MSP METALLICS LIMITED

Office : Vill. & P.O. Marakuta, Dist.Jharsuguda, PIN-768202, Odisha
Ph. 8393089903, E-mail:edoffice@mspsteeljsg.com
CIN No.U27109WB1996PLC082138

MSPML/IRO-MoEF&CC/2023-24/1-E/0158
31st May 2023

To,
The Dy. Director General of Forest (Central),
Ministry of Environment, Forests and Climate Change, Govt. of India,
Integrated Regional Office, A/3 Chandrashekharpur,
Bhubaneswar, Odisha - 751023
E-Mail: roez.bsr-mef@nic.in

Sub.: Expansion of integrated steel plant, Sponge Iron (10,50,000 TPA); Pig Iron (10,60,000 TPA); Pellet Plant (6,00,000, TPA); Steel Melting Shop (10,50,000 TPA); Captive Power Plant (85 MW); Coal Washery (15,00,000 TPA) and Coke Oven Battery (6,00,000 TPA) at Village Marakuta, District – Jharsuguda, Orissa - Submission of half yearly (June 1st 2023) EC Compliance Status Report for the period of October 2022 to March 2023

Ref.: EC issued vide letter no. J-11011/494/2007-IA-II (I) dated 13/07/2009

Dear Sir,

With reference to the above, we are submitting herewith the half yearly report on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data for the period of October 2022 to March 2023 for your kind information and necessary record, please.

The softcopy of the same is being mailed to the email id: roez.bsr-mef@nic.in.

Thanking you,

Yours faithfully,
For MSP Metallics Limited

MSP METALLICS LIMITED JHARSUGUDA (ODISHA) MARAKUTA

J P Sharma
Executive Director (Works)

Encl.: As above

CC: 1. The Central Pollution Control Board, Zonal Office, Southern Conclave, Block - 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700107
2. The Member Secretary, State Pollution Control Board, Odisha, A/118, Nilakantha Nagar, Unit - VIII, Bhubaneswar, Odisha - 751012

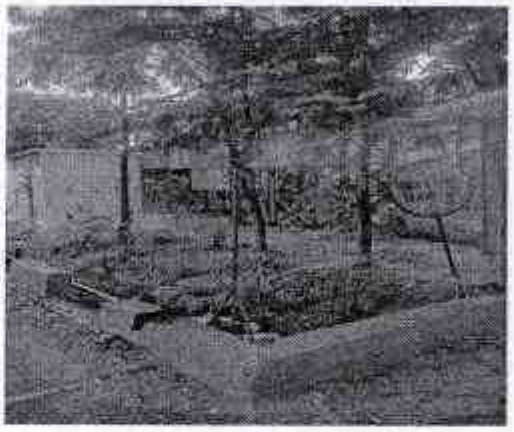
Half yearly compliance reports of the conditions stipulated in Environmental Clearance accorded by MoEFCC, Govt. of India vide F. No. J-11011/494/2007-IA-II (I) dated 13th July 2009

Project Proponent: M/s MSP Metallics Limited

Name of the project: Expansion of integrated steel plant, Sponge Iron (10,50,000 TPA); Pig Iron (10,60,000 TPA); Pellet Plant (6,00,000, TPA); Steel Melting Shop (10,50,000 TPA); Captive Power Plant (85 MW); Coal Washery (15,00,000 TPA) and Coke Oven Battery (6,00,000 TPA) at Village Marakuta, District – Jharsuguda, Orissa

Period of compliance: October 2022 to March 2023

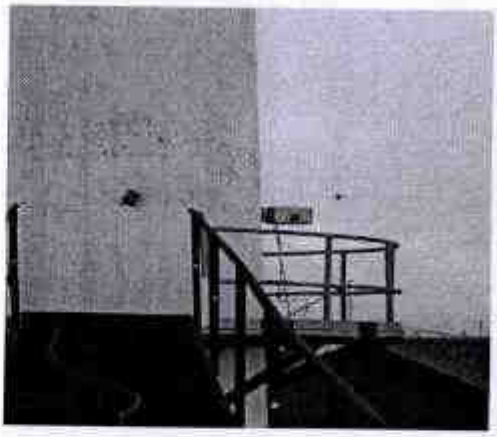
S. No.	Specific Conditions	Status of Implementation
i)	Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks and sufficient air pollution control devices shall be provided to keep the emission levels below 100 mg/Nm^3. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.	To reduce RSPM levels in the ambient air the following steps taken: 1. Internal roads are either black topped or concreted. 2. 50 numbers of both fixed type and portable sprinklers are installed. 3. Four numbers of rain guns are installed. 4. We have installed 10 nos. of rotary type water sprinklers with range of 50 m throw at coal and iron ore stockyard to control fugitive emission. 5. Fog mist canon system is available. 6. 33% of the total plant area has already been developed as greenbelt. However, existing greenbelt is being strengthened to increase the density as well as gap filling. Total 250 Nos of saplings have been planted during the period of October 2022 to March 2023. 7. In addition, Bag Filters and ESPs are provided to keep the emission levels below CTO permissible limit. 8. At no time, the emission level is going

		beyond the prescribed standards. 9. We have the SOP for reduction of raw material feeding in case emission level is going to exceeds 75% of the limit instead of shutting down the process unit. 10. Continuous stack emission monitoring facilities for PM, SO_2, NOx for all the stacks of operating units have been replaced and installed as per CPCB Guidelines. Connectivity of Continuous stack emission monitoring system with Odisha State Pollution Control Board has been done (https://ospcb-rtdas.com/#/publicPortal/industryDetails/site_4111/IRON%20AND% 20STEEL) and approval of the staion with CPCB server is in progress. Screenshot of the State Pollution Control Board, Odisha monitoring data acquisition system is attached as **Annexure-I**. 11. 02 nos. of ambient air quality monitoring System (Beta Attenuation) have been provided. Also, final stage negotiation is going on with the vendors for supply of 04 nos. of USEPA/MCERTS approved CAAQMS. 

Fixed rotary type water sprinklers

Mechanized wheel washing system

Dry fog system



Online Continuous Emission Monitoring System (CEMS)

IP Camera

Digital display at main gate

ii)	Hot gases from 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 leaving out into the atmosphere through ID fan and stack. Electrostatic Precipitator (ESP) shall be provided to DRI plant, WHRB and FBB boilers to control air emissions within 100 mg/Nm^3.	• In each of DRI Kiln, Dust Settling Chambers (DSC) and After Burning Chamber (ABC) are provided. • Waste Heat Recovery Boiler (WHRB) are also installed at each DRI Kiln followed by ESPs. • The clean gas is then being emitted out from ESP Outlet both in WHRB and AFBC boilers into the atmosphere through ID fan and stack to control air emissions within CTO permissible limit. Flue gas emission analysis report for the period of October 2022 to March 2023 is enclosed as **Annexure-II**.
iii)	Gas cleaning plant comprising of bag filters and cyclones shall be provided to blast furnace (BF). Fume extraction system with bag filters shall be provided to induction furnace and ladle refining furnace to control fugitive emissions. Dust extraction system along with ESP and multi-cyclones shall be provided to pellet plant. ESP and bag filters shall be provided to sinter plant. Fume extraction system followed by a stack shall be provided to continuous casting machine. Bag filters and dust suppression system shall be provided at coal crushing and handling areas.	• Gas Cleaning Plant comprising of Bag Filters and Cyclones has been provided in Blast Furnace (BF). • 01 no. of wet scrubber unit of capacity 64,000 Nm^3/hr has been installed in BF plant to control gaseous emission before discharging to atmosphere through the chimney. • Presently the BF is not operational. • The slag generated from BF will be taken to Slag Granulated plant wherein the slag will be granulated and will be supplied to the local cement manufacturers/ associate company of the Group. • 100% of granulated slag will be used for cement making.

iv)	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive dust emission from raw material and product handling section shall be controlled by dust extraction systems with bag filters or by water sprinkling. Dust extraction system with bag filters shall be provided at all the material transfer points. Dust suppression system with water sprinklers shall be provided at raw material stockpiles and loading/ unloading points. Fume extraction system followed by a stack shall be provided to continuous casting machine. Dust extraction system shall be provided at cooling discharge house, product separation unit. Water sprinkling system and dust extraction system shall be provided at raw material sizing and handling areas. All conveyors shall be completely covered by GI sheets. Bag filters and dust suppression system shall be provided at coal crushing and handling areas.	1. In-plant control measures taken for checking fugitive emissions are as follows. i. 50 numbers of fixed rotary type water sprinklers have been installed for regular spraying of water on all internal roads, raw material handling area and solid waste dumping area to prevent dust nuisance. ii. In addition, water sprinkling on internal roads and village roads in immediate vicinity are also carried out manually with the help of 01 no. of water tanker of capacity of 5.0 KL and another water tanker of capacity 12 KL. iii. Dry Fog system provided at the Coal handling area as standby measures. iv. All the main internal roads used for movement of Vehicles have been concreted and most of the branch roads are also concreted that used for pedestrian. It helps in controlling fugitive emission from Vehicular movement. v. Fixed type water sprinklers at appropriate locations are provided. vi. Four numbers of rain guns are installed. vii. Plantation with local species has been done along compound wall, around raw material handling area, along internal roads, around waste disposal site. 2. Installation of ESP i. All the installed and operating DRI kilns are provided with WHRB and ESPs. ii. AFBC based CPP is also provided with ESP.

		iii. ESP connected to Rotary Drum of Pellet Plant. 3. Details of bag filters installed i. Total 11 (Eleven) numbers of Bag Filters provided for 8 X 100 TPD DRI to cover Coal Circuit, Iron Ore Circuit, Stock House (Day Bin), Cooler Discharge, Intermediate Bin, Product House and Coal Crusher, ii. 01 (One) Common Bag Filter of capacity 35,000 Nm^3 per Hr with stack height of 25 mtrs is connected to the Swivelling Hoods of 2 X 30 TPH Induction Furnaces in SMS. 4. Gas Cleaning Plant (GCP) of capacity 64,000 Nm^3 per Hr with stack height of 33 metres has been provided at Blast Furnace. 5. Pollution control measures in Sinter Plant i. 01 (One) no. of multi cyclone of sintering process of capacity 2,40,000 Nm^3 per Hr is connected to process section. ii. 01 (One) no. Bag Filter of capacity 2,10,000 Nm^3 per Hr is provided at flux area of Sinter Plant. iii. 01 (One) no. Bag Filter of capacity 1,20,000 Nm^3 per Hr is provided at discharge end of Sinter Plant. 6. One no. Bag Filter of capacity 24,000 Nm^3 per Hr is attached to the stack of Coal Pulverizing Unit of Pallet Plant 7. One no. Bag Filter of capacity 26,000 Nm^3 per Hr is attached to the stack of Coal Handling Plant of Coal Washery. 8. Regular monitoring of fugitive emissions is carried out by NABL accredited laboratory (copy enclosed as **Annexure-III**).

