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Ref : PP/ENV/16/391

Date : 27.05.2016

Mr. S.Kerketta,  
Joint Director (S)  
Ministry of Environment & Forests,  
Eastern Regional Office,  
A/3, Chandrasekharpur,  
Bhubaneswar – 751023.

**Sub : Half yearly compliance report of 30 MW expansion  
Power Plant (from October'15 to March'16).**

**Ref : 1.Clause no. 3 (xix), General conditions of  
Environmental Clearance Letter No. J-13012/77/2007- IA  
II (T) dt 27.07.2007  
2. Letter from MoEF, Eastern Regional Office dt  
09.10.2007**

Dear Sir,

Reference above, we are enclosing herewith half yearly compliance report (October'15 to March'16) in Annexure – I and soft copy of the same in CD for your needful.

Thanking you,  
Yours faithfully,  
**for INDIAN METALS & FERRO ALLOYS LTD.**

  
**(B.Mohapatra)**  
**Sr. Vice President, Head - Power Business Unit.**

Encl : As above.  
cc to : Member Secretary,  
State Pollution Control Board, Orissa,  
Paribesh Bhavan,  
A/118, Nilakanthanagar, Unit – VIII,  
Bhubaneswar – 751012.

cc to: Regional Officer,  
State Pollution Control Board, Orissa,  
586, Suryavihar, Link Road,  
Cuttack – 753012.

COMPLIANCE TO CONDITIONS OF MOEF CLEARENCE FOR 30 MW POWER PROJECT		
Sl.No.	CONDITION	COMPLIANCE STATUS
i)	No additional land shall be acquired for any activity relating to the proposed expansion project	The plant is being constructed within the available land ,adjacent to existing 108 MW power plant, as per the layout finalised for the 30MW expansion project which is under the ownership of IMFA. The relevant documents in this regard has already been submitted to OPCB. Refer Note below.
ii)	Sulphur content of in coal and middlings to be used as fuel shall not exceed 0.6%	Copies of the analysis report of coal and coal middlings indicating, sulphur content in coal to be used in proposed 30 MW power project has already been submitted . Refer Note below.
iii)	A stack of 45.6 m height. This is subject to the condition that SO <sub>2</sub> emission will be kept below 51.2Kg/hr or 277 mg/Nm <sup>3</sup> . The monitoring data in this regard be regularly sent to the Ministry's Regional Office/SPCB.	Construction of Stack of 45.6 m height is completed. Installation of continuous on-line monitoring system for SO <sub>2</sub> emission is completed. The level of emission is found within the norm.
iv)	High efficiency Electrostatic Precipitators (ESPs) shall be installed to limit particulate emission to 100mg/Nm <sup>3</sup>	ESP having 4 nos of fields with 99.92 % efficiency has been installed and commissioned. During operation PM emission was found to be < 100mg/Nm <sup>3</sup> . Tech. details and write up has already been submitted. Refer Note below.
v)	Low NO <sub>x</sub> burners shall be provided.	The CFBC boiler of 30MW does not have coal burners. However for efficient combustion of coal the state of the art technology,viz. Fluidized bed combustion has been employed. This boiler is having the added advantage of limiting NO <sub>x</sub> emission due to its inherent low temperature(800-900 deg.C) combustion.
vi)	CFBC technology with lime injection for removal of SO <sub>2</sub> up to 70% shall be provided.	Using CFBC technology and lime injection, SO <sub>2</sub> removal will be more than 92%. Detail calculation sheet has already submitted. Refer note below.
vii)	Dust extraction and dust suppression system and water sprinklers shall be provided for controlling fugitive dust during coal transportation, in coal storage & handling area and other vulnerable areas of the plant.	In the 30 MW power plant dust extraction system for CHP, coal bunker & ash silo has been installed and commissioned. Water sprinklers are provided at ground hopper, coal storage area and along road side.

