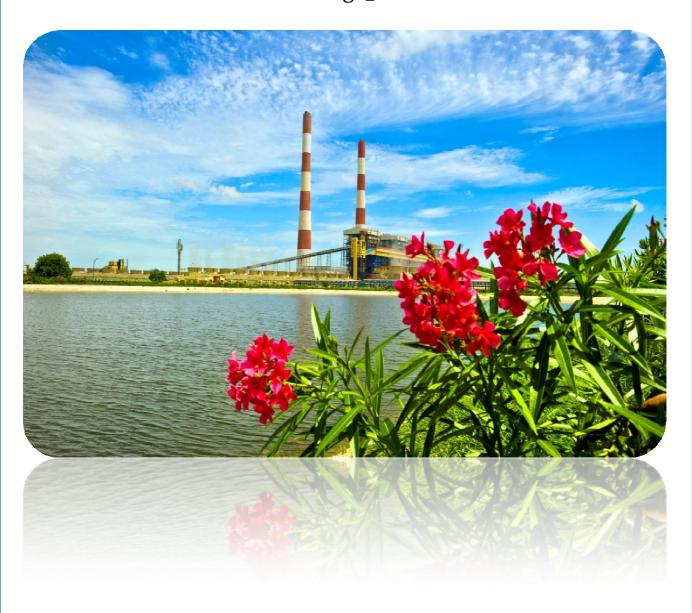
Six Monthly Environmental Clearance Compliance Report April 2020 to September 2020

Rosa Power Supply Co. Ltd. Stage_I





Reliance

Rosa Power Supply Company Limited CIN: U3110MH1994PLC243148 Administrative Block, Hardoi Road, P.O. Rausar Kothi, Tehsil-Sadar, District – Shahjahanpur Uttar Pradesh 242 406

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Date: 25/11/2020

Ref: RPSCL/Env/EC/11/2020/03

To, The Director Ministry of Environment & Forests Kendriya Bhawan, 5th Floor Sector-H, Aliganj LUCKNOW (U.P.)

Sub: Compliance Status - 2X300 MW Rosa Thermal Power Plant Stage-I

Dear Sir,

This is with reference to the Environmental Clearance no J-13011/19/2005-IA (T) dated 14.03.2006 and its subsequent amendment issued to us.

As advised please find enclosed the six monthly compliance reports both in hard & soft copy for the period of April 2020 to September 2020.

Thanking You,

For Rosa Power Supply Co. Ltd.

(Authorized Signatory)

Cc: (I) Regional Officer UPPCB Bareilly

(II) Regional Officer CPCB Lucknow

(III) Member Secretary UPPCB Lucknow

(Iv) MoEF, New Delhi

Encl: Six Monthly Compliance report

i. Annexure 1: STP & ETP Effluent Analysis Report

ii. Annexure 2: Stack Monitoring Report

iii. Annexure 3: Coal Ash Analysis Report

iv. Annexure 4: Ground Water Analysis Report in Ash Pond Area

v. Annexure 5: Green Belt development progress Report

vi. Annexure 6: First Aid Facilities Details

vii. Annexure 7: Noise Monitoring Report

viii. Annexure 8: AAQ (Ambient Air Quality) Monitoring Report

ix. Annexure 9: Organization Structure



Capacity: 2x 300 MW - Stage I Compliance Status of Env Clearance Letter No. J-13011/19/2005-IA(T) dated 14.03.2006

