

**F. No. J-11011/305/2012-IA II (I)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(I.A. Division)**

Indira Paryavaran Bhawan  
Jor Bagh Road, Ali Ganj,  
New Delhi - 110003

**E-mail: satish.garkoti@nic.in**  
**Tele fax: 011: 24695316**

Dated: 1<sup>st</sup> April, 2016

To

**The Director**  
M/s Rungta Mines Ltd.,  
(Chaliyama Steel Plant)  
Rungta Chambers,  
Chaibasa 833 201,  
Jharkhand

Email: [esp@rungamines.com](mailto:esp@rungamines.com) ; Fax: 06582 255461

**Subject: Expansion of Integrated Steel Plant from 0.20 MTPA to 0.50 MTPA, CPP (39 MW to 119 MW), setting up of Pelletisation Plant (2.4 MTPA) and Coal Washery (1.26 MTPA) by M/s Rungta Mines Limited, located at Village Chaliyama, Bankasai and Kuju in Saraikela, Kharwan District, Jharkhand – Environmental Clearance regarding.**

Sir,

This has reference to your letter dated 12<sup>th</sup> December, 2013 along with copies of revised EIA/EMP report prepared by M/s CTRAN Consulting Limited, Bhubaneswar seeking environment clearance under the provisions of the EIA Notification, 2006. The ToRs to the project were awarded by the Ministry vide letter of even no. dated 18<sup>th</sup> March, 2013 for preparation of EIA/EMP report. The Environment Clearance for the existing 0.20 MTPA steel plant was accorded by the Ministry vide letter no. J-11011/838/2007-IA.II(1) dated 4.11.2008.

2. The Ministry of Environment, Forest and Climate Change (MoEFCC) has examined the application for the project cited above. It is noted that M/s. Rungta Mines Limited have proposed to expand their integrated steel plant from 0.2 MTPA to 0.5 MTPA at village Chaliyama, Bankasai and Kuju in Saraikela, Kharwan District, Jharkhand. The land requirement for the project is 592.16 acres (239.364 ha), out of which 183.88 acres (74.42 Ha) is Government land and 408.2 acres (165.23 Ha) is agricultural land. It has been mentioned that a total of 213.219 acres of private land has already been purchased and for 53 acres of Government land, a recommendation has been forwarded by DC to Government of Jharkhand. The existing plant is located in an area of 204.425 acres (82.73 Ha) and it is proposed to procure additional area of 387.73 acres (156.91 Ha) for the proposed expansion. No Forest land is involved. There are no ecologically sensitive areas such as Biosphere Reserves, National Parks/Wild Life Sanctuaries, etc within 10 km radius of the project site. Nearest villages are Chaliyama, Bankasai and Kuju. A river flows all along the west side of the project site ~ HFL of river is 192 mRL and plinth of plant is 198.15 mRL. The total cost of the



project is Rs. 1237.02 crores. An amount of Rs. 18.14 crores and Rs.3.96 crores has been earmarked for capital cost and recurring costs per annum towards the environmental pollution control measures. An amount of Rs. 3 crores is earmarked towards the Enterprise Social Commitment related activities. No court case/litigation is pending against the proposed project.

3. Following are the existing and proposed production capacities:

PLANT/ FACILITY	EXISTING (0.2 MTPA)	PROPOSED EXPANSION (0.5 MTPA)	TOTAL AFTER EXPANSION
DRI plant	0.21 MTPA	0.24 MTPA	0.450 MTPA
Mini blast furnace	0.383 MTPA	-	0.383 MTPA
Steel melting shop, Induction Furnace Ladle Furnace EAF	0.20 MTPA 15Tx4 20Tx1	0.30 MTPA 15 T X 4 30 T X 2 30 TX 1	0.50 MTPA
Rolling Mill	0.20 MTPA	-	0.20 MTPA
Billets/ slab/ bloom caster		0.30 MTPA	0.30 MTPA
Continuous Casting machine	1x3 strand	2x3 strand	3x3 strand
Flats/ Round/ Structural mill	-	0.30 MTPA	0.30 MTPA
WHR based CPP	14 MW	18 MW	32 MW
Coal based CPP	25 MW	62 MW	87 MW
Total	39MW	80 MW	119 MW
Pelletisation Plant	-	1.2x2 MTPA	2.4 MTPA
Coal Washery	-	1.26 MTPA	1.26 MTPA
Oxygen Plant	-	1X30 TPD	1X30 TPD (69,30,000 m <sup>3</sup> /annum)
Lime Plant	-	1X90 TPD	1X90 TPD (29,700 m <sup>3</sup> /annum)
Vaccum Degassing	-	1X30 T	1x30 T