Sl.No.	CONDITION	COMPLIANCE STATUS
viii)	Water requirement shall not exceed 3460 m <sup>3</sup> /day which will be met from river. Necessary permission for drawl of requisite quantity of water shall be obtained from competent authority.	Requirement of water for the project is kept within 3460 m <sup>3</sup> /day. No further permission is required, because we are already having adequate permission for drawel of water from river and above requirement will be met after supplying water to existing 108 MW power plant. In this regard water consumption data for last five year and a copy of the permission obtained from Govt authority, to draw water from river has already been submitted. Refer Note below.
ix)	Closed circuit cooling system with cooling towers shall be installed.	Close circuit cooling system with cooling tower has been installed and commissioned. Make up to the system is being supplied from the existing 108 MW power plant. The system is operating at 4 to 5 COC.
x)	Treated effluents conforming to the prescribed standards shall be recirculated and reused within the plant. No effluents shall be discharged outside the plant boundary.	In the 30 MW power plant no effluent is generated, as treated water from existing 108 MW power plant is in use as make up to the cooling tower. Reuse of boiler blow down water and cooling tower blow down water is going on. No effluent is discharged to outside.
xi)	Rain water harvesting shall be practiced. A detail 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.	Report submitted. Please refer our letter no. EVP(O)/ENV/09/1598 dt. 24.09.2009 in this regard.
xii)	Leq of noise level shall be limited to 75 dBA and regular maintenance of equipments should be undertaken. For people working in high noise areas, personal protection devices should be provided.	During operation, noise level was regularly monitored and found to be <75 dBA. PPEs have been provided to the peoples working in high noise areas.
xiii)	Dry ash collection system shall be provided. 100% ash utilisation shall be ensured from day one of the commissioning of the plant.	Dry ash collection system has been provided. Dry ash is now being collected and utilized completely.
xiv)	A green belt shall be developed around the plant boundary with tree density of around 2500 trees per ha covering 1/3 of the total project area.	Plantation is being carried out on regular basis. Adequate care is taken for their survival.

Sl.No.	CONDITION	COMPLIANCE STATUS
xv)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase	Complied during construction phase.
xvi)	Regular monitoring of ambient air quality shall be carried out in and around the power plant and records maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation of with the State Pollution Control Board. Periodic reports shall be submitted to the regional office of this Ministry at Bhubaneswar.	Ambient air quality monitoring results are enclosed.
xvii)	The project proponent shall advertise in at least two local news papers 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 letter are available with the State Pollution Control Board / Committee and may also be seen at website of Ministry of Environment and forests at <a href="http://envfor.nic.in">http: //envfor.nic.in</a>	Advertised in local daily. Viz : Indian Express dt. 31.08.07 & Dharitri (vernacular language) dt.31.08.07
xviii)	A separate environmental management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	Existing environment management cell of 108 MW power plant is now looking into the implementation of the stipulated environmental safeguards. Name of the personnels and their responsibilities has been defined and has already submitted Refer Note below.
xix)	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry, the Regional office and the CPCB/SPCB.	Being complied.

Sl.No.	CONDITION	COMPLIANCE STATUS
xx)	Regional office of the Ministry of Environment & Forests located at Bhubaneswar will monitor the implementation of the stipulated conditions. Complete set of Environment 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.	Complied. Vide letter no. SVP(O)/ENV/06/1791 dt.12.10.2006 & SVP(O)/ENV/07/001 dt.02.04.2007
xxi)	Separate funds shall be allocated for implementation of environmental protection measures along with item wise break up. The cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purpose and year wise expenditure shall be reported to the Ministry.	Details of fund allocation on different heads has been furnished earlier. Capital expenditure incurred for installation of (a) ESP + fly ash handling system is \$850000. (b) Coal dust extraction system + lime handling & dosing system is \$1,030,000. Further, year wise expenditure incurred for environmental protection measures ,during operation of the plant, are being furnished.
xxii)	Full cooperation shall be extended to the Scientists / Officers from the Ministry/ Regional office of the Ministry at Bhubaneswar / CPCB / SPCB who would be monitoring the compliance of environmental status.	Is being Complied.

Note : Reports , write up etc. stated above have been submitted to your good office on 04.11.08 (Please refer our letter no EVP(O)/ENV/2006 dt 04.11.08)