v)	All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using waste heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air.	• The coke oven unit is not in operation since April, 2013. • The said condition shall be complied one the coke oven plant comes in operation.
vi)	Gaseous emission levels including secondary fugitive emissions from blast furnace and sinter plant shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. The emission standards issued by the Ministry in May, 2008 for the sponge plants shall be followed.	• Gaseous emission levels including secondary fugitive emissions from blast furnace will be controlled within the latest permissible limits issued by the Ministry and will be regularly monitored. Guidelines/ Code of Practice issued by the CPCB will be followed. • Emission level from Sinter plant is controlled within the latest permissible limits issued by the Ministry and will be regularly monitored. • Guidelines/Code of Practice issued by the CPCB are followed. • The emission standards issued by the Ministry in May, 2008 for the sponge plants are maintained. Flue gas emission analysis report carried out by NABL accredited laboratory is enclosed as **Annexure-II**.
vii)	Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements should also be made to control dust emissions during loading and unloading of the raw	We are allowing all the vehicles inside the plant premises having valid PUC. At places display boards have also been provided as indicative of speed regulation inside the plant so that dust generation can be controlled.

	material and finished product.	
viii)	As proposed, total water requirement from IB River shall not exceed 10,271 m^3/day. Ground water requirement shall not exceed the limit permitted by the CGWA vide letter No. 21-4 (51)/SER/CGWA/07-262 dated 7th May, 2007. Closed-circuit re-circulation system shall be installed to reduce fresh water consumption and no wastewater generation. Water from ash dyke shall be decanted and collected in the reservoir and re-circulated/reused for ash handling and coal dust suppression in coal yard. Acidic and alkaline effluent from DM water plant shall be neutralized and reused in the plant. Cooling tower blow down shall be reused for dust suppression. BF-GCP and coal washery water shall be treated in thickener and reused in the process. Oil and grease shall be removed from wastewater by means of oil traps and skimming devices. All the wastewater from process and domestic sources shall be treated and recycled and reused in the process or for dust suppression, green belt development and various other activities at the site.	Permission for drawl of surface water from Hirakud Reservoir sources (upstream of IB River) has been issued by the Water Resources Department vide letter no. 18396/WR dated 08/07/2013 for 4.068 cusec or 9984 CUM per day. Presently, water for potable use and industrial uses is drawn from underground sources having valid NOC from CGWA vide Order no. CGWA/NOC/IND/ORIG/2022/14872 and it is valid from 07/02/2022 for 490 m^3/Day. Closed-circuit system has been provided in plant and no wastewater/effluent is being or will be discharged into any main course. There is provision of treatment of waste water and re-used of treated water in the process for water used for other process and dust suppression. Waste water generated from raw water treatment system and back wash of filtration plant are properly treated and subsequently taken to guard pond and re-use specifically dust suppression. Thus, no wastewater is discharged outside the Premises and zero effluent discharge is ensured. Presently the domestic effluents are treated in septic tanks (15 nos. at different location within the plant premises) followed by soak pits so as to meet the prescribed standard of the Board.

	No wastewater shall be discharged outside the premises and zero effluent discharge shall be ensured. Domestic effluent will be treated in septic tank followed by soak pit and used for green belt development.	
ix)	Prior permission for the drawl of 10,271 m^3/day water from IB River from the concerned department shall be obtained.	Permission for drawl of surface water from Hirakud Reservoir sources (upstream of IB River) has been issued by the Water Resources Department vide letter no. 18396/WR dated 08/07/2013 for 4.08 cusec or 9984 m^3/Day. Application for revalidation of the same has been submitted to department of water resources and is in progress.
x)	The water consumption should not exceed 16 m^3/Ton of Steel as per prescribed standard.	We abide by the said norms.
xi)	Groundwater monitoring around the solid waste disposal site/secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bhubaneswar, CPCB and OPCB.	Is being complied with. Copy of the ground water monitoring is enclosed as **Annexure-IV**.
xii)	DRI & iron ore fines, coke breeze, sinter dust, GCP dust, SMS dust, shall be used in sinter plant. All the other solid wastes including broken refractory mass shall be properly disposed off in environment-friendly manner. Sludge from sewage treatment plant	➢ We have installed a Sinter Plant of Capacity 4.6 LTPA and it is operational. ➢ Waste from DRI & Iron ore fines, coke breezes, sinter dust, GCP dust, SMS dust, are and will be used in sinter plant. ➢ All the other solid wastes including broken refractory mass are and will be properly disposed off in environment-

	(STP) shall be used as compost. Oily waste shall be provided to Authorized Cyclers/Re-processors.	friendly manner. ➢ Sludge from Sewage Treatment Plant (STP) will be used as compost. ➢ Oily waste shall be provided to Authorized Cyclers/Re-processors of SPCB.
xiii)	AFBC plant shall be installed in Phase II before installation of sponge iron plant during expansion so that utilization of char in the from the existing as well as proposed sponge iron plant in AFBC boiler is ensured. All the char from DRI plant, coal fines, middlings and rejects from the coal washery shall be utilized in AFBC boiler of power plant and no char shall be disposed off anywhere else. All the blast furnace (BF) slag shall be granulated and provided to cement manufacturers for further utilization. Dust from ESP, bag filter, wet scrapper, kiln accretions, slag from IF, EAF, LRF and SMS shall be properly utilized or disposed off in environment-friendly manner.	➢ AFBC plant of capacity of 16 MW has already been installed and dolo-char is used in AFBC Boiler. ➢ Coal washery of capacity 7 LTPA has been installed but not in operation as it is not economically viable in the market. ➢ No char is disposed off anywhere else. ➢ Presently the BF is not operational. Blast Furnace Slag will be granulated and to be provided to cement manufacturers for further utilization. ➢ Dust from ESP, bag filter, wet scrapper, kiln accretions, slag from IF, EAF, LRF and SMS will be properly utilized or disposed off in environment-friendly manner.
xiv)	All the slag shall be used for road making or filing low-lying area only after passing through Toxic Chemical Leachability Potential (TCLP) test. Otherwise, slag and output waste shall be disposed in	New management of the company has resumed operations of Steel melting shop after obtaining consent to operate (Order No. 550/IND-I-CON-5973, dated 07.01.2023) from OSPCB. We agree to abide by the condition.

	secured landfill as per CPCB guidelines.	
xv)	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, CPCB and OPCB.	New management of the company has resumed operations of the plant in phased manner after obtaining consent to operate (dated 17.08.2022, 07.01.2023 & 22.03.2023) from OSPCB. We agree to abide by the condition. Proper handling, storage, utilization and disposal of all the solid waste will be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, CPCB and OPCB from the next compliance cycle i.e. December 2023.
xvi)	A time bound action plan shall be submitted to reduce solid Waste, its proper utilization and disposal.	We have already optimised the generation of final solid wastes from our plant by keeping provision of using all solid wastes generated in other units in our Sinter Plant Process. • However still we are exploring further possibilities of reduction of Final Solid Waste generation to the Maximum extent possible by process optimization improving raw materials fuel etc.
xvii)	Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding shall be submitted to the Ministry's Regional Office at Bhubaneswar.	• Utilization of fly ash will be ensured as per Fly Ash Notification, 1999 and subsequent amendments. • All the fly ash shall be disposed at designated place inside the Plant premises and to cement and brick manufacturers.

xviii)	As proposed, green belt shall be developed in 165 acres (33 %) out of total 500 acres land in and around the plant as per the CPCB guidelines in consultation with DFO.	For the existing operational project, an area 34.72 Hectares (85.8 Acres) of total plant area 105.218 Hectares (260 Acres) has been earmarked for greenbelt development/plantation. An area of around 34.72 Hectares (85.8 Acres) i.e. 33% has already been covered under greenbelt with total 51,730 nos. of trees. Existing Greenbelt/plantation will be strengthened and to minimize the impact on human and sensitive manmade structure tree density of the existing greenbelt will be increased to at least 2,500 trees per hectare as per CPCB guideline. The management had planted 250 nos. trees during October 2022 to March 2023 along the boundary wall as well plantations within the plant areas at different locations such as along the road, around Waste Disposal areas, Raw Material storage area, and open spaces around different facilities. Few photographs are given below. 

		     
xix)	All the recommendations made in the Charter on	The technology, guidelines and recommendations made for Steel Plants

	Corporate Responsibility for Environment Protection (CREP) for the Steel Sector shall be implemented.	in the CREP guidelines are being/will be implemented. Details of implementations is enclosed as **Annexure-V.**
xx)	All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 7th November 2008 shall be satisfactorily implemented.	Company believes in growth with a human face and pursuing people-centered development. company is a socially committed organization and a socially responsible corporate citizen. It attaches great importance to discharging its overall social responsibilities to the community and the society at large where its project is located. An amount of ₹ 1.185 crores has been spent under CSR by previous management of M/s MSP Metallics Limited as mentioned in minutes of 22nd reconstituted expert appraisal committee (industry) held on 28th-29th august 2014.
xxi)	The company shall provide housing for 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.	Complied.
	General Conditions	**Status of Compliances**
i)	The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board (OPCB) and the State Government.	We are abiding by the stipulations made by the Odisha State Pollution Control Board, (OSPCB) and the State Government of Odisha. In this connection valid CTO has been obtained from OSPCB.

ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	Prior approval of the Ministry will be obtained in case of any deviation/modification or expansion in the plant is envisaged in future. In compliance to this condition, we have obtained TOR for expansion of Integrated Steel Plant (1.05 To 1.7 million TPA Finished Steel) with 275 MW Captive Power Plant by addition of some facilities and by revamping, augmentation, up gradation/ modification of existing technologies & facilities and increasing annual working days of some of the EC accorded facilities vide letter No. IA-J-11011/494/2007-IA-II(I) dated 28.09.2022. Copy of the standard TOR is enclosed as **Annexure-VI**.
iii)	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The Orissa Pollution Control Board (OPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	We ensure to conform to the load/mass based standards notified by the Ministry on 19th May 1993 and standards prescribed from time to time regarding the gaseous emissions being emitted from various process units of our Company. We also ensure to conform the respective standards that to be specified by The Odisha State Pollution Control Board (OSPCB).
iv)	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO_2 and NO_x are anticipated in consultation with the OPCB. Data on ambient air quality and	Four (04) numbers of Ambient Air Quality (AAQ) Monitoring stations were in place but not meeting USEPA/MCER) norms and become obsolete. The same is being replaced with 02 nos. of AQMS (BETA) attenuation Technology. Also, final stage negotiation is going on with the vendors for supply of 04 nos. of USEPA/MCERTS approved CAAQMS. Environmental parameters monitoring for

	stack emission shall be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and OPCB, CPCB once in six months.	ambient air quality and stack emission are being carried out by a NABL Accredited Laboratory. The abstract of Ambient Air Quality monitoring report for the period from October 2022 to March 2023 is enclosed as **Annexure-VII**. The abstract of Stack emission report for the period from October 2022 to March 2023 is given in **Enclosure–II**.
v)	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Further, specific measures like water sprinkling around the coal stockpiles and asphalting or concreting of the roads shall be done to control fugitive emissions.	In-plant control measures taken for checking fugitive emissions has been provided in Point no. i & iv of specific condition.
vi)	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	Industrial wastewater is properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater is being utilized for different purposes such as plantation, sprinkling on road & raw material yard etc. The abstract of wastewater analysis report for the period of October 2022 to March 2023 is enclosed **Annexure-VIII**.
vii)	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	We are slowly replacing the old Equipments and also overhauling the machineries as per the need. We have taken the following measures at most noise generating areas; • Installation of enclosures (Acoustic Enclosure) around noise generating

	sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	machines to reduce the amount of noise emitted into the workplace or environment. • Damping of Machines. • Use of barriers and screens to block the direct path of sound. • Positioning noise sources further away from workers. The abstract of Noise Level Measurement report for the period of October 2022 to March 2023 is enclosed as **Annexure-IX**.
viii)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance programme of all permanent and contractual workers is being done-regularly as per factory act and record is maintained. Copy of health register is enclosed as **Annexure-X**.
ix)	The company shall develop rainwater-harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table.	01 number of Rainwater harvesting systems with settling pond has been implemented to harvest rainwater and is utilized for sprinkling, plantation.
x)	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. Suggestions made during the public hearing shall be	Is being complied with. All the environmental protection measures and safeguards as recommended in the EIA/EMP report for consideration the EC as well as socio-economic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc has been/will be carried out in a time bond manner.

	implemented.	
xi)	As proposed, Rs. 12.89 Crores and Rs. 0.14 Crores shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures shall be judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	Adequate fund towards capital & recurring has been earmarked and the fund earmarked will not be diverted/ utilized for any other purposes.
xii)	The Regional Office of this Ministry at Bhubaneswar/CPCB/ OPCB shall monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Noted. Six-monthly compliance report and the monitored data along with statistical interpretation is being submitted regularly to the Regional Office of the Ministry at Bhubaneswar/CPCB/OPCB. Please refer our letter no. MSPML/IRO-MoEF&CC/2022-23/1-E/109, dated: 1st December 2022 for half yearly compliance report for the period of April 2022 to September 2022.
xiii)	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 OPCB and may also be seen at Website of the Ministry of Environment and Forests at http:/envfor.nic.in. This shall be advertised within	Complied. It has already been published in Odia Daily "Pragatibadi" and English Daily "The Pioneer" on dated 01.09.2009.