4. The raw materials required are iron ore (26,32,800 TPA), iron ore lump (5,74,500 TPA), Bentonite (36,000 TPA), Dolomite (105220 TPA), Coke breeze (40,800 TPA), Coal (13,58,368 TPA), Quartzite (19,916 TPA), scrap (19,916 TPA), BF coke (2,33,630 TPA), finished product (2,15,522 TPA), Pellets (1,72,5000 TPA), TMT (2,00,000 TPA) and flat structural (3,00,000 TPA). The iron ore will be sourced from company's mines in Jharkhand/Odisha and the Coal will be sourced from their own mines. The power requirement will be 96.97 MW (Existing – 32.96 MW and Expansion – 64.01 MW) which will be met from the CPP. Details of Transport of raw Materials to the Plant is as following:

S.N.	Operation	Quantity	Quantity(TPD)	Transport	No/day
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		(TPA)			(One-way)
1	Iron Ore Fines	2,632,800	8228	Truck	411
2	Iron Ore Lumps	574500	1795	Truck	90
3	Bentonite	36000	113	Truck	6
4	Dolomite	105220	329	Truck	16
5	Coke Breeze	40800	128	Truck	6
6	Coal	1358368	4245	Truck	212
7	Quartzite	19,916	62	Truck	3
8	Scrap	19916	62	Truck	3
9	BF coke	23,3630	730	Truck	37
10	Finished product- Pig Iron	215522	674	Truck	34
11	Pellets	1725000	5391	Truck	270
12	TMT	200000	625	Truck	31
13	Plat/structural	300000	938	Truck	47
	TOTAL	7,461,318	23,318		1166

5. Total water requirement after the proposed expansion will be 1483 m<sup>3</sup>/hr (Existing – 420m<sup>3</sup>/hr; proposed – 1063m<sup>3</sup>/hr). Water will be sourced from River Kharkai. The proponent informed that necessary permission has been obtained from the State Govt for the withdrawal of water. Cooling tower blow down, DM Plant wastewater and service water effluents will be collected in a sump and utilized for dust suppression and ash handling. Wastewater streams comprising of boiler blow down and pre-treatment wastewater will be collected in another sump and utilized for horticulture and greenbelt development. Sewage and sanitary wastewater will be treated in septic tank followed by septic tank. The run-off from coal, iron ore and solid waste handling and storage areas will be guided through suitably designed drains in to the reservoirs so that most of the solids will be settled and the remaining suspended solids settle down in reservoirs. Coal washery effluent will be treated in a thickener. The thickened tailing will be dewatered in a belt press while the clarified water will be recycled back in the process circuit. Water req. 1483 m<sup>3</sup>/h of which existing is 420 m<sup>3</sup>/h and proposed 1063 m<sup>3</sup>/h. Source of water is River Kharkhai. Drawl of water from River Kharkhai will not have effect even during lean season as quantum of flow in Kharkai river is 3.702cumecs (13,327.2 m<sup>3</sup>/h) and the plant withdrawal is 11.1% of this. The maximum discharge is 295.7 cumecs (106,4520 cum/h) of which plant withdrawal is 0.13% only. No groundwater to be used in the expn. project. Water table is about 6-10m bgl during pre-monsoon. Three rainwater harvesting ponds have been created for storage of treated wastewater and rainwater for reuse. No effluent discharge from plant and plant operates on a zero-discharge concept.

6. Hot gases from sponge iron kiln will be successively passed through dust settling chamber (DSC), after burning chamber (ABC), WHRB and then cleaned in ESP before venting to atmosphere through the chimney. In the DRI plant, dust extraction system with bag filters will be provided to kiln inlet area, crushing unit, cooler outlet area to suppress PM level below 50 mg/Nm<sup>3</sup>. Pollution control devices will effectively trap 99% of the trace metals. In addition, dolomite will be added to kiln, EAF and boiler which additionally absorbs trace elements. Trace metal analysis has been carried out of flyash, solid wastes, slurry, etc and found that trace metals are found to be less than 1% by mass. Flue gases from WHRB and AFBC boiler will be routed to a stack through an ESP. Bag filters and dust collectors will be provided to pelletization plant. Flue gases from coke oven will be passed through a stack of adequate height. The emissions from induction furnace and ladie furnace will be collected by hood and passed through bag filters and discharged through a stack of adequate height. Bag

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filters will be provided to stock house. Fugitive emissions will be controlled through water sprinkling and dust extraction system.