# Monitoring data

AMBIENT AIR QUALITY & STACK EMISSION OF 30 MW (OCTOBER'2015 –MARCH'2016 )																						
	At coal handling plant				Near gate no.6				At filter house				Power Plant lawn				Near 30 MW CHP Control room				P.M. and SO2 at boiler stack	
Month/week	PM10	SO2	NO2	PM2.5	PM10	SO2	NO2	PM2.5	PM10	SO2	NO2	PM2.5	PM10	SO2	NO2	PM2.5	PM10	SO2	NO2	PM2.5	PM	SO2
Oct'1st week	75	7.9	14.1	51	84	8.3	12.9		68	6.8	11.9		81	7.9	13.3		89	8.7	15		41	
2nd week	83	7.6	12.5		77	8.1	13.9	46	63	6.5	11.7		70	7.2	12.1		78	8	13.3			
3rd week	80	7.5	13.5		86	8.2	15.3		69	8	13.1	53	67	7.2	12.9		85	7.8	15.2		39	
4th week	77	6.9	13.3		81	7.5	12.9		75	8.7	13.9		71	6.9	14.4	37	78	8.2	12.6	47	55	207
Nov' 1st week	71	6.3	13.2	55	87	9.8	16	57	79	8.9	14.3		83	10.1	12.9		91	9.6	14.4		58	169
2nd week	88	8.1	12.5		92	9.5	13.7		81	8.5	15.8	48	77	8.9	14.2		89	9.7	12.8			
3rd week	93	10.8	13.1		98	9.2	17		85	8.6	13.2		80	7.8	12.5	39	82	9.5	14.9		45	
4th week	87	8.6	12.9		90	10.2	14.1		74	6.9	15.4		71	8.3	13.8		79	7.8	12.3	58		
Dec' 1st week	92	8.3	17.1	52	76	6.5	15.4		85	8.1	16.6		83	7.1	18.2		89	7.8	15.8			
2nd week	79	5.9	16.1		90	7.4	15.3	49	95	6.3	14.9	54	82	5.9	15.8		93	7.9	15.2		39	
3rd week	85	6.6	14.3		79	7.1	15.5		94	8.3	16		78	6.5	14.3	41	82	6.6	14.8			
4th week	91	7.5	15.6		87	8.1	16.5		82	6.9	14.5		90	5.8	16.6		86	7.1	15.4	59	81	177
Jan' 1st week	81	7.8	13.3	57	89	8.7	14.4		77	7.1	15.2		93	10.2	14.8		90	8.4	16.5		73	
2nd week	85	8.8	14.7		91	10.1	15.6	49	75	7.9	12.6	50	86	9.7	15.2		95	10.5	13.8		45	189
3rd week	81	9.3	14.8		87	8.5	15.2		80	7.4	12.6		89	9	14.3	40	92	10.4	15.1			
4th week	85	9	14.3		93	8.7	15.2		81	7.5	14.3		90	8.6	13.8		89	10	14.8	56		
Feb' 1st week	76	9.1	13.2	53	90	10	14.3	58	72	8.5	12.7		86	7.8	13.9		97	10.5	14.7		41	
2nd week	83	9.5	15.1		88	8.2	12.9		68	7	11.8	52	80	8.5	12.8		89	9.7	13.8			
3rd week	90	10	15.2		95	8.9	13.5		79	7.4	12.1		88	9.2	12.9	49	82	9.2	13.3		36	150
4th week	94	8.2	12.9		87	9.7	14.2		75	7.2	13		82	9.1	14.1		91	10.3	15.8	55		
Mar' 1st week	90	7.6	14.2	56	84	8.6	16.2	51	92	8.2	18.1		86	8.1	14.6		91	7.7	15.1			
2nd week	94	8.2	13.2		80	7.8	14.2		80	9.3	13.6	55	92	8.4	14.3		79	9.6	16.1		44	
3rd week	88	7.3	13.8		83	8.5	15.2		78	7.9	15.3		92	9	14.6	53	92	8.4	14.7	52	69	182
4th week	84	7.6	15.6		90	6.7	14.2		83	7.6	15.1		94	8.1	16.6		83	6.4	13.7			

Env expndtr, CSR, Plantation

Period	Expenditure incurred on environmental management	Plantation, green belt development	CSR activities undertaken
October'15 to March'16	<p>Operation – Rs.20,69,418/-</p> <p>Maintenance – Rs.62,798/-</p> <p>Total – Rs.21,32,216/-</p>	<p>April - Nil</p> <p>May - Nil</p> <p>June - 2400</p> <p>July - 5100</p> <p>August - 9200</p> <p>September - Nil.</p> <p><b>Total - 16700 nos.</b></p> <p>October'15 to March'16 = Nil</p> <p>Survival = 85%</p>	<p>Free mediactal check up through out the period near Kapaleswar post office. General health camp organised at Banipada and Choudwar Municipality. Free medicine distributed at old cows' home (gosala) at Mangarajpur. 50 pairs pre fabricated desk and benches donated to Choudwar UP School, Kujibara UP School and Jhoteswar High School. Water project constructed at Chasapada and Chanchuo village. Costructed one public toilet with water facility at Mangarajpur village. Two nos hall constructed at Mangarajpur and Megheswar High School building. Desk top computer, one number each, donated to Bibekananda Sikshya Kendra, Jagatpur and St. Xavier's School, Jobra.</p> <p>100 pairs school uniform provided to Paikraypur UP School. 3 nos. Hearing aid mechine provided to deaf personal at Servent's society of India, Choudwar. One manadap for dol purnima celebration was constructed at Ward no 1, Choudwar Municipality.</p> <p>Total expenditure under CSR = Rs.27,12,762/-</p>