	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 shall be forwarded to the Regional office at Bhubaneswar	
xiv)	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.	The company is a private company and no finance is needed from outside. Land development word had been started after obtaining Consent to establish from State Pollution Control Board, Odisha.
xv)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Paris had/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 website of the company by the proponent.	Complied.
xvi)	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of	We abide by the condition.

	monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO2, NOx (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.	
xvii)	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 respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Is being complied with. Please refer our letter no. MSPML/IRO-MoEF&CC/2022-23/1-E/109, dated: 1st December 2022 for half yearly compliance report for the period of April 2022 to September 2022.
xviii)	The environmental statement for each financial year ending 31st 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)	M/s MSP Metallics Limited has been purchased/acquired by M/s Orissa Metaliks Private Limited (OMPL) on "assets sale basis" under liquidation under the order (I.A No. 616/KB/2022) connected with CP (IB) No. 580/KB/2020 of the National Company Law Tribunal (NCLT) Kolkata bench, Kolkata after being a 'Successful Bidder' on relation to E-Auction held on 06.05.2022.

	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 Offices of the MoEF by e-mail.	New management of the company has resumed operation in October, 2022 after obtaining CTO in August 2022 after 6 years of long shut down of the plant. The Environmental Statement in Form-V for the FY 2021-2022 (nil Returns) was submitted to OSPCB vide. our letter no. 29th September 2022. Further, we will submit the Environmental Statement in Form-V for the FY 2022-2023 to OSPCB as well as Regional Office of the MoEFCC on or before September 30th, 2023 and also put on the company's website.
Clause No. 7	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed and noted.
Clause No. 8	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agreed and noted for compliance.
Clause No. 9	Any appeal against this Environmental Clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act., 1997.	Noted.
Clause No. 10	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act,	Noted.

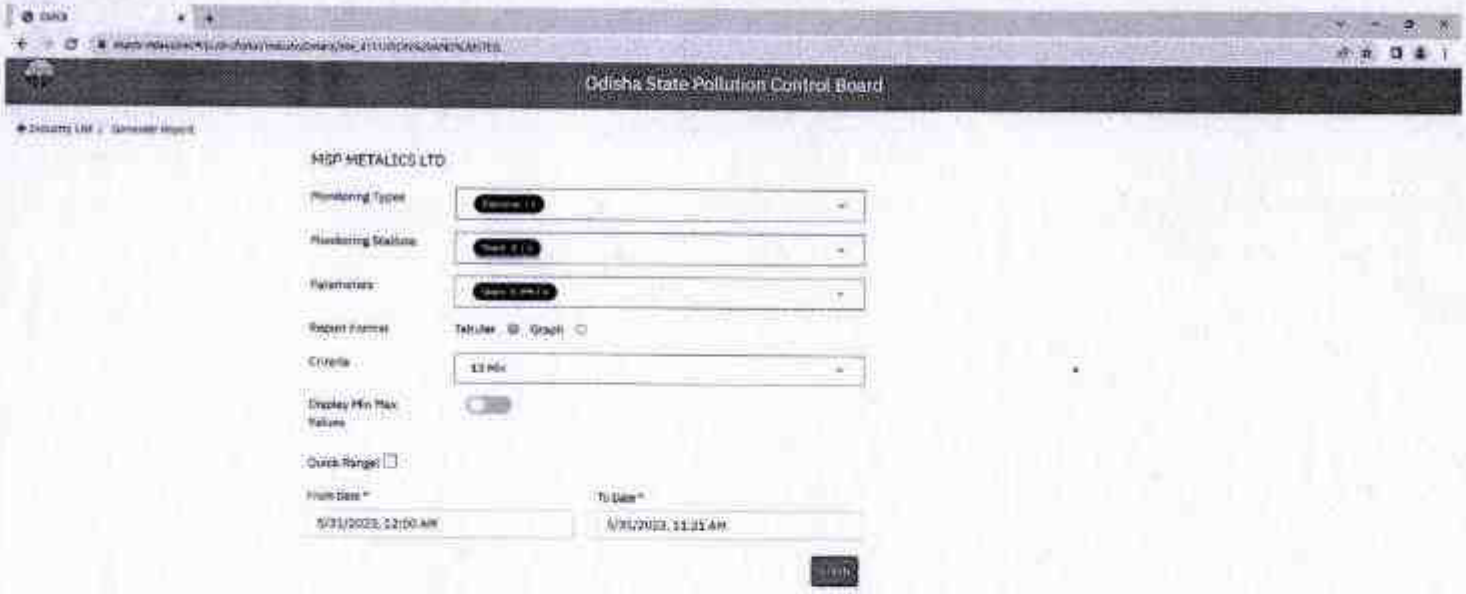
	1974, the Air (Prevention & Control of Pollution) Act. 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	

Thanking you,
With sincere regards,

For, **MSP Metallics Limited**

(J. P. Sharma)
Executive Director (Works)

Annexure-1


Odisha State Pollution Control Board
MSP METALICS LTD
Monitoring Type
Monitoring Station
Parameters
Report Format
Tabular
Graph
Criteria
15 Min
Display Min Max Values
Quick Range
From Date *
To Date *
5/31/2023, 12:00 AM
5/31/2023, 11:15 AM

Annexure - I

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(An ISO/IEC 17025 : 2017 (NABL) Accredited Laboratory, OSPCB Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

ULR-TC744022000000035F

Test Report Format No.: ERSIPL/FM/38

TEST REPORT (FLUE GAS)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/SE/004**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	Iso- kinetic CPCB(ER) 1985
Quantity of Sample	:	01 sample for each parameter
Environment Condition	:	All Tests carried out in Room Temperature

Sample ID. No.		Location
1. ERSIPL/SE/012 ; dt. 13.01.2023	:	Stack attached to ESP of DRI Kiln – I & II
2. ERSIPL/SE/013 ; dt. 13.01.2023	:	Stack attached to ESP of DRI Kiln – III & IV
3. ERSIPL/SE/014 ; dt. 13.01.2023	:	Stack attached to ESP of DRI Kiln – V & VI
4. ERSIPL/SE/015 ; dt. 14.01.2023	:	Stack attached to ESP of DRI Kiln – VII & VIII
5. ERSIPL/SE/016 ; dt. 14.01.2023	:	Stack attached to ESP of 16MW AFBC Boiler.

Sample ID No.	Test Method	Test Parameters					
		Temp. of Flue gases in (deg. C)	Velocity of flue gases in mps	Particulate matter in mg/Nm³			SO_2 in mg/Nm³
				Analyzed result without CO_2 Correction	Permissible limit as per EC	Permissible limit as per SPCB	Permissible limit as per SPCB (600)
ERSIPL/SE/012	For PM IS:11255(Part-1):1985, Reaffirmed 2019 & for SO_2 IS:11255(Part-2):1985, Reaffirmed 2019, Barium Perchlorate Method	113.0	22.4135	**41.31**	< 100	100.0	xx
ERSIPL/SE/013		131.0	23.6148	**42.77**	< 100	100.0	xx
ERSIPL/SE/014		127.0	22.8163	**38.86**	< 100	100.0	xx
ERSIPL/SE/015		137.0	22.7471	**39.53**	< 100	100.0	xx
ERSIPL/SE/016		118.0	20.7791	**40.41**	xx	50.0	52.51

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

...END OF TEST REPORT...

CIN - U73100OR1995PTC003889

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(OSPCB 'A' Category Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha

Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

Test Report Format No.: ERSIPL/FM/38

TEST REPORT (FLUE GAS)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/SE/T-004**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	Iso- kinetic CPCB(ER) 1985
Quantity of Sample	:	01 sample for each parameter
Environment Condition	:	All Tests carried out in Room Temperature

Sample ID. No.		Location
1. ERSIPL/SE/012 ; dt. 13.01.2023	:	Stack attached to ESP of DRI Kiln – I & II
2. ERSIPL/SE/013 ; dt. 13.01.2023	:	Stack attached to ESP of DRI Kiln – III & IV
3. ERSIPL/SE/014 ; dt. 13.01.2023	:	Stack attached to ESP of DRI Kiln – V & VI
4. ERSIPL/SE/015 ; dt. 14.01.2023	:	Stack attached to ESP of DRI Kiln – VII & VIII
5. ERSIPL/SE/016 ; dt. 14.01.2023	:	Stack attached to ESP of 16MW AFBC Boiler

Sample ID No.	Test Parameters				
	Temp. of Flue gases in (deg. C)	Velocity of flue gases in mps	CO % (v/v)	NO_2 in mg/Nm^3	Hg in mg/Nm^3
			Analyzed result Permissible limit as per OSPCB (1.0)	Permissible limit as per SPCB (300) max	Permissible limit as per SPCB (0.03) max
ERSIPL/SE/012	113.0	22.4135	<0.02	xx	
ERSIPL/SE/013	131.0	23.6148	<0.02		
ERSIPL/SE/014	127.0	22.8163	<0.02		
ERSIPL/SE/015	137.0	22.7471	<0.02		
ERSIPL/SE/016	118.0	20.7791	xx	145.0	<0.01

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

...END OF TEST REPORT...

Annexure - III

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(An ISO/IEC 17025 : 2017 (NABL) Accredited Laboratory, OSPCB Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Certificate No. : TC-2448

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

ULR-TC744023000000034F **Test Report Format No.: ERSIPL/FM/37**

TEST REPORT (AMBIENT AIR)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/AA/015**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Date of Sampling/Monitoring	:	14.01.2023
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	ERSIPL/MSP/06
Quantity of Sample	:	01 sample for each parameter
Environment Condition	:	Sunny

Sample ID. No.	**Locations**
1. ERSIPL/AA/029 (Fugitive Emission)	1. Near Iron Ore Stock Yard
2. ERSIPL/AA/030 (Fugitive Emission)	2. Near Coal Stock Yard
3. ERSIPL/AA/031 (Fugitive Emission)	3. Near RMHS
4. ERSIPL/AA/032 (Fugitive Emission)	4. Near Steel Melting Shop

TEST FINDINGS:

Sl. No	Test Parameters	Test & Sampling method	Unit	Permissible Limit as per G.S.R 414 (E) dtd. 30.05.2008	Results			
					ERSIPL /AA/ 029	ERSIPL /AA/ 030	ERSIPL /AA/ 031	ERSIPL /AA/ 032
1	Suspended Particulate Matter (SPM)	IS: 5182 (Part 4)- 1999, Reaffirmed 2019, Gravimetric Method	$\mu g/m^3$	2000.0	211.43	203.74	206.21	201.27

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

.....END OF TEST REPORT.....