Sr. No.	Stipulated Clearance Condition	Compliance status
	tions and Safeguards	
(i)	All the conditions stipulated by Uttar Pradesh Pollution Control Board vide their letter no. 5677/C-3/NOC/940/94 dated 2.5.1994 and F-51465 C-5/NOC-91/05/20 dated 14.10.2005 shall be strictly implemented.	Complied. Compliance Report submitted to UPPCB vide letter no RTPP/UPPCB/08-09/01 dated July 1, 2008
(ii)	The land to be acquired for the project shall not exceed 400 ha. Including land for the ash pond and green belt.	Complied. The total land available for stage – I & stage - II is 610 ha. The same was approved by MoEF-vide letter No. J-13011/73/2007-1A, II (T) dated 20 th July 2009.
(iii)	Closed circuit cooling system with a COC of not less than 4 shall be adopted.	Being Complied. Cooling water system designed for >4.0 Cycle of concentration. The present COC is 5.0 to 5.5.
(iv)	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.	Complied. The project site has shallow ground water level (5 to 8 meter) hence artificial recharge to ground water shall not be feasible. Hence, Central Ground Water Authority has negated the above requirement vide letter No. 32-5/CGWA/RWH/OTH/08-332 dated 29/01/2008. This is with reference to our Renewed NOC for Ground Water withdrawal vide NOC No-CGWA/NOC/IND/ORIG/2018/3524 dated 22.05.2018, the NOC was valid from 27.04.2018 to 26.04.2020. We have online applied for renewal of NOC before due date on 03.02.2020 with submission of requisite fee. As per our above NOC, ground water recharge condition for 7,96,450 cum/year, but as per CGWA guideline, the mandatory recharge is 94,600 cum/year, as area lies in Safe Category "Bawal Khera" of District Shahjahanpur and we are recharging 9,84,912 cum/year.
		Also, As per new development and guideline of CGWA in November 2020: "Project Proponents from Uttar Pradesh are informed that UP Government has started its online portal for Groundwater NOC and hence CGWA NOCAP Portal has stopped processing of already existing applications, as well as accepting fresh and renewal applications for

Capacity: 2x 300 MW - Stage I Compliance Status of Env Clearance Letter No. J-13011/19/2005-IA(T) dated 14.03.2006

		Projects in UP. All Project Proponents of UP are advised to visit upgwdonline.in" and again applied for renewal of application vide No-SHJP1120RIN0001 dated 05.11.2020.
(v)	There shall be no construction within 500 m from the highway and within 500 m from HFL of the river. The HFL shall be determined based on studies to be carried out by an expert agency within 3 months from the date of issue of this letter. Based on the same, a map shall be prepared showing the river, its highest flood line (HFL) and 500 m distance from HFL up to which no construction shall take place. These details shall be submitted to this Ministry within three months.	MoEF has substituted vide amendment in EC dated 21 st July 2014 as "In case the state Govt. undertakes widening of the state Highway No. 25, the project proponent shall extend all co-operation and support and without any claim for compensation, demolish / dismantle any construction at its own cost and relinquish the portion of area falling in the power plant area for highway extension." Amendment is noted for compliance. Further conditions no. (xxxiv to xliii) is added with amendment. Compliance of additional compliance put in subsequent continuation. A letter regarding determination of HFL, (letter No. 617/Rosa Project dated 18/02/06) issued by the Executive Engineer, Irrigation Department, Govt. of U.P., along with a map showing that the boundary of flood plane has remained more than 500 mtr. away from the location of the power plant during the last 50 years have already been submitted to MoEF.
(vi)	The effluents from the plant after proper treatment shall be used within the plant to the extent possible and discharge of effluents outside the plant boundary shall be kept to the minimum. The effluents to be discharged into Garaah river shall conform to the standards prescribed by the State Pollution Control Board.	Being Complied. The treated effluent is being used for ash disposal system and for horticulture and green belt development. If any treated water is excess, it is monitored for its quantity and quality and will be discharged into Garaah river. The Analysis report of treated waste water.
(vii)	R&R plan shall be finalized within three months in accordance with the norms to be decided by the State Govt. which shall not be less than the norms prescribed in the National R&R policy. A copy of the same shall be furnished to this Ministry within six months.	The Analysis report of treated waste water from STP/ETP is enclosed as Annexure-I Completed. Rehabilitation & Resettlement plan has been prepared in line with NRRP 2007 and submitted to District Administration as well as MoEF. This has been completed and no pending issues are existing as of now.