7. Coal and char will be used as fuels in FBC power plant. Fly ash from FBC power plant will be sent to cement plants and brick manufacturing units for cement and brick making and unused fly ash and bottom ash for filling up low lying areas and raising plinth. Granulated BF slag will be sold to cement plants. CPP fly ash will be used in brick/cement manufacturing plants. Oil and lubricant will be sold and the DM resin will be disposed in properly constructed pit as per CPCB norms. Sewage sludge will be used as compost/manure. Green belt will be developed in 33% of total plant area. CREP Guidelines for DI of reducing agents in BF, 100% utilisation of BF scarp material will be recycled as raw material in induction material. Use of HW from nearby industries will be explored. Monitoring of PAHs in AAQ shows levels of PAHs to be in the range 2.8 ng/m<sup>3</sup>-4.5 ng/m<sup>3</sup> in SPM.

8. Iron ore linkage is from two mines - Ghatkini (Jharkhand) and Jhajang mine (Orissa). Coal linkage - Bundu Coal block for which the EAC has recommended EC. A Coal washery is also established of 1.26 MTPA capacity which produces 0.63 MTPA of clean coal, 0.535 MTPA middling and 94,500 TPA of coal rejects.

9. A total of 187 land losers from villages of Chaliyama (114), Banksai (11), Kuju (62). No displacement of people. Jharkhand R&R Policy 2008 will be followed. Employment to marginal land losers on priority. Land losers not opting for employment will be provided skill development and training for contract jobs. Compensation for fixed assets will be as per market rates. Peripheral development Will be implemented through a CSR Plan with Rs 3 crores (capital) and Rs 53.55 lakhs/y (recurring).

10. Stage-I FC for the Bundu coal mine is pending with the PCCF (Nodal). Iron ore will be sourced from M/s Ghatkuri Iron ore mines, Jharkhand for which EC has been accorded vide letter no.J-11015/57/2010-IA.II(M) dated 22.5.2013. Further, iron ore will also be sourced from M/s Jajang iron ore mine for which EC has been accorded vide letter no.J-11015/136/2005-IA.II(M) dated 14.6.2005. Coal washery rejects will be disposed in de-coaled area of proposed Bundu coal mine by mixing with backfill material. The water required for the Plant shall be sourced from Kharkai River. The State Government has permitted withdrawal of 5000 m<sup>3</sup>/day from river Kharkai. Action plan for transportation of raw materials and finished products have been submitted. No coal washery has been established in the plant premises. Coal will be sourced from Bundu coal block.

11. All the Steel Plants are listed at S.No. 3(a) under Primary Metallurgical Industries under "Category A" of the Schedule of EIA Notification 2006 and appraised at the Central level.

12. The aforesaid proposal was considered by the Expert Appraisal Committee (EAC) in its 15<sup>th</sup> meeting held during 19-20<sup>th</sup> December 2013 and 21<sup>st</sup> meeting held during 30<sup>th</sup> July 2014 to 1<sup>st</sup> August 2014 for the grant of Environment Clearance. The Committee recommended the proposal for environmental clearance subject to stipulation of specific conditions along with other environmental conditions. The Committee deliberated on the issues raised during Public Hearing/Public Consultation conducted by Jharkhand Pollution Control Board on 4.9.2013 at B.L Newatia Girls High School Chaliyama, block Rajnagar, District Seraikela - Kharsawan under the Chairmanship of Shri C.K.Singh ADC, Saraikela - Kharswa. The issues raised during Public Hearing are employment, pollution control, CSR activities and formation of Paryavaran Samiti etc which were addressed in the final EIA-EMP report.