Annexure-IV

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(An ISO/IEC 17025 : 2017 (NABL) Accredited Laboratory, OSPCB Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Certificate No. : TC-7440

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

ULR-TC744023000000040F **Test Report Format No.: ERSIPL/FM/40**

TEST REPORT (WATER/ ~~WASTE WATER~~)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/WA/021**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Date of Sampling	:	14.01.2023
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	IS 3025: Part 1: 1987, Reaffirmed 2019
Quantity of Sample	:	2ltrs
Type of Container	:	Glass Bottle & HDPE Bottle
Environment Condition	:	All Tests carried out in Room Temperature

Sample ID. No.
1. ERSIPL/WA/036
2. ERSIPL/WA/037

Locations
1. Bore Well Water- from Admin Office
2. Bore Well Water- from Mechanical Work Shop

TEST FINDINGS

S. No.	Parameters Analyzed	Test Method	Unit	Result		Permissible Limit as per IS:10500, 2012
				ERSIPL/ WA/ 036	ERSIPL/ WA/ 037	
01	pH	IS 3025:Part 11: 1983 Reaffirmed-2017	No	7.07	7.01	6.5-8.5
02	Turbidity	IS 3025:Part 10: 1984 Reaffirmed-2017	NTU	0.43	0.49	1.0
03	Total Hardness (as $CaCO_3$)	IS 3025:Part 21: 2009 Reaffirmed-2019	mg/L	128.0	152.0	200.0
04	Iron (as Fe)	IS 3025:Part 53: 2003 Reaffirmed-2019	mg/L	0.07	0.07	0.30
05	Chloride (as Cl)	IS 3025:Part 32: 1988 Reaffirmed-2019	mg/L	25.62	30.55	250.0
06	Total Dissolved Solids	IS 3025:Part 16: 1984 Reaffirmed-2017	mg/L	233.5	284.0	500.0
07	Calcium (as Ca)	IS 3025:Part 40: 1991 Reaffirmed-2019	mg/L	34.47	36.07	75.0
08	Sulphate (as SO_4)	IS 3025:Part 24: 1986 Reaffirmed-2019	mg/L	7.95	20.13	200.0
09	Fluoride (as F)	IS 3025:Part 60: 2008 Reaffirmed-2019	mg/L	<0.1	<0.1	1.0
10	Alkalinity (as $CaCO_3$)	IS 3025:Part 23: 1986 Reaffirmed-2019	mg/L	290.0	242.0	200.0

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

.....END OF TEST REPORT.....

CIN - U731000R1995PTC003889

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(OSPCB 'A' Category Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha

Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

Test Report Format No.: ERSIPL/FM/40

TEST REPORT (WATER/ ~~WASTE WATER~~)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/WA/T-021**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Date of Sampling	:	14.01.2023
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	IS 3025: Part 1: 1987, Reaffirmed 2019
Quantity of Sample	:	2ltrs
Type of Container	:	Glass Bottle & HDPE Bottle
Environment Condition	:	All Tests carried out in Room Temperature

Sample ID. No.	Locations
1. ERSIPL/WA/036	1. Bore Well Water- from Admin Office
2. ERSIPL/WA/037	2. Bore Well Water- from Mechanical Work Shop

TEST FINDINGS

Sl	Parameters Analysed	Test Method	Unit	Result		Permissible Limit as per IS:10500, 2012
				ERSIPL/ WA/ 036	ERSIPL/ WA/ 037	
01	Colour	IS 3025:Part 04: 1983 Reaffirmed-2017	Hazen	<5.0	<5.0	5.0
02	Odour	IS 3025:Part 05: 1983 Reaffirmed-2017	--	A	A	Agreeable (A)
03	Taste	IS 3025:Part 07,08: 1984 Reaffirmed-2017	--	A	A	Agreeable (A)
04	Nitrate as NO_3	IS 3025:Part 34: 1983 Reaffirmed-2019	mg/L	<5.0	<5.0	45.0
05	Residual Free Chlorine	IS 3025:Part 26: 1986 Reaffirmed-2019	mg/L	Nil	Nil	0.2 (min) When chlorinated
06	Copper	IS 3025:Part 42: 1992 Reaffirmed-2019	mg/L	ND	ND	0.05
07	Manganese	IS 3025:Part 59: 2006 Reaffirmed-2017	mg/L	ND	ND	0.1
08	Phenolic Compound	IS 3025:Part 43: 1992 Reaffirmed-2019	mg/L	ND	ND	0.001
09	Mercury	IS 3025:Part 48: 1994 Reaffirmed-2019	mg/L	ND	ND	0.001
10	Cadmium	IS 3025:Part 41: 1992 Reaffirmed-2019	mg/L	ND	ND	0.003

CIN - U73100OR1995PTC003889

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(OSPCB 'A' Category Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha

Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

11	Selenium	IS 3025:Part 56: 2003 Reaffirmed-2019	mg/L	ND	ND	0.01
12	Total Arsenic	IS 3025:Part 37: 1988 Reaffirmed-2019	mg/L	ND	ND	0.01
13	Cyanide	IS 3025:Part 27: 1986 Reaffirmed-2019	mg/L	ND	ND	0.05
14	Lead	IS 3025:Part 47: 1994 Reaffirmed-2019	mg/L	ND	ND	0.01
15	Zinc	IS 3025:Part 49: 1994 Reaffirmed-2019	mg/L	ND	ND	5.0
16	Anionic detergents	IS 13428 :2005 Reaffirmed-2019	mg/L	ND	ND	0.2
17	Total Chromium	IS 3025:Part 52: 2003 Reaffirmed-2019	mg/L	ND	ND	0.05
18	Polynuclear aromatic hydrocarbons	APHA 6440	mg/L	ND	ND	0.0001
19	Mineral Oil	IS 3025:Part 39: 1991 Reaffirmed-2019	mg/L	ND	ND	0.5
20	Pesticides	USEPA gas-liquid chromatography	mg/L	ND	ND	---
21	Aluminium	IS 3025:Part 55: 2003 Reaffirmed-2019	mg/L	ND	ND	0.03
22	Boron	IS 3025:Part 57: 2005 Reaffirmed-2017	mg/L	ND	ND	0.5
23	Nickel	IS 3025:Part 54: 2003 Reaffirmed-2019	mg/L	ND	ND	0.02

ND-Not Detected

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

...END OF TEST REPORT...

CIN - U731000R1995PTC003889

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(OSPCB 'A' Category Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

DEPTH OF GROUND WATER TABLE

Date: 31 Jan 2023

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Date of Measurement	:	14.01.2023
Measurement taken by	:	Representative of ERS (I) Pvt. Ltd.
Measurement taken in presence of	:	Representative of the Customer

Sl. No.	Location	Depth (Below surface level in meter)
01	Bore Well near Admin Office	20.53
02	Bore Well near Mechanical Work Shop	27.92

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

.....END OF TEST REPORT.....

Annexure-V

Plan for implementation of recommendations mentioned in Charter on Corporate Responsibility for Environmental Protection (CREP) For Integrated Iron & Steel Industry

S. No.	Recommendation	Plan for Implementation
1.	**Coke Oven Plants** • To meet the parameters PLD (%leaking doors), PLL (%leaking lids), PLO (%leaking off take), of the notified standards under EPA within three years. Industry will submit time bound action plan and PERT Chart along with the Bank Guarantee for the implementation of the same. • To rebuild at least 40% of the coke oven batteries* in next 10 years.	For the existing coke oven plant, latest available technology has been adopted to meet the emission standard.
2.	**Steel melting shop** To reduce the fugitive emissions	MSPML has installed spark arrestor system and reverse bag filter of sufficient capacity and will be connected to MS stack of 35 m height for better dispersion of pollutant.
3.	**Blast Furnace** Direct inject of reducing agents.	Presently the Blast furnace is not in operation. Direct injection of reducing agents will be ensured during operation of blast furnace.
4.	**Solid waste/Hazardous Waste management** Utilisation of Steel Melting Shop (SMS)/ Blast Furnace (BF) Slag.	100% of the SMS slag will be given for metal recovery, converted to aggregates (special balls) and used in road making. The BF slag will be ground and used for cement manufacturing in the proposed cement grinding unit.
5.	**Water conservation/water pollution** • To reduce specific water	• Not applicable.

S. No.	Recommendation	Plan for Implementation
	consumption for long products. • To operate CO-BP effluent treatment plant efficiently to achieve the notified effluent discharge standards.	• A neutralizing pit and effluent collection sump (called common monitoring basin) has been installed for treating & reusing the effluent generated.
6.	Installation of Continuous Stack Monitoring system and its calibration in major stacks and setting up of the online ambient air quality monitoring stations.	The company has successfully installed online Stack monitoring in existing operation stacks. 04 Nos. Online continuous air quality monitoring stations shall be installed after getting site approval from OSPCB. (PM_{10}, $PM_{2.5}$, SO_2, NO_2, CO).
7.	To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard be submitted to CPCB/SPCB.	Existing pollution control equipment are being operated efficiently and regular record maintained. The records will be submitted to the SPCB at regular intervals.
8.	To implement the recommendations of Life Cycle Assessment (LCA) study sponsored by MoEF.	The recommendations of MoEFCC shall be implemented on complete installation of all the plant facilities.
9.	The industry will initiate the steps to adopt the following clean technologies/measures to improve the performance of industry towards production, energy and environment.	-
	➢ Energy recovery of top Blast Furnace (BF) gas.	Blast furnace gas will be recovered through BF Stove Gas Recovery System and consumed in Sinter & Pellet plant.
	➢ Use of Tar-free runner linings.	Fire clay bricks are in use for

S. No.	Recommendation	Plan for Implementation
		the runners.
	➢ De-dusting of Cast House at tap holes, runners, skimmers ladle and charging points.	De dusting units shall be operational at various locations in cast house.
	➢ Suppression of fugitive emissions using nitrogen gas or other inert gas.	This shall be carried out in the applicable equipment.
	➢ To study the possibility of slag and fly ash transportation back to the abandoned mines, to fill up the cavities through empty railway wagons while they return back to the mines and its implementation.	The slag generated from MBF and fly ash from CPP will be used in cement manufacturing. The slag generated from the SMS plant will be used for road making, paver block making and land leveling after recovering valuable metal from slag crushing unit.
	➢ Processing of the waste containing flux & ferrous wastes through waste recycling plant.	A modern State of Art of Technology of Sinter Plant has been installed for reuse of waste materials. Maximum Generated Solid wastes will be reused in different units such as pellet dusts will be used in Sinter Plant, Granulated MBF slag will be used in Cement Plant, Dust from Sinter plant re used in Sinter plant.
	➢ To implement rainwater harvesting.	Rainwater harvesting pond has been constructed in existing plant.
	➢ Reduction of Green House Gases by: 1. Reduction in power consumption 2. Use of by-products gases for power generation 3. Promotion of Energy Optimization Technology	1. The power use will be reduced through energy conservation measures on commencement of operation. 2. DRI exhaust is used for power generation. 3. Energy auditing will be