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efficiency of 99.9% efficiency shall be te	Complied. Continuous online monitoring system of CODEL, UK make has been installed for stack emission and connected online with CPCB server also for real time data transfer. Stack Emission Monitoring Report (Iso-Kinetic) is attached as Annexure-II	
	Noted and incorporated to design. A brief echnical detail of ESP is as under. S.No. Parameters Value Type of ESP Double pass,7 1. Collection 99.94% 2. efficiency Size of ESP 54.38x26.6x31.52	
	3. Specific 207.55 m²/m³/sec 4. Collection Area Flue Gas 0.87 m/sec 5. Velocity Inlet Dust Concentration Particulate Function Particulate Function Functio	
used as fuel in the project shall not exceed 40% and 0.28 % respectively.	Complied. As per Environment (Protection) Amendment Rules, 2020, dated 21st May, 2020, There is now Relaxation on use of coal with ash content not exceeding 34% on quarterly basis due to pandemic situation over world. Copy of Test Report of Coal sample enclosed as Annexure-III	
(xi) Fly ash should be collected in dry form and bottom ash only be disposed in the ash pond area in the form of high concentration slurry. 100% fly ash utilization shall be ensured from 5th year onward.	The condition has been amended vide letter no. F. No. J-13012/19/2005-IA.II(T) dated 1st October,2008 which states that; Fly ash shall be collected in dry form and storage facility of adequate capacity (silos) shall be provided. 100% utilization of fly ash shall be ensured from 4 th year onwards as per MoEF Notification dated 3 rd Nov 2009. Unutilized fly ash and bottom ash shall be disposed off in the ash pond through conventional slurry system."	

Rosa Power Supply Co.Ltd, Vill. Chaudhera, Rosa, Shahjahanpur Capacity: 2x 300 MW - Stage I

Compliance Status of Env Clearance Letter No. J-13011/19/2005-IA(T) dated 14.03.2006

April 2020 to September 2020

FY 2019-2020 and 116% Fly Ash Utilization had been done for FY 2018-2019.

Approx 76% Ash Utilization has been done from April 2020 to September 2020 and approx 84% ash utilisation has been done till 31st November 20 in FY 2020-21.

Due to outbreak of COVID-19 pandemic and its unforeseeable consequences on power plant operations and impact on ash utilization due to Nationwide lock down, unable to achieve 100% ash utilization till date.

Also it should be considered on the basis of joint study and validation by IIT Roorkee and Dyke expert Sh Vasudevan (Ex IITian & retired from NTPC as ED design) that a maximum of 7.23 lakh tonnes from Lagoon-2 and 4.3 lakh tonne from Lagoon-1 can be evacuated back log ash from Ash Pond in alternate years.

As per Comprehensive study:

- Out of two lagoons, one lagoon shall be reserved for continuous slurry discharge and hence ash can be evacuated only from any one lagoon at a time.
- Every year, both the lagoons will be filled with rain water, and for drying of ash some time shall be required after monsoon season.
- For moving of heavy earth moving machinery over ash bed, the water table in the lagoon shall be at least 2 metre below ash surface.
- As the lagoons are lined with impervious material, water cannot seep downwards or sidewards and water will evaporate only from the top.
- Because of presence of water in the lagoon, with excavation of ash, the water table will be nearer and hence there will be restriction on movement of vehicles. To

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		overcome this difficulty, excavation is not planned on the transportation corridors and excavation shall be limited to areas in between transportation corridors only.
		Please refer Annexure_III for Ash utilisation details.
(xii)	Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and data furnished to the Regional Office of this Ministry.	Being Complied. A ground water quality report is attached herewith as Annexure-IV
(xiii)	Green belt will be developed all around the power plant and around ash pond area. One third (1/3) of the total plant area shall be used for green belt development.	Total land of Rosa Thermal Power Plant (4x300MW) is 610Ha. As per 33% Norms of MoEF, we had to develop green belt in 201 Ha. Rosa Power has already been developed green belt / plantation over an area of 283.5 Ha which is approx 46% including township. A total of 6,00,057 trees / shrubs are already planted till date. Local species are chosen for developing green belt. The status of Plantation is attached as Annexure-V
(xiv)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	First aid, ambulance & sanitation facility was provided by contractors at construction site during construction phase. The plant has First Aid, Ambulance and sanitation facilities at its operation also for the employees and workers. Facilities details at Occupational Health and Centre is enclosed as Annexure_VI
(xv)	Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in the high noise areas, personal protection devices should be provided.	The Noise level monitoring is being carried out regularly at work places and the noise level is maintained below to the stipulated norms. The people working at high noise area are being provided with PPE and facilitated with job rotation. A copy of monitoring report attached herewith as Annexure-VII
(xvi)	Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. Periodic six monthly reports should be submitted to the Regional Office of this Ministry.	The Ambient air quality monitoring is being carried out regularly and a copy of monitoring report is attached as Annexure-VIII
(xvii)	For controlling fugitive dust, regular sprinkling of water in coal storage area and other vulnerable areas of the plant shall be ensured.	Following measures taken at CHP and other vulnerable area - 1. Dry fog system at wagon tippler 2. Dust extraction system at Crusher House 3. Water sprinkling system on conveyors

