₂, NOX and CO
- 3.

Sr. No.	Locations	Coordinates	
A.1	Admin. Bldg.	Latitude: 24° 0'36.63"N	Longitude: 82°24'37.78"E
A.2	Gate # 2	Latitude: 24° 0'33.85"N	Longitude: 82°24'11.94"E
A.3	Gate # 3	Latitude: 24° 0'17.30"N	Longitude: 82°24'29.99"E
A.4	Switch Yard	Latitude: 24° 0'19.51"N	Longitude: 82°25'9.71"E

4. Area map indicating locations of CAAQMS is attached
5. A.1) Near STP plant, DM Plant and Adm Building.
A.2) Near entry Road, Security office and Coal yard
A.3) Near entry gate, Road, O & M store and CHP conveyor belt
A.4) Near Switch Yard, Road and TG Building

Hope this is in line with your requirements.

Thanking you,

Sincerely yours,
For Essar Power M.P.Ltd.

M.K. Sharma
Chief Operating Officer

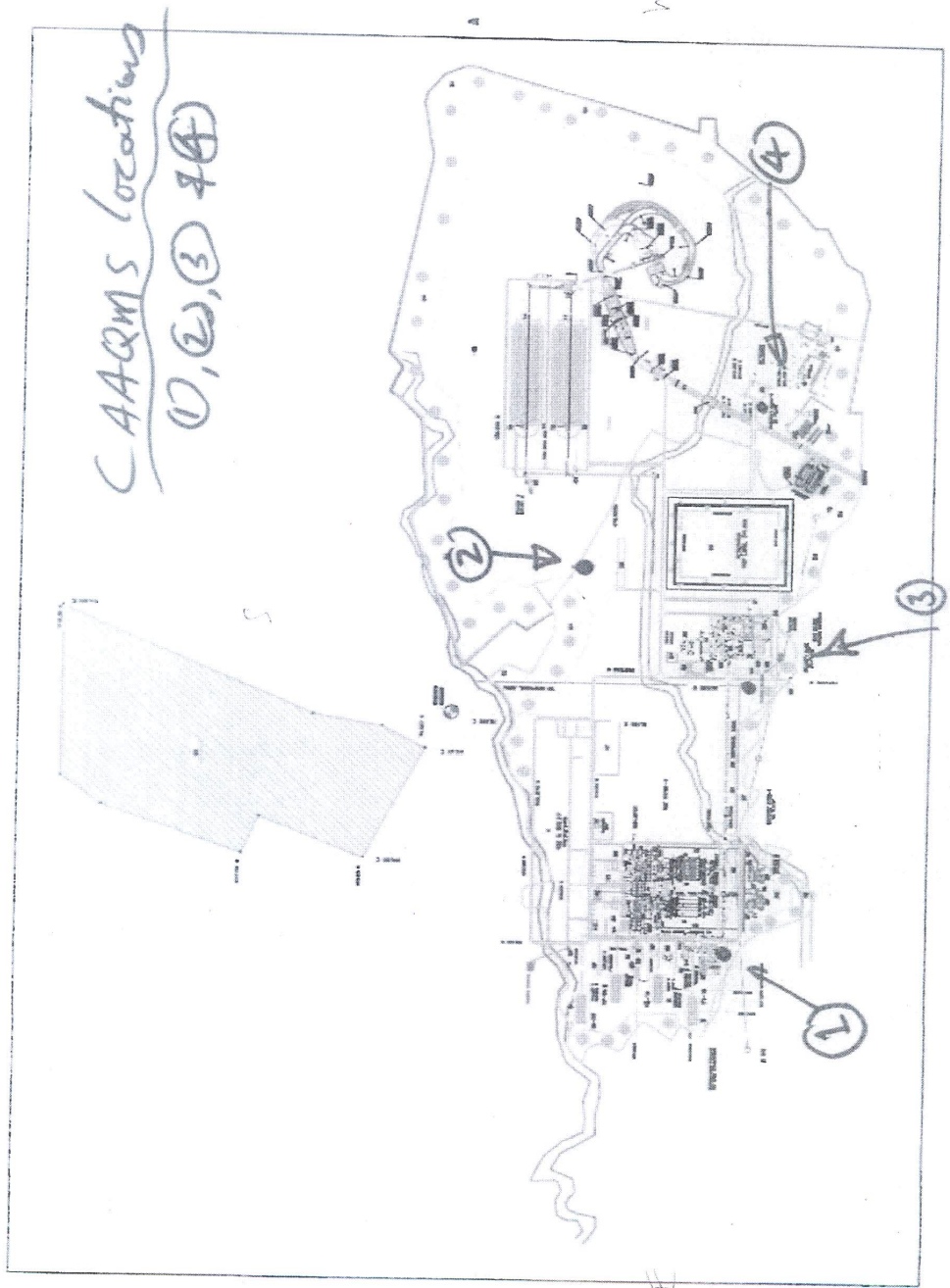
Cc : Regional Officer,
MPPCB,
D-2, Russian Complex,
Vindhyanagar, Singrauli
: Sh. V.K. Ahirwar (C.E.), MPPCB, Bhopal

Corporate Identification Number - U40100DL2005PLC201961

Registered Office : Prakash Deep Building, 10th Floor, 7 Tolstoy Marg, New Delhi - 110 001, India

T +91 11 4350 1000 F +91 11 4350 1046 / 47

STEEL | ENERGY | INFRASTRUCTURE | SERVICES



Item No. 12

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

I.A. No. 337/2019
IN
Original Application No. 164/2018
(Earlier O.A.No.276/2013)

Ashwani Kumar Dubey

Applicant(s)

Versus

Union of India & Ors.

Respondent(s)

Date of hearing: 21.05.2019

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P. WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

For Applicant(s): Mr. Sidharth Bhatnagar and Mr. Nishant Rao,
Advocates

For Respondent (s):

ORDER

1. This application is in the nature of the review of order dated 28.08.2018. By the said order, the report of the Expert Committee filed on the subject of air pollution caused by the Thermal Power Plant in question suggested that transportation of coal will only be either by railway wagon or by dedicated conveyer system and not by road as such transportation was causing severe dust pollution in the area.
2. The applicant has referred to the observations of the Oversight Committee appointed by this Tribunal to look into the mitigation measures to the effect that if the coal is not transported, generation of power will stop which will be against public interest.

3. The applicant while seeking permission to continue coal transportation has not pointed out any mitigation measures nor indicated the extent of coal to be transported. We find that in the consent to operate order dated 01.09.2018 of the Madhya Pradesh Pollution Control Board (MPPCB), there is a specific requirement that all internal roads should be made *pucca* to control emission of particulate matter generated due to coal transportation which has not been done. It is not clear as to how many roads have been made *pucca* after eight months of the condition imposed while granting consent to operate.

4. Let the Central Pollution Control Board (CPCB) and the State Pollution Control Board may furnish a report about compliance of consent conditions and by way of response to the prayer of the applicant.

A copy of this order be sent to the CPCB and the SPCB by e-mail for compliance.

List for further consideration on 19.07.2019.

Adarsh Kumar Goel, CP

S.P. Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

May 21, 2019
I.A. No. 337/2019 IN
Original Application No. 164/2018

71

(Earlier O.A.No.276/2013)
DV