S. No.	Recommendation	Plan for Implementation
	including energy audit	carried out periodically.
	➢ To set targets for Resource Conservation such as Raw material, energy and water consumption to match International Standards.	The company's management has adopted adopt eco-friendly (i.e. 3 R's, Reduce, Recycle & Reuse) philosophy for day to day plant operations.
	➢ Up-gradation in the monitoring and analysis facilities for air and water pollutants. Also, to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories.	A state of the art laboratory will be established for analysis. Elaborate training to the manpower and establishment of laboratory will be carried out as required.
	➢ To improve overall housekeeping.	Action taken by company for improvement of housekeeping and controlling emission are: a) 50 numbers of fixed rotary type water sprinklers have been installed for regular spraying of water on all internal roads, raw material handling area and solid waste dumping area to prevent dust nuisance. b) In addition, water sprinkling on internal roads and village roads in immediate vicinity are also carried out manually and with the help of 01 Numbers of Water Tanker having capacity of 5.0 KL and another Water Tanker of capacity 12 KL. c) Dry Fog system provided at the Coal handling area as standby measures. d) All the main internal roads

S. No.	Recommendation	Plan for Implementation
		used for movement of Vehicles have been concreted and most of the branch roads are also concreted that used for pedestrian It helps in controlling fugitive emission from Vehicular movement. e) Fixed type Water Sprinklers at appropriate locations are provided. f) Four numbers of Rain guns are installed. g) Plantation with local species has been done along compound wall, around raw material handling area, along internal roads, around waste disposal site.
10.	**Sponge Iron Plants** Inventorization of sponge iron plants to be completed by SPCBs/CPCB and units will be asked to install proper air pollution control equipment to control primary and secondary emissions.	All necessary air pollution control equipments (ESP/DES) with adequate capacity WHRB installed with 8 x 100 TPD DRI kiln is in place and for proposed expansion project, the same will be implemented. Management will ensure that all APCD are working efficiently to control emissions within the permissible limits.

Annexure-VI

No.IA-J-11011/494/2007-IA-II(I)

Goverment of India

Minister of Enviroment,Forest and Climate Change .

Impact Assessment Division

***

Indira Paryavaran Bhavan,
Vayu Wing,3rd Floor,Aliganj,
Jor Bagh Road,New Delhi-110003
28 Sep 2022

To,

M/s MSP METALLICS LIMITED
1, GARSTIN PLACE, ORBIT HOUSE, 3RD FLOOR, ROOM NO 3B, KOLKATA,
Gondiya-700001
Punjab

Tel.No.-; Email:mspmetallicsltdworks@gmail.com

Sir/Madam,

This has reference to the proposal submitted in the Ministry of Environment, Forest and Climate Change to prescribe the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining Environmental Clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted online information in the prescribed format (Form-1) along with a Pre-feasibility Report. The details of the proposal are given below:

1. Proposal No.:	IA/OR/IND/291725/2022
2. Name of the Proposal:	Expansion of Steel Plant 1.05 Million TPA With CPP To Integrated Steel Plant 1.7 Million TPA Finished Steel With 275 MW Captive Power Plant.
3. Category of the Proposal:	Industrial Projects - 1
4. Project/Activity applied for:	2(b) Mineral beneficiation 3(a) Metallurgical industries (ferrous & non ferrous) 3(b) Cement plants 4(b) Coke oven plants
5. Date of submission for TOR:	24 Sep 2022

In this regard, under the provisions of the EIA Notification 2006 as amended, the Standard TOR for the purpose of preparing environment impact assessment report and environment management plan for obtaining prior environment clearance is prescribed with public consultation as follows:

2(b):STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR MINERAL BENEFICIATION PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

1) The alternate sites considered, the relative merits and demerits and the reasons for selecting the proposed site for the Beneficiation Plant should be indicated.

2) Details of the technology and process involved for beneficiation should be given. .

3) Location of the proposed Plant w.r.t. the source of raw material and mode of transportations of the ore from mines to the beneficiation plant should be justified.

4) Treatment of run of mine (ROM) and or of the fines/waste dump should be spelt out.

5) Estimation of the fines going into the washings should be made and its management described.

6) Details of the equipment, settling pond etc. should be furnished.

7) Detailed material balance should be provided.

8) Sources of raw material and its transportation should be indicated. Steps proposed to be taken to protect the ore from getting air borne should be brought out.

9) Management and disposal of tailings and closure plan of the tailing pond, if any after the project is over, should be detailed in a quantified manner.

10) The water requirement for the project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the project should also be indicated.

11) A copy of the document in support of the fact that the Proponent is the rightful lessee of the unit should be given.

12) All documents including EIA and public hearing should be compatible with one another in terms of the production levels, waste generation and its management and technology and should be in the name of the lessee.

13) All corner coordinates of the Unit, superimposed on a High Resolution Imagery/Toposheet should be provided. Such an Imagery of the proposed Unit should clearly show the land use and other ecological features of the study area (core and buffer zone).

14) It should be clearly indicated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of

environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large,may also be detailed in the EIA Report.

15) Issues relating to Safety should be detailed. The proposed safeguard measures in each case should also be provided. Disaster management plan shall be prepared and included in the EIA/EMP Report.

16) The study area will comprise of 10 km zone around the Plant.

17) Cumulative impact study of both Beneficiation Plant with suggested mitigation measures as per the study should be described.

18) Location of Railway siding with its handling capacity and safety measures should be indicated.

19) Option to provide only silo for storage of minerals instead of open stacking to avoid fugitive dust should be explored and arrangements finalized justified.

20) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.

21) Details of the land for any Over Burden Dumps outside the lease, such as extent of land area, distance from lease, its land use, R&R issues, if any, should be given.

22) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the Project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.

23) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.

24) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.

25) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.

26) A study shall be got done to ascertain the impact of the Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required, should be worked out with cost implications and submitted.

27) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly

indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.

28) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

29) Proximity to Areas declared as 'Critically Polluted' shall also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB/CPCBshall be secured and furnished to the effect that the proposed activities could be considered.

30) Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the unit w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).

31) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects, should be discussed in the report.

32) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the unit in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.

33) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of

mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

34) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.

35) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be secured and copy furnished. .

36) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.

37) Impact of the project on the water quality, both surface and groundwater should be assessed and necessary safeguard measures, if any required, should be provided.

38) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.

39) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the project. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to the pollution.

40) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.

41) Details of the onsite shelter and facilities to be provided to the workers should be included in the EIA report.

42) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area should be be detailed.

43) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.

44) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.

45) Public hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.

46) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.

47) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

48) A brief background of the Project, its financial position, Group Companies and legal issues etc should be provided with past and current important litigations if any.

49) Benefits of the Project, if the project is implemented should be outlined. The benefits of the projects shall clearly indicate environmental, social, economic, employment potential, etc.

50) Besides the above, the below mentioned general points are also to be followed:-

a) All documents to be properly referenced with index and continuous page numbering.

b) Where data are presented in the report especially in Tables, the period in which the data were collected and the sources should be indicated.

c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the project.

d) Where the documents provided are in a language other than English, an English translation should be provided.

e) The Questionnaire for environmental appraisal of project as devised earlier by the Ministry shall also be filled and submitted.

f) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should also be followed.

g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certifiedReport of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project by the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.

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ACTIVITY 3 (a)- METALLURGICAL INDUSTRY (Ferrous and Non-ferrous)

STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR METALLURGICAL INDUSTRY (Ferrous and Non-ferrous) AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

GENERAL CONDITIONS-

1. Introduction

i. Background about the project
ii. Need of the project
iii. Purpose of the EIA study
iv. Scope of the EIA study

2. Project description

A. Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State.
ii. Site accessibility
iii. Adigital toposheet in pdf or shape file compatible to google earth of the study area of radius of 10km and site location preferably on 1:50,000 scale. (including all eco-sensitive areas and environmentally sensitive places).
iv. Latest High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc., along with delineation of plant boundary co-ordinates. Area must include at least 100m all around the project location.
v. Environment settings of the site and its surrounding along with map.
vi. A list of major industries with name, products and distance from plant site within study area (10km radius) and the location of the industries shall be depicted in the study area map.
vii. In case if the project site is in vicinity of the water body, 50 meters from the edge of the water body towards the site shall be treated as no development/construction zone. If it's near the wetland, Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017 may be followed.
viii. In case if the project site is in vicinity of the river, the industry shall not be located within the river flood plain corresponding to one in 25 years flood, as certified by concerned District Magistrate/Executive Engineer from State Water Resources Department (or) any other officer authorized by the State Government for this purpose as per the provisions contained in the MoEF&CC Office Memorandum dated 14/02/2022.
ix. Type of land, land use of the project site.
x. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process as per the MoEF&CC O.M. dated 7/10/2014 shall be furnished.
xi. Engineering layout of the area with dimensions depicting existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

B. Forest and wildlife related issues (if applicable):

i. Status of Forest Clearance for the use of forest land shall be submitted.
ii. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife if the project site located within notified Eco-Sensitive Zone, 10km radius of national park/sanctuary wherein final ESZ notification is not in place as per MoEF&CC Office Memorandum dated 8/8/2019.
iii. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas, the project proponent shall submit the map duly authenticated by Divisional Forest Officer showing the distance between the project site and the said areas.
iv. Wildlife Conservation Plan duly authenticated by the Competent Authorityof the State Government for conservation of Schedule I fauna, if any exists in the study area.

C. Salient features of the project

i. Products with capacities in **Tons per Annum** for the proposed project.
ii. If expansion project, status of implementation of existing project, details of existing/proposed products with production capacities in Tons per Annum.
iii. Site preparatory activities.
iv. List of raw materials required and their source along with mode of transportation.
v. Other than raw materials, other chemicals and materials required with quantities and storage capacities.
vi. Manufacturing process details along with process flow diagram of proposed units.
vii. Consolidated materials and energy balance for the project.
viii. Total requirement of surface/ ground water and powerwith their respective sources, status of approval.
ix. Water balance diagram
x. Details of Emission, effluents, hazardous waste generation and mode of disposal during construction as well as operation phase.
xi. Man-power requirement.
xii. Cost of project and scheduled time of completion.
xiii. Brief on present status of compliance (Expansion/modernization proposals)

a. Cumulative Environment Impact Assessment for the existing as well as the proposed expansion/modernization shall be carried out.
b. In case of ground water drawl for the existing unit, action plan for phasing out of ground water abstraction in next three years except for domestic purposes and shall switch over to 100 % use of surface water from nearby source.
c. Copy of all the Environment Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environment clearances including amendments shall be provided.
d. In case the existing project has not obtained EnvironmentClearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the Regional Office of the SPCB shall be submitted.

3. Description of the Environment

i. Study period

ii. Approach and methodology for data collection as furnished below.