13. The Ministry of Environment, Forest and Climate Change has considered the application based on the recommendations of the Expert Appraisal Committee (Industry-I) and hereby decided to grant Environmental Clearance to the above mentioned expansion of Integrated Steel Plant from 0.20 MTPA to 0.50 MTPA, CPP (39 MW to 119 MW), setting up of Pelletisation Plant (2.4 MTPA), and Coal Washery (1.26 MTPA) by M/s Rungta Mines Limited, under the provision of EIA Notification dated 14<sup>th</sup> September, 2006, as amended, subject to strict compliance of the following Specific and General conditions:

**A. SPECIFIC CONDITION:**

- i. The project proponent shall install 24x7 air monitoring devices to monitor air emission, as provided by CPCB and submit report to Ministry and its Regional Office.
- ii. The Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31st March, 2012 regarding integrated iron and steel plant shall be followed.
- iii. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm<sup>3</sup> by installing energy efficient technology.
- iv. The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be followed.
- v. In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.
- vi. Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30<sup>th</sup> May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
- vii. Multi stage scrubber, cyclone and bag filters etc. to control particulate emissions within the prescribed limits from coke oven shall be provided. Carbon mono-oxide (CO) shall also be monitored along with other parameters and standards notified under Environment (Protection) Act shall be followed. The reports shall be submitted to the Ministry's Regional Office at the Ranchi, CPCB and SPCB.
- viii. Hot gases from the DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in Waste Heat Recovery Boiler (WHRB). The gas then shall be cleaned in ESP before dispersion out into the atmosphere through ID fan and stack. ESP shall be installed to control the particulate emissions from the WHRB.



- ix. Total make up water requirement after the proposed expansion shall not exceed 1483 m<sup>3</sup>/hr. The water consumption shall not exceed as per the standard prescribed for the sponge iron plants and steel plants.
- x. Efforts shall further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly.
- xi. All the effluent shall be treated and used for dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Domestic wastewater will be treated in the Sewage Treatment Plant.
- xii. Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Ranchi, SPCB and CPCB.
- xiii. In case source of coal supply is to be changed at a later stage (now proposed coal from Bundu Coal block, Jharkhand) the project proponent shall intimate the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change.
- xiv. Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Ranchi, SPCB and CPCB within 3 months of issue of environment clearance letter.
- xv. All the blast furnace (BF) slag shall be granulated and provided to cement manufacturers for further utilization. Flue dust from pellet plant, sinter plant, DRI and SMS and sludge from BF shall be re-used in sinter plant. Coke breeze from coke oven plant shall be used in sinter and pellet plant. SMS slag shall be given for metal recovery or properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.
- xvi. A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.
- xvii. Coal and coke fines shall be recycled and reused in the process. The waste oil shall be properly disposed of as per the Hazardous Waste (Management, Handling, Handling and Transboundary Movement) Rules, 2008.
- xviii. As proposed, green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
- xix. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented.

- xx. At least 5 % of the total cost of the project shall be earmarked towards the Enterprise Social Commitment (ESC) based on locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Ranchi. Implementation of such program shall be ensured accordingly in a time bound manner.
- xxi. The Company shall submit within three months their policy towards Corporate Environment Responsibility which shall inter-alia address (i) Standard operating process/ procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
- xxii. All the commitments made to the public during the Public Hearing /Public Consultation meeting held on 4.9.2013 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Ranchi.
- xxiii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

**B. GENERAL CONDITIONS:**

- i. The project authorities must strictly adhere to the stipulations made by the Jharkhand Pollution Control Board and the State Government.
- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).
- iii. At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Ranchi and the SPCB/CPCB once in six months.
- iv. Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. The treated waste water shall be utilized for plantation purpose.
- v. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).



- vi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- vii. The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.
- viii. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.
- ix. Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEF&CC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Ranchi. The funds so provided shall not be diverted for any other purpose.
- x. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.
- xi. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF&CC at Ranchi. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- xii. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MOEF&CC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Ranchi / CPCB / SPCB shall monitor the stipulated conditions.
- xiii. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MOEF&CC at Ranchi by e-mail.
- xiv. The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are



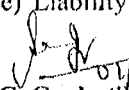
available with the SPCB and may also be seen at Website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at <http://envfor.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Ranchi.

- xv. Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

14. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

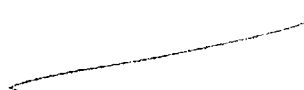
15. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

16. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.

  
(Dr. Satish C. Garkoti)  
Scientist 'F'

**Copy to:-**

1. The Secretary, Department of Environment and Forest, Government of Jharkhand, Nepal House, Ranchi
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi, 110 032.
3. The Chairman, Jharkhand Pollution Control Board, T.A Division Building (Ground Floor) HEC Campus, Dhurwa, Ranchi – 834 004
4. The Additional Principal Chief Conservator of Forest, Regional Office (EZ), Ministry of Environment, Forests and Climate Change (MoEFCC), Ranchi, Jharkhand.
5. Guard File / Record File/Monitoring file.

  
(Dr. Satish C. Garkoti)  
Scientist 'F'