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**Steel Authority of India Limited**  
**Rourkela Steel Plant**  
**Rourkela – 769011**  
**Fax : 0661-2510183**

Ref. No.: 691/EE/59/71  
Date : 24/05/2024

Dear Sir,

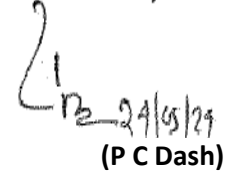
Sub : Implementation Status of Env. Clearance Conditions issued to RSP.  
Ref. : EC vide ref.no. F No. J-11011/40/88 – IA.I, dated 24/04/1992.

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The implementation status of the various EC Conditions accorded to Rourkela Steel Plant (RSP) for its Modernization project for the period of October - March, 2024 is enclosed as Annexure-4 for kind perusal.

With warm regards,

Yours faithfully,  
For Rourkela Steel Plant,

  
(P C Dash)

General Manager I/c  
Environmental Engg. Department

Note : Soft copy mailed to [roez.bsr-mef@nic.in](mailto:roez.bsr-mef@nic.in)

To,

The Dy. Director General of Forests (C),  
Integrated Regional Office,  
Ministry of Environment Forests & Climate Change,  
A/3, Chandrasekharpur,  
Bhubaneswar. – 751023.



Steel Authority of India Limited  
Rourkela Steel Plant's Expansion Project

(Environment Clearance vide ref.no. F No. J J-11011/40/88 – IA.I, dated 24/04/1992.  
Half Yearly Report (October – March.,2024)

Contact Persons : Sri P C Dash, GM I/c (Env.Engg.) Phone : 0661-2447258  
Sri V V R Murty, GM(Env.Engg.) Phone : 0661-2448254

SN.	CONDITION	STATUS/ ACTION PLAN
1.	The project authority must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Adhered to all stipulations at the time of establishment. RSP has obtained Consent to Operate for the plant @ 4.5 MTPA capacity for the year 2023-24.
2.	Any expansion of the plant, either with the existing product mix or new products can be taken up only with the prior approval of this Ministry.	EC obtained for expansion of RSP to 4.2 MTPA of Total Crude Steel Production on 29/01/2008 and the projects were executed and are under operation. RSP again obtained EC for modernization of RSP by adding 3 MTPA HSM and expansion of Special Plate Plant and other projects on 15/12/2016. Both projects viz., 3 MTPA HSM and SPP expansion have been established and Consent to Operate obtained from SPCB for the year 2022-23. On 30/03/2022, RSP obtained EC for expansion of RSP for enhancing Hot Metal production to 4.855 MTPA, Crude Steel to 4.850 MTPA and Saleable Steel to 4.325 MTPA by installing COB#7, SMS#3, Normalising Furnace in NPM, Oxygen Plant, Natural Gas Pipe Line Network, Micro Pellet Plant, Granshot, Stove No. 4 in BF#5.
3.	The gaseous emissions from various process units should conform to the standards prescribed by the concerned authorities, from time to time. At no time the emission level should go beyond the stipulated standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should be put out of operation immediately and should not be restarted until the control measures are rectified to achieve the desired efficiency.	Being adhered to.
4.	Provision of seven Air quality monitoring stations should be provided in consultation with the State Pollution Control Board for measurement of SO2, NOx, suspended particulate matters, etc. also stack emissions should be monitored regularly by setting up automatic stack monitoring facilities. Data on stack emissions along with the ambient air quality should be submitted to the State Pollution Control Board and to this Ministry once in three months along with the statistical analysis.	4 no. of online Ambient Air Quality Monitoring Stations covering all directions and 6 no. of Ambient Stations along plant's boundary for manual monitoring of ambient air quality were established and are being operated. The monitoring data is being submitted to statutory authorities on monthly basis through mail. The monitored data along with statistical analysis is also submitted on half yearly basis to statutory authorities and the softcopies are uploaded to the web sites of MoEFCC & SAIL-RSP.
5.	All the air pollution control measures which are being undertaken and are planned to be undertaken in the near future should be to the satisfaction of the pollution Control authorities and within legal requirements and be completed by December, 1993 and a report on the progress of the implementation should be submitted every six months to this Ministry.	All the Pollution Control Projects were executed and put in operation. CTO obtained from SPCB and is valid up to 31/03/2025.