Attributes	Sampling		Remarks
	Network	Frequency	
A. Air Environment			
Micro-Meteorological • Wind speed (Hourly) • Wind direction • Dry bulb temperature • Wet bulb temperature • Relative humidity • Rainfall • Solar radiation • Cloud cover • Environmental Lapse Rate	Minimum 1 site in the project impact area	1 hourly continuous	• IS 5182 Part 1-20 • Site specific primary data is essential • Secondary data from IMD, New Delhi • CPCB guidelines to be considered.
Pollutants • $PM_{2.5}$ • PM_{10} • SO_2 • NOx • CO • HC • Other parameters relevant to the project and topography of the area	At least 8-12 locations	As per National Ambient Air Quality Standards, CPCB Notification.	• Sampling as per CPCB guidelines • Collection of AAQ data (except in monsoon season) • Locations of various stations for different parameters should be related to the characteristic properties of the parameters. • The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16/11/2009 and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests, • Raw data of all AAQ measurement for 12 weeks of all stations as

Attributes	Sampling		Remarks
	Network	Frequency	
			per frequency given in the NAAQM Notification of 16/11/2009 along with min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
B. Noise			
• Hourly equivalent noise levels	At least 8-12 locations	As per CPCB norms	
C. Water			
Parameters for water quality • pH, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium, salinity • Total nitrogen, total phosphorus, DO, BOD, COD, Phenol • Heavy metals • Total coliforms, faecal coliforms • Phyto plankton • Zoo plankton	Samples for water quality should be collected and analyzed as per: • IS: 2488 (Part 1-5) methods for sampling and testing of Industrial effluents • Standard methods for examination of water and wastewater analysis published by American Public Health Association.		
For River Bodies • Total Carbon • pH • Dissolved Oxygen • Biological Oxygen Demand • Free NH4 • Boron • Sodium Absorption Ratio • Electrical	• Surface water quality of the nearest River (60m upstream and downstream) and other surface water	• Yield of water sources to be measured during critical season • Standard methodology for collection of surface water (BIS standards)	

Attributes	Sampling		Remarks
	Network	Frequency	
Conductivity	bodies		
For Ground Water	• Ground water monitoring data should be collected at minimum of 8 locations (from existing wells /tube wells/existing current records) from the study area and shall be included.		
D. Traffic Study			
• Type of vehicles • Frequency of vehicles for transportation of materials • Additional traffic due to proposed project • Parking arrangement			
E. Land Environment			
Soil • Particle size distribution • Texture • pH • Electrical conductivity • Cation exchange capacity • Alkali metals • Sodium Absorption Ratio (SAR) • Permeability • Water holding capacity • Porosity	Soil samples be collected as per BIS specifications		
Land use/Landscape • Location code • Total project area • Topography • Drainage (natural) • Cultivated, forest, plantations, water bodies, roads and settlements			
E. Biological Environment			

Attributes	Sampling		Remarks
	Network	Frequency	
Aquatic • Primary productivity • Aquatic weeds • Enumeration of phyto plankton, zoo plankton and benthos • Fisheries • Diversity indices • Trophic levels • Rare and endangered species • Marine Parks/ Sanctuaries/ closed areas /coastal regulation zone (CRZ) **Terrestrial** • Vegetation-species list, economic importance, forest produce, medicinal value • Importance value index (IVI) of trees • Fauna • Avi fauna • Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes	• Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. Indicator species which indicate ecological and environment degradation should be identified and included to clearly state whether the proposed project would result in to any adverse effect on any species. • Samples to collect from upstream and downstream of discharge point, nearby tributaries at downstream, and also from dug wells close to activity site. • For forest studies, direction of wind should be considered while selecting forests. • Secondary data to collect from Government offices, NGOs, published literature.		
F. socio-economic			
• Demographic structure • Infrastructure resource base • Economic resource base • Health status: Morbidity pattern • Cultural and aesthetic attributes	• Socio-economic survey is based on proportionate, stratified and random sampling method. • Primary data collection through questionnaire • Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. Agencies		

Attributes	Sampling		Remarks
	Network	Frequency	
• Education			

iii. Interpretation of each environment attribute shall be enumeratedand summarized as given below:

- Ambient air quality
- Ambient Noise quality
- Surface water quality
- Ground water quality
- Soil quality
- Biological Environment
- Land use
- Socio-economic environment

4. Anticipated Environment Impacts and mitigation measures (In case of expansion, cumulative impact assessment shall be carried out)

i. Identification of potential impacts in the form of a **matrix** for the construction and operation phase for all the environment components

Activity	Environment	Ecological	Socio-economic
Construction phase			
Operation phase			

ii. Impact on ambient air quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

- Details of stack emissions from the existing as well as proposed activity.
- Assessment of ground level concentration of pollutants from the stack emission based on AQIP Modelling The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any along with wind rose map for respective period
- Impact on ground level concentration, under normal, abnormal and emergency conditions. Measures to handle emergency situations in the event of uncontrolled release of emissions.

iii. Impact on ambient noise quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

iv. Impact on traffic (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

v. Impact on soil quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

vi. Impact on land use (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

vii. Impact on surface water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

viii. Impact on ground water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

ix. Impact on terrestrial and aquatic habitat (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

x. Impact on socio-economic environment (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

xi. Impact on occupational health and safety (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

5. Analysis of Alternatives (Technology & Site)

i. No project scenario
ii. Site alternative
iii. Technical and social concerns
iv. Conclusion

6. Environmental Monitoring Program

i. Details of the Environment Management Cell
ii. Performance monitoring schedule for all pollution control devices shall be furnished.
iii. Corporate Environment Policy

a. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environment or forest norms / conditions? If so, it may be detailed in the EIA.
c. What is the hierarchical system or Administrative order of the company to deal with the environment issues and for ensuring compliance with the environment clearance conditions? Details of this system may be given.

d. Does the company have system of reporting of non compliances / violations of environment norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

iv. Action plan for **post-project environment monitoring matrix**:

Activity	Aspect	Monitoring Parameter	Location	Frequency	Responsibility
Construction phase					
Operation phase					

7. Additional Studies

i. Public consultation details (Entire proceedings as separate annexurealong with authenticated English Translation of Public Consultation proceedings).

ii. Summary of issues raised during public consultation along with action plan to address the same as per MoEF&CC O.M. dated 30/09/2020

S	Physical activity and action plan		Year of implementation (Budget in INR)			Total Expenditure (Rs. in Crores)
	Name of the Activity	Physical Targets	1st	2nd	3rd	

iii. Risk assessment

- Methodology
- Hazard identification
- Frequency analysis
- Consequence analysis
- Risk assessment outcome

iv. Emergency response and preparedness plan

8. Project Benefits

i. Environment benefits
ii. Social infrastructure
iii. Employment and business opportunity
iv. Other tangible benefits

9. Environment Cost Benefit Analysis

i. Net present value
ii. Internal rate of return
iii. Benefit cost ratio
iv. Cost effectiveness analysis

10. Environment Management Plan (Construction and Operation phase)

i. Air quality management plan
ii. Noise quality management plan

iii. Solid and hazardous waste management plan
iv. Effluent management plan
v. Storm water management plan
vi. Rain water harvesting plan
vii. Occupational health and safety management plan
viii. Green belt development plan
ix. Socio-economic management plan
x. Wildlife conservation plan (In case of presence of schedule I species)
xi. Total capital cost and recurring cost/annum for environment pollution control measures shall be included.

11. Conclusion of the EIA study

12. In addition to the above, any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

SPECIAL CONDITIONS-

1. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
2. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
3. Plan for solid wastes utilization
4. Plan for utilization of energy in off gases (coke oven, blast furnace)
5. System of coke quenching adopted with justification.
6. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content (TCLP), composition and end use of slag.
9. 100 % dolo char generated in the plant shall be used to generate power.
10. Fourth Hole fume extraction system shall be provided for SAF. WHR system shall be installed to recover sensible heat from flue gases of EAF. Provision for installation of jigging and briquetting plant to utilise the fines generated in the process.
11. No tailing pond is permitted for Iron ore slimes. Dewatering and filtration system shall be provided.
12. Emission/effluent norms as per G.S.R 894 (E) dated 4/12/2019.

ACTIVITY 3(b)- CEMENT PLANTS

STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR CEMENT PLANTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

GENERAL CONDITION-.

1. Introduction

i. Background about the project
ii. Need of the project
iii. Purpose of the EIA study
iv. Scope of the EIA study

2. Project description

Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State.
ii. Site accessibility
iii. Adigital toposheet in pdf or shape file compatible to google earth of the study area of radius of 10km and site location preferably on 1:50,000 scale. (including all eco-sensitive areas and environmentally sensitive places).
iv. Latest High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc., along with delineation of plant boundary co-ordinates. Area must include at least 100m all around the project location.
v. Environment settings of the site and its surrounding along with map.
vi. A list of major industries with name, products and distance from plant site within study area (10km radius) and the location of the industries shall be depicted in the study area map.
vii. In case if the project site is in vicinity of the water body, 50 meters from the edge of the water body towards the site shall be treated as no development/construction zone. If it's near the wetland, Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017 may be followed.
viii. In case if the project site is in vicinity of the river, the industry shall not be located within the river flood plain corresponding to one in 25 years flood, as certified by concerned District Magistrate/Executive Engineer from State Water Resources Department (or) any other officer authorized by the State Government for this purpose as per the provisions contained in the MoEF&CC Office Memorandum dated 14/02/2022.
ix. Type of land, land use of the project site.
x. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process as per the MoEF&CC O.M. dated 7/10/2014 shall be furnished.
xi. Engineering layout of the area with dimensions depicting existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

3. Forest and wildlife related issues (if applicable):

i. Status of Forest Clearance for the use of forest land shall be submitted.

ii. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife if the project site located within notified Eco-Sensitive Zone, 10km radius of national park/sanctuary wherein final ESZ notification is not in place as per MoEF&CC Office Memorandum dated 8/8/2019.

iii. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas, the project proponent shall submit the map duly authenticated by Divisional Forest Officer showing the distance between the project site and the said areas.

iv. Wildlife Conservation Plan duly authenticated by the Competent Authorityof the State Government for conservation of Schedule I fauna, if any exists in the study area.

4. Salient features of the project

i. Products with capacities in **Tons per Annum** for the proposed project.

ii. If expansion project, status of implementation of existing project, details of existing/proposed products with production capacities in Tons per Annum.

iii. Site preparatory activities.

iv. List of raw materials required and their source along with mode of transportation.

v. Other than raw materials, other chemicals and materials required with quantities and storage capacities.

vi. Manufacturing process details along with process flow diagram of proposed units.

vii. Consolidated materials and energy balance for the project.

viii. Total requirement of surface/ ground water and powerwith their respective sources, status of approval.

ix. Water balance diagram

x. Details of Emission, effluents, hazardous waste generation and mode of disposal during construction as well as operation phase.

xi. Man-power requirement.

xii. Cost of project and scheduled time of completion.

xiii. Brief on present status of compliance (Expansion/modernization proposals)

a. Cumulative Environment Impact Assessment for the existing as well as the proposed expansion/modernization shall be carried out.

b. In case of ground water drawl for the existing unit, action plan for phasing out of ground water abstraction in next three years except for domestic purposes and shall switch over to 100 % use of surface water from nearby source.

c. Copy of all the Environment Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environment clearances including amendments shall be provided.

d. In case the existing project has not obtained EnvironmentClearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the Regional Office of the SPCB shall be submitted.

5. Description of the Environment

i. Study period

ii. Approach and methodology for data collection as furnished below.