Rosa Power Supply Co.Ltd, Vill. Chaudhera, Rosa, Shahjahanpur Capacity: 2x 300 MW - Stage I Compliance Status of Env Clearance Letter No. J-13011/19/2005-IA(T) dated 14.03.2006

		and track hopper.4. Road wetting through water tankers.5. Speed limit of 20 kmph is maintained inside plant premises
(xviii)	The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which should 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://envfor.nic.in,	Complied. Photocopies of the newspapers advertisements, "Dainik Jagran" and "Amar Ujala" dated 8th May, 2006, has already been submitted to your good office vide our letter dated 12/05/2006.
(xix)	A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.	Rosa Power has a well equipped Environmental Cell comprising of environmental expert and staff which is headed by Head-EHS. The organization structure is enclosed as Annexure-IX .
(xx)	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards should be submitted to this Ministry/ Regional Office/CPCB/SPCB.	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards being submitted to Ministry/ Regional Office/CPCB/SPCB on or before 1 st June and 1 st December of each calendar year as per EIA Notification 2006.
(xxi)	Regional Office of the Ministry of Environment & Forests located at Lucknow will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan should be forwarded to the Regional Office for their use during monitoring.	EIA/ EMP report already submitted to the Regional Office
(xxii)	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.	Noted for Compliance. Approx Rs. 269.2 Cr. (Rs. 100Cr for Stage-1 and Rs. 169.2Cr for Stage-2) were allocated for implementation of environmental protection measures during design and construction of the power station. Further for operation of the power station, the environmental protection cost has been now increased and approx Rs.381Cr had been spent. item wise breakup is as under:

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		<u> </u>			1
		Capita	al Expenditure for Stag	ae I & II:	
		S.No	Description	Amount (Rs)	1
		1	Dust Extraction System	46517	1
			Continuous Effluent		
		2	Monitoring System	1199999	
			Ash recovery water		
		3	System	50489462	
		4	Ash Handling Plant	1682886259	
		5	Ash Disposal System	270068438	
		6	CAAQMS	17610984	
			Chemical &		
		7	Environmental Lab -UI	1554259	
		8	Chimney	477148378	
			Gas emission Monitoring		
		9	Instrument	17388191	
			Sewerage Treatment		
		10	Plant	241798095	
		11	Effluent Treatment Plant	155369441	
			Electrostatic		
		12	Precipitators	889597026	
		13	Online Coal Ash Analyser	3200000	
			Instrument for Online		
			Remote Calibration of		
		14	CEMS	1800000	-
		<u></u>	Total (Cr)	381.02]
		Opera	ational Expenditure:		
		1.	Environment Monitor	ring and	STP
			Operation	0.49 Cr	
		2.	Horticulture	1.50 Cr	
		3.	ETP Operation	0.02 Cr	
		4.	ESP Maintenance	0.75 Cr	
(xxiii)	Full cooperation should be extended to the	Noted	& adhered.		
	Scientists/Officers from the Ministry/Regional				
	Office of the Ministry at Lucknow / the CPCB /				
	the SPCB who would be monitoring the				
	compliance of environmental status.				
General	Conditions				
4.	The Ministry reserves the right to revoke the	Noted			
	clearance if conditions stipulated are not				
	implemented to the satisfaction of the				
	Ministry.				
5.	The environmental clearance accorded shall		tage I of the plant is alr	•	
	be valid for a period of 5 years for starting		since 30/6/2010. Com		
	construction/operation of the power plant. In		(COD) of Unit#1 is 12.0)3.2010 and	COD
	case, the project authorities fail to do so	of Uni	t#2 is 30.06.2010		
	within this stipulated period, the				
	·				