SN.	CONDITION	STATUS/ ACTION PLAN
6.	The Project authorities must examine possibilities of reduction in consumption of water to 1/3rd of the present consumption and submit a comprehensive plan to this Ministry within a period of three months.	The Sp. Water Consumption has come down to 3.02 m <sup>3</sup> /TCS in the year 2023-24 from a level of 32.5 m <sup>3</sup> /TCS in the year 1996-97.
7.	The usage of blast furnace slag should reach the level of 100% by the time envisaged modernization process is completed. The utilization plan for the same should be submitted to this Ministry within 6 months.	The present BFc slag utilization is 100%. The slag is given for Cement manufacturing.
8.	With regard to metallic sludge, a detailed plan for its disposal should be prepared and submitted to this Ministry for approval within six months.	The metallic sludge/scrap is recovered and recycled back and utilized in steel making.
9.	The existing effluent treatment facilities should be upgraded/augmented so that treated effluent conforms to the standards, as stipulated by the State Pollution Control Board, or prescribed by the Central Government under the Environment (Protection) Act, 1986 by December, 1993. Any new facilities likely to be created under the modernization process would also have to comply with the effluent/emission norms. Similarly, the emissions from the stacks should conform to the stipulated standards latest by December, 1993 failing which legal action will be taken under the provisions of the Environment (Protection) Act, 1986 and the defaulting units would have to be closed down.	All pollution control treatment units were installed, commissioned and presently being operated after getting consent renewal from SPCB every year based on conformance to norms. The present CTO is valid up to 31/03/2025.
10	Effluent treatment plant for Coke Oven By-product (CO-BP) must be provided and oil scrapping facilities for mill wastes, tar, ammonia removal from CO-BP must be adequately upgraded to achieve the stipulated standards.	A dedicated Biological Oxidation and De Penolisation Plant (BOD Plant) was established, commissioned and presently being operated for treatment of Phenol, Ammonia and Cyanide present in the effluent coming from Coke Oven By-product plant. In addition to the above, Sodium Hypochlorite treatment has been introduced in the month of Sept., 2019 for further enhancing the efficiency of BOD Plant. Oil skimming facilities and Clafifloculators for removal of mill scales and sediments were established, commissioned and presently being operated. The effluent quality is regularly being monitored and is within the statutory norms. The BOD Plant has been modernized with MBR (Membrane Bio Reactor) Technology along with RO (Reverse Osmosis) based on Zero Liquid Discharge Principle.
11.	In-plant control measures for checking fugitive emissions, spillage of chemicals/raw materials etc. should be provided and properly maintained specially in the critical areas like blast furnace, fertilizer, by-product plant, coke oven plant, sintering plant etc.	RSP established a dedicated Env. Engg. Department with Env. Laboratory with qualified personnel for regular inspection, monitoring, sampling and analysis of various pollutions from fugitive emissions, stack emissions and effluents from different units of RSP. RSP also engaged NABL accredited third party laboratories for regular monitoring of and water pollutants. The monitoring report is submitted to statutory authorities on monthly basis.
12.	A green belt of adequate width and density should be raised all around the plant. A plan for raising a green belt should be prepared and submitted to this Ministry within a period of three months for approval.	During 2023-24 7,792 no. of saplings have been planted for expanding Green belt which has been developed around the plant by planting more than 51.5 lakh trees since inception.

SN.	CONDITION	STATUS/ ACTION PLAN
13.	The Project authority must set up a laboratory facility for collection and analysis of samples under the supervision of competent technical personnel, who will directly report to the Chief Executive.	An Environmental Laboratory was set up under Env. Engg. Department for collection and analysis of samples under supervision of experienced Environmental Engineers. In addition to this, RSP also engaged NABL accredited third party laboratories for regular monitoring of and water pollutants. The monitoring report is submitted to statutory authorities on monthly basis.
14.	The present Environmental Management Cell should be further strengthened, with suitably qualified people, to carry out various functions and should be set up under the control of Senior Executive who will report directly to the Head of the Organization.	At present Env Engg. Department is provided with 7 number of qualified and experienced Personnel.
15.	Medical surveillance of workers should be done regularly to avoid possibility of contracting occupational diseases against the workers engaged in the various pants and record maintained.	RSP has established a dedicated Occupational Health Centre & Clinic inside plant premises with qualified doctors and nursing staff for medical surveillance of employees. Health check up of all employees is being carried out regularly.
16.	The funds earmarked for the environmental protection measures should not be diverted for and purposes and year-wise expenditure should be reported to this Ministry.	Being strictly followed. The expenditure on maintenance & further improvement of pollution control facilities for the year 23-24 is around Rs. 8 Cr. This expenditure is in addition to the operational expenditure of the pollution control systems.

### Conditions that need Special Attention

SN.	CONDITION	STATUS/ ACTION PLAN
1.	One more monitoring station should be located in the Civil Township to find out the AAQ level due to the steel plant. All the on-line stack monitoring systems should be included in Annual Maintenance Contract to keep all the electronic systems in functional conditions (Condition No. 4).	An AAQMS was installed at Sector#22 of Steel Township. AMC has been given for all online monitoring systems.
2.	To minimize use of raw water the following efforts be taken: i) This discharged water should be recycled to reduce specific water consumption further. ii) This effluent can be used for development of greeneries in the colony instead of using raw water. iii) The supernatant from the ash pond can be recycled into various process plants. This can also be utilized for making ash slurry (Condition No. 6).	Dedicated Waste Water Treatment Plants were installed & commissioned in different departments for treating waste water and recycling back the treated water back to process. The treated water finally discharged from Lagoon is party used by public for greenery. The treated effluent from ash pond is recycled back to NSPCL for preparation of ash slurry. All the ash ponds and their management is under the control of NSPCL.
3.	More efforts to be given to utilize 100% BF slag in future and in this regards, a fresh action plan of implementation schedule is to be provided to the Regional Office (Condition No. 7).	The utilization of BFc slag is 100%. This is given for making BFc grade cement.
4.	Only 20% utilization is achieved so far for SMS sludge, the project authorities need to put more efforts to utilize it to 100% (Condition No. 8).	The utilization of SMS Sludge in the period 2023-24 has been enhanced to 192.59%. RSP is working out a strategy for conversion of this sludge into useful byproducts viz., Micro Pellets.
5.	There is need to have better coordination between different departments, so that the information on operational details and the environmental management in each of the unit should be available in the Environmental Cell. The breakup of environmental expenditure item-wise need to be provided while forwarding the six monthly compliance report (Condition Nos. 14 & 16).	RSP established a dedicated Env. Engg. Department with qualified and experience Environmental personnel for proper coordination with different departments for effective environment management. As all the pollution control measures/treatment systems are part and parcel of total project package which are awarded in totality, the breakup of environment expenditure on these units could not be separately ascertained.