Attributes	Sampling		Remarks
	Network	Frequency	
. Air Environment			
licro-Meteorological Wind speed (Hourly) Wind direction Dry bulb temperature Wet bulb temperature Relative humidity Rainfall Solar radiation Cloud cover Environmental Lapse Rate	linimum 1 site in the project impact area	hourly continuous	IS 5182 Part 1-20 Site specific primary data is essential Secondary data from IMD, New Delhi CPCB guidelines to be considered.
ollutants $PM_{2.5}$	t least 8-12 locations	s per ational Ambient Air Quality Standards, CPCB otification.	Sampling as per CPCB guidelines Collection of AAQ data (except in monsoon season) Locations of various stations for different parameters should be related to the characteristic properties of the parameters. The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16/11/2009 and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests, Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in
PM_{10}			
SO_2			
NOx			
CO			
HC			
Other parameters relevant to the project and topography of the area			

Attributes	Sampling		Remarks
	Network	Frequency	
			the NAAQM Notification of 16/11/2009 along with min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
. Noise			
Hourly equivalent noise levels	t least 8-12 locations	s per CPCB norms	
. Water			
arameters for water quality pH, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium, salinity Total nitrogen, total phosphorus, DO, BOD, COD, Phenol Heavy metals Total coliforms, faecal coliforms Phyto plankton Zoo plankton	amples for water quality should be collected and analyzed as per: IS: 2488 (Part 1-5) methods for sampling and testing of Industrial effluents Standard methods for examination of water and wastewater analysis published by American Public Health Association.		
or River Bodies Total Carbon pH Dissolved Oxygen Biological Oxygen Demand Free NH4 Boron Sodium Absorption Ratio Electrical Conductivity	Surface water quality of the nearest River (60m upstream and downstream) and other surface water bodies	Yield of water sources to be measured during critical season Standard methodology for collection of surface water (BIS standards)	

Attributes	Sampling		Remarks
	Network	Frequency	
or Ground Water	Ground water monitoring data should be collected at minimum of 8 locations (from existing wells /tube wells/existing current records) from the study area and shall be included.		
. Traffic Study			
Type of vehicles Frequency of vehicles for transportation of materials Additional traffic due to proposed project Parking arrangement			
. Land Environment			
oil Particle size distribution Texture pH Electrical conductivity Cation exchange capacity Alkali metals Sodium Absorption Ratio (SAR) Permeability Water holding capacity Porosity	oil samples be collected as per BIS specifications		
and use/Landscape Location code Total project area Topography Drainage (natural) Cultivated, forest, plantations, water bodies, roads and settlements			
. Biological Environment			
quatic	Detailed description of flora and fauna (terrestrial and		

Attributes	Sampling		Remarks
	Network	Frequency	
Primary productivity Aquatic weeds Enumeration of phyto plankton, zoo plankton and benthos Fisheries Diversity indices Trophic levels Rare and endangered species Marine Parks/ Sanctuaries/ closed areas /coastal regulation zone (CRZ)	aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. Indicator species which indicate ecological and environment degradation should be identified and included to clearly state whether the proposed project would result in to any adverse effect on any species. Samples to collect from upstream and downstream of discharge point, nearby tributaries at downstream, and also from dug wells close to activity site. For forest studies, direction of wind should be considered while selecting forests. Secondary data to collect from Government offices, NGOs, published literature.		
errestrial			
Vegetation-species list, economic importance, forest produce, medicinal value Importance value index (IVI) of trees Fauna Avi fauna Rare and endangered species Sanctuaries / National park / Biosphere reserve Migratory routes			
socio-economic			
Demographic structure Infrastructure resource base Economic resource base Health status: Morbidity pattern Cultural and aesthetic attributes	Socio-economic survey is based on proportionate, stratified and random sampling method. Primary data collection through questionnaire Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies		

Attributes	Sampling		Remarks
	Network	Frequency	
Education			

iii. Interpretation of each environment attribute shall be enumeratedand summarized as given below:

- Ambient air quality
- Ambient Noise quality
- Surface water quality
- Ground water quality
- Soil quality
- Biological Environment
- Land use
- Socio-economic environment

6. Anticipated Environment Impacts and mitigation measures (In case of expansion, cumulative impact assessment shall be carried out)

i. Identification of potential impacts in the form of a **matrix** for the construction and operation phase for all the environment components

Activity	Environment	Ecological	Socio-economic
onstruction phase			
peration phase			

ii. Impact on ambient air quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

- Details of stack emissions from the existing as well as proposed activity.
- Assessment of ground level concentration of pollutants from the stack emission based on AQIP Modelling The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any along with wind rose map for respective period
- Impact on ground level concentration, under normal, abnormal and emergency conditions. Measures to handle emergency situations in the event of uncontrolled release of emissions.

iii. Impact on ambient noise quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

iv. Impact on traffic (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

v. Impact on soil quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

vi. Impact on land use (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
a. Construction phase
b. Operation phase

vii. Impact on surface water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
a. Construction phase
b. Operation phase

viii. Impact on ground water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
a. Construction phase
b. Operation phase

ix. Impact on terrestrial and aquatic habitat (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
a. Construction phase
b. Operation phase

x. Impact on socio-economic environment (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
a. Construction phase
b. Operation phase

xi. Impact on occupational health and safety (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
a. Construction phase
b. Operation phase

7. Analysis of Alternatives (Technology & Site)

i. No project scenario
ii. Site alternative
iii. Technical and social concerns
iv. Conclusion

8. Environmental Monitoring Program

i. Details of the Environment Management Cell
ii. Performance monitoring schedule for all pollution control devices shall be furnished.
iii. Corporate Environment Policy

a. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environment or forest norms / conditions? If so, it may be detailed in the EIA.
c. What is the hierarchical system or Administrative order of the company to deal with the environment issues and for ensuring compliance with the environment clearance conditions? Details of this system may be given.

d. Does the company have system of reporting of non compliances / violations of environment norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

iv. Action plan for **post-project environment monitoring matrix**:

ctivity	spect	Monitoring Parameter	ocation	requency	Responsibility
onstruction phase					
peration phase					

9. Additional Studies

i. Public consultation details (Entire proceedings as separate annexurealong with authenticated English Translation of Public Consultation proceedings).

ii. Summary of issues raised during public consultation along with action plan to address the same as per MoEF&CC O.M. dated 30/09/2020

S	Physical activity and action plan		Year of implementation (Budget in INR)			Total Expenditure (Rs. in Crores)
	ame of the Activity	Physical Targets	1st	2nd	3rd	

iii. Risk assessment

- Methodology
- Hazard identification
- Frequency analysis
- Consequence analysis
- Risk assessment outcome

iv. Emergency response and preparedness plan

10. Project Benefits

i. Environment benefits
ii. Social infrastructure
iii. Employment and business opportunity
iv. Other tangible benefits

11. Environment Cost Benefit Analysis

i. Net present value
ii. Internal rate of return
iii. Benefit cost ratio
iv. Cost effectiveness analysis

12. Environment Management Plan (Construction and Operation phase)

i. Air quality management plan
ii. Noise quality management plan

iii. Solid and hazardous waste management plan
iv. Effluent management plan
v. Storm water management plan
vi. Rain water harvesting plan
vii. Occupational health and safety management plan
viii. Green belt development plan
ix. Socio-economic management plan
x. Wildlife conservation plan (In case of presence of schedule I species)
xi. Total capital cost and recurring cost/annum for environment pollution control measures shall be included.

13. Conclusion of the EIA study

14. In addition to the above, any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

SPECIAL CONDITONS-

1. Limestone and coal linkage documents along with the status of environment clearance of limestone and coal mines.
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines shall be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co-processing of hazardous waste in cement plant.
9. Provision of Alternate fuels.
10. Emission/Effluent norms as per GSR 496 (E) dated 9/5/2016.

ACTIVITY 4(b)(ii)- COKE OVEN PLANT

STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR COKE OVEN PLANTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

GENERAL CONDITIONS-

1. Introduction

i. Background about the project
ii. Need of the project
iii. Purpose of the EIA study
iv. Scope of the EIA study

2. Project description

A. Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State.
ii. Site accessibility
iii. Adigital toposheet in pdf or shape file compatible to google earth of the study area of radius of 10km and site location preferably on 1:50,000 scale. (including all eco-sensitive areas and environmentally sensitive places).
iv. Latest High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc., along with delineation of plant boundary co-ordinates. Area must include at least 100m all around the project location.
v. Environment settings of the site and its surrounding along with map.
vi. A list of major industries with name, products and distance from plant site within study area (10km radius) and the location of the industries shall be depicted in the study area map.
vii. In case if the project site is in vicinity of the water body, 50 meters from the edge of the water body towards the site shall be treated as no development/construction zone. If it's near the wetland, Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017 may be followed.
viii. In case if the project site is in vicinity of the river, the industry shall not be located within the river flood plain corresponding to one in 25 years flood, as certified by concerned District Magistrate/Executive Engineer from State Water Resources Department (or) any other officer authorized by the State Government for this purpose as per the provisions contained in the MoEF&CC Office Memorandum dated 14/02/2022.
ix. Type of land, land use of the project site.
x. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process as per the MoEF&CC O.M. dated 7/10/2014 shall be furnished.
xi. Engineering layout of the area with dimensions depicting existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

B. Forest and wildlife related issues (if applicable):

i. Status of Forest Clearance for the use of forest land shall be submitted.
ii. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife if the project site located within notified Eco-Sensitive Zone, 10km radius of national park/sanctuary wherein final ESZ notification is not in place as per MoEF&CC Office Memorandum dated 8/8/2019.
iii. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas, the project proponent shall submit the map duly authenticated by Divisional Forest Officer showing the distance between the project site and the said areas.
iv. Wildlife Conservation Plan duly authenticated by the Competent Authorityof the State Government for conservation of Schedule I fauna, if any exists in the study area.

C. Salient features of the project

i. Products with capacities in **Tons per Annum** for the proposed project.
ii. If expansion project, status of implementation of existing project, details of existing/proposed products with production capacities in Tons per Annum.
iii. Site preparatory activities.
iv. List of raw materials required and their source along with mode of transportation.
v. Other than raw materials, other chemicals and materials required with quantities and storage capacities.
vi. Manufacturing process details along with process flow diagram of proposed units.
vii. Consolidated materials and energy balance for the project.
viii. Total requirement of surface/ ground water and powerwith their respective sources, status of approval.
ix. Water balance diagram
x. Details of Emission, effluents, hazardous waste generation and mode of disposal during construction as well as operation phase.
xi. Man-power requirement.
xii. Cost of project and scheduled time of completion.
xiii. Brief on present status of compliance (Expansion/modernization proposals)
a. Cumulative Environment Impact Assessment for the existing as well as the proposed expansion/modernization shall be carried out.
b. In case of ground water drawl for the existing unit, action plan for phasing out of ground water abstraction in next three years except for domestic purposes and shall switch over to 100 % use of surface water from nearby source.
c. Copy of all the Environment Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environment clearances including amendments shall be provided.
d. In case the existing project has not obtained EnvironmentClearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the Regional Office of the SPCB shall be submitted.

3. **Description of the Environment**

i. Study period

ii. Approach and methodology for data collection as furnished below.