Capacity: 2x 300 MW - Stage I Compliance Status of Env Clearance Letter No. J-13011/19/2005-IA(T) dated 14.03.2006

	environmental clearance shall stand lapsed automatically.		
6.	- Control Cont		
	In case of any deviation or alteration in the	Noted	
	proposed project from that submitted to this		
	Ministry for clearance, a fresh reference shall		
	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	Noted & adhered.	
	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,		
	Hazardous Wastes (Management and		
	Handling) Rules, 1989, the Public Liability		
	Insurance Act, 1991, the Environment Impact		
	assessment Notification, 1994 and the		
	amendments made therein from time to time.		
Environm	nent (Protection Amendment Rules, 20l4 – Not	ification No. G.S.R. O2 (El dated 24 Jan.2014,	
regarding	supply and use of coal with ash content not	exceeding 34% to coal based Thermal Power	
Plants - c	compliance reg.		
i	The Thermal Power Pants attracting the said	Coal used by RPSCL has ash content	
	Notification shall submit its	between 34% to 40%. Report is being sent to	
	Compliance to the Ministry Regional Office	regulatory bodies on quarterly basis as per guideline. Refer Annex_III.	
	and SPCB concerned along with the compliance reports of the environmental	guideline. Relei Allilex_III.	
	safeguards stipulated in the ECs and		
	Consents.		
	Environment (Protection) Amendment Rules,	As per Environment (Protection) Amendment	
ii	2020, dated 21st May, 2020	Rules, 2020, dated 21st May, 2020, There is	
		now Relaxation on use of coal with ash	
		content not exceeding 34% on quarterly basis	
		due to pandemic situation over world.	
		Copy of Test Report of Coal sample enclosed	
S O 220	F(E) — In eversice of the newers conferred by a	as Annexure-III	
	5(E).— In exercise of the powers conferred by son) Act, 1986 (29 of 1986), the Central Government		
	ne Environment (Protection) Rules, 1986, namely		
1. (1) These rules may be called the Environment (Protection) Amendment Rules, 2015 dated 7th December, 2015.			
i	All existing CT-based plants reduce specific	Complied.	
	water consumption upto maximum of	Specific water consumption is below	
	3.5m ³ /MWh within a period of two years from	3.5m³/MWh	
	the date of Publication of this notification.		
ii	TPPs (units) installed after 1st January,2003, upto 31st December, 2016*	Noted.	
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Rosa Power Supply Co.Ltd, Vill. Chaudhera, Rosa, Shahjahanpur Capacity: 2x 300 MW - Stage I

Compliance Status of Env Clearance Letter No. J-13011/19/2005-IA(T) dated 14.03.2006

April 2020 to September 2020

- a) Particulate Matter: 50 mg/Nm3
- b) Sulphur Dioxide (SO2) : 600 mg/Nm3 (Units Smaller than 500MW capacity units)
- c) Oxides of Nitrogen (NOx): 300 mg/Nm3
- d) Mercury (Hg:) 0.03 mg/Nm3
- a) Emission Norms for Particulate Matter is 100 mg/Nm³ as per Environmental Clearance Condition and there was no norms for SOx, NOx and Hg. MoEF&CC published its Notification in 2015 for New Emission norms for Particulate Matter, SOx, NOx and for Hg and the Compliance completion date was before Jan-18. CPCB/CEA give relaxation to this Compliance condition to comply this Norms upto Dec-2021 for RPSCL.
- RPSCL has made DPR for implementation of New Emission Norms as per guidelines of CEA and Submitted to CEA authority for cost approval.
- c) Vendor finalization for ESP up gradation, wet FGD installation and NOX control is completed, LOI issued and award of work is in progress.
- d) Hg emission is well below stipulated norms. Hence, there is no requirement for Hg control technology up gradation. Achieving the prescribed Norms. Refer **Annex-2**, Stack Emission Monitoring Report.

CPCB Notice for Remote Calibration vide File No. 12011/33/2018/IT-RCAL, Dated – 25th June,2018:

Directions for installation of Online
Continuous Emission Monitoring System
(OCEMS) and submission of its data to CPCB
online were issued to 17 categories of highly
polluting industries and grossly polluting
industries by CPCB in the year 2015.

Further

i) Time extension, to install remote calibration facility for OCEMS performance check by CPCB and SPCBs/PCCs, is given till 20.09.2018. All industries shall also submit remote calibration facility details such as make, model and device ID in the section 12 "Instrument Details" of Form E2 of Compliance Reporting Protocal.

Updation of System for Remote Calibration of CEMS System as per Guideline of CPCB Completed. Online Data are transferred to CPCB server through M/s Forbes Marshall.