Attributes	Sampling		Remarks
	Network	Frequency	
A. Air Environment			
Micro-Meteorological • Wind speed (Hourly) • Wind direction • Dry bulb temperature • Wet bulb temperature • Relative humidity • Rainfall • Solar radiation • Cloud cover • Environmental Lapse Rate	Minimum 1 site in the project impact area	1 hourly continuous	• IS 5182 Part 1-20 • Site specific primary data is essential • Secondary data from IMD, New Delhi • CPCB guidelines to be considered.
Pollutants • $PM_{2.5}$	At least 8-12 locations	As per National Ambient Air Quality Standards, CPCB Notification.	• Sampling as per CPCB guidelines • Collection of AAQ data (except in monsoon season) • Locations of various stations for different parameters should be related to the characteristic properties of the parameters. • The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16/11/2009 and take into account the predominant wind direction, population zone and
• PM_{10}			
• SO_2			
• NOx			
• CO			
• HC			
• Other parameters relevant to the project and topography of the area			

Attributes	Sampling		Remarks
	Network	Frequency	
			sensitive receptors including reserved forests, • Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAAQM Notification of 16/11/2009 along with min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
B. Noise			
• Hourly equivalent noise levels	At least 8-12 locations	As per CPCB norms	-
C. Water			
Parameters for water quality • pH, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium, salinity • Total nitrogen, total phosphorus, DO, BOD, COD, Phenol • Heavy metals • Total coliforms,	Samples for water quality should be collected and analyzed as per: • IS: 2488 (Part 1-5) methods for sampling and testing of Industrial effluents • Standard methods for examination of water and wastewater analysis published by American Public Health Association.		

Attributes	Sampling		Remarks
	Network	Frequency	
faecal coliforms • Phyto plankton • Zoo plankton			
For River Bodies • Total Carbon • pH • Dissolved Oxygen • Biological Oxygen Demand • Free NH4 • Boron • Sodium Absorption Ratio • Electrical Conductivity	• Surface water quality of the nearest River (60m upstream and downstream) and other surface water bodies	• Yield of water sources to be measured during critical season • Standard methodology for collection of surface water (BIS standards)	
For Ground Water	• Ground water monitoring data should be collected at minimum of 8 locations (from existing wells /tube wells/existing current records) from the study area and shall be included.		
D. Traffic Study			
• Type of vehicles • Frequency of vehicles for transportation of materials • Additional traffic due to proposed project • Parking arrangement	-		
E. Land Environment			
Soil • Particle size distribution • Texture • pH • Electrical conductivity • Cation exchange	Soil samples be collected as per BIS specifications		

Attributes	Sampling		Remarks
	Network	Frequency	
capacity • Alkali metals • Sodium Absorption Ratio (SAR) • Permeability • Water holding capacity • Porosity			
Land use/Landscape • Location code • Total project area • Topography • Drainage (natural) • Cultivated, forest, plantations, water bodies, roads and settlements	-		
E. Biological Environment			
Aquatic • Primary productivity • Aquatic weeds • Enumeration of phyto plankton, zoo plankton and benthos • Fisheries • Diversity indices • Trophic levels • Rare and endangered species • Marine Parks/ Sanctuaries/ closed areas /coastal regulation zone (CRZ)	• Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. Indicator species which indicate ecological and environment degradation should be identified and included to clearly state whether the proposed project would result in to any adverse effect on any species. • Samples to collect from upstream and downstream of discharge point, nearby tributaries at downstream, and also from dug wells close to activity site. • For forest studies, direction of wind should be considered while selecting forests. • Secondary data to collect from Government offices, NGOs, published literature.		

Attributes	Sampling		Remarks
	Network	Frequency	
Terrestrial • Vegetation-species list, economic importance, forest produce, medicinal value • Importance value index (IVI) of trees • Fauna • Avi fauna • Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes			
F. socio-economic			
• Demographic structure • Infrastructure resource base • Economic resource base • Health status: Morbidity pattern • Cultural and aesthetic attributes • Education	• Socio-economic survey is based on proportionate, stratified and random sampling method. • Primary data collection through questionnaire • Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. Agencies		

iii. Interpretation of each environment attribute shall be enumeratedand summarized as given below:

- Ambient air quality
- Ambient Noise quality
- Surface water quality
- Ground water quality
- Soil quality
- Biological Environment

- Land use
- Socio-economic environment

4. Anticipated Environment Impacts and mitigation measures (In case of expansion, cumulative impact assessment shall be carried out)

i. Identification of potential impacts in the form of a **matrix** for the construction and operation phase for all the environment components

Activity	Environment	Ecological	Socio-economic
Construction phase			
Operation phase			

ii. Impact on ambient air quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

- Details of stack emissions from the existing as well as proposed activity.
- Assessment of ground level concentration of pollutants from the stack emission based on AQIP Modelling The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any along with wind rose map for respective period
- Impact on ground level concentration, under normal, abnormal and emergency conditions. Measures to handle emergency situations in the event of uncontrolled release of emissions.

iii. Impact on ambient noise quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

iv. Impact on traffic (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

v. Impact on soil quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

vi. Impact on land use (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

vii. Impact on surface water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase

b. Operation phase

viii. Impact on ground water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

ix. Impact on terrestrial and aquatic habitat (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

x. Impact on socio-economic environment (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

xi. Impact on occupational health and safety (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)

a. Construction phase
b. Operation phase

5. Analysis of Alternatives (Technology & Site)

i. No project scenario
ii. Site alternative
iii. Technical and social concerns
iv. Conclusion

6. Environmental Monitoring Program

i. Details of the Environment Management Cell
ii. Performance monitoring schedule for all pollution control devices shall be furnished.
iii. Corporate Environment Policy

a. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environment or forest norms / conditions? If so, it may be detailed in the EIA.
c. What is the hierarchical system or Administrative order of the company to deal with the environment issues and for ensuring compliance with the environment clearance conditions? Details of this system may be given.
d. Does the company have system of reporting of non compliances / violations of environment norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

iv. Action plan for **post-project environment monitoring matrix**:

Activity	Aspect	Monitoring Parameter	Location	Frequency	Responsibility
Construction phase					
Operation phase					

7. Additional Studies

i. Public consultation details (Entire proceedings as separate annexurealong with authenticated English Translation of Public Consultation proceedings).

ii. Summary of issues raised during public consultation along with action plan to address the same as per MoEF&CC O.M. dated 30/09/2020

	Physical activity and action plan		Year of implementation (Budget in INR)			Total Expenditure (Rs. in Crores)
	Name of the Activity	Physical Targets	1st	2nd	3rd	

iii. Risk assessment

- Methodology
- Hazard identification
- Frequency analysis
- Consequence analysis
- Risk assessment outcome

iv. Emergency response and preparedness plan

8. Project Benefits

i. Environment benefits
ii. Social infrastructure
iii. Employment and business opportunity
iv. Other tangible benefits

9. Environment Cost Benefit Analysis

i. Net present value
ii. Internal rate of return
iii. Benefit cost ratio
iv. Cost effectiveness analysis

10. Environment Management Plan (Construction and Operation phase)

i. Air quality management plan
ii. Noise quality management plan
iii. Solid and hazardous waste management plan
iv. Effluent management plan
v. Storm water management plan
vi. Rain water harvesting plan
vii. Occupational health and safety management plan
viii. Green belt development plan
ix. Socio-economic management plan
x. Wildlife conservation plan (In case of presence of schedule I species)
xi. Total capital cost and recurring cost/annum for environment pollution control measures shall be included.

11. Conclusion of the EIA study

12. In addition to the above, any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

SPECIAL CONDITIONS-

1. Justification for selecting recovery/non-recovery (beehive) type batteries with the proposed unit size.
2. Details of proposed layout clearly demarcating various facilities such as coal storages, coke making, by-product recovery area,etc within the plant.
3. Details of coke oven plant (recovery/non-recovery type) including coal handling, coke oven battery operations, coke handling and preparation.
4. Scheme for coal changing, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.
6. Emission/effluent norms as per G.S.R 894 (E) dated 4/12/2019.Provision of CDQ in case of coke oven plant of 0.8 MTPA and above.

Annexure - VII

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(An ISO/IEC 17025 : 2017 (NABL) Accredited Laboratory, OSPCB Empaneled Laboratory and ISO 9001 : 2015 Certified Company) Certificate No. : TC-7440

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

ULR-TC744023000000033F

Test Report Format No.: ERSIPL/FM/37

TEST REPORT (AMBIENT AIR)

Date: 31 Jan 2023

Test Report No: ERSIPL/TR/AA/014

Name and Address of the Customer : MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha

Sample Collected by : Representative of ERS (I) Pvt. Ltd.

Sample Collected in presence of : Representative of the Customer.

Date of Sampling/Monitoring : 13-14.01.2023

Sample Received on : 24.01.2023

Analysis Started on : 24.01.2023

Analysis Completed on : 31.01.2023

Method of Sampling : ERSIPL/MSP/06

Quantity of Sample : 01 sample for each parameter

Environment Condition : Sunny

Sample ID. No.

1. ERSIPL/AA/025
2. ERSIPL/AA/026
3. ERSIPL/AA/027
4. ERSIPL/AA/028

Locations

1. Near Main Gate
2. Near Pellet Plant
3. Near Steel Melting Shop
4. Near Coke Oven Plant

TEST FINDINGS:

Sl. No	Test Parameters	Test method	Unit	Permissible Limit as per NAAQ Standards CPCB Nov-2009	Results			
					ERSIPL/ AA/ 025	ERSIPL/ AA/ 026	ERSIPL/ AA/ 027	ERSIPL/ AA/ 028
1	Particulate Matter (size less than 10 µm) or PM 10	IS 5182 (Part 23): 2006, Reaffirmed-2017, Gravimetric Method	$\mu g/m^3$	100.0	76.06	70.20	73.27	67.18
2	Particulate Matter (size less than 2.5 µm) or PM 2.5	IS 5182 (Part 24): 2019, Gravimetric Method	$\mu g/m^3$	60.0	33.10	34.88	34.42	28.92
3	Sulphur Dioxide (SO_2)	IS 5182 (Part 2): 2001, Reaffirmed-2017, Improved West & Gaeke Method	$\mu g/m^3$	80.0	8.57	9.94	8.45	8.55
4	Oxides of Nitrogen (NO_x)	IS 5182 (Part 6): 2006, Reaffirmed - 2017	$\mu g/m^3$	80.0	13.75	11.80	13.86	11.77

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

CIN - U73100OR1995PTC003889

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(OSPCB 'A' Category Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha

Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

Test Report Format No.: ERSIPL/FM/37

TEST REPORT (AMBIENT AIR)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/AA/T-014**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Date of Sampling/Monitoring	:	13-14.01.2023
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	ERSIPL/MSP/06
Quantity of Sample	:	01 sample for each parameter
Environment Condition	:	Sunny

Sample ID. No.	Locations
1. ERSIPL/AA/025	1. Near Main Gate
2. ERSIPL/AA/026	2. Near Pellet Plant
3. ERSIPL/AA/027	3. Near Steel Melting Shop
4. ERSIPL/AA/028	4. Near Coke Oven Plant

TEST FINDINGS:

Sl. No	Test Parameters	Test method	Unit	Permissible Limit as per NAAQ Standards CPCB Nov-2009	Results			
					ERSIPL/AA/025	ERSIPL/AA/026	ERSIPL/AA/027	ERSIPL/AA/028
1	Carbon Monoxide (CO)	By CO Monitor	mg/m^3	**2.0**	<1.14	<1.14	<1.14	<1.14

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

.....END OF TEST REPORT.....

Annexure-VIII

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(An ISO/IEC 17025 : 2017 (NABL) Accredited Laboratory, OSPCB Empanelled Laboratory and ISO 9001 : 2015 Certified Company) Certificate No. : TC-7448

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

ULR-TC744023000000036F

Test Report Format No.: ERSIPL/FM/40

TEST REPORT (~~WATER~~/ WASTE WATER)

Date: 31 Jan 2023

Test Report No: ERSIPL/TR/WA/017

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Date of Sampling	:	14.01.2023
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	IS 3025: Part 1: 1987, Reaffirmed 2019
Quantity of Sample	:	2ltrs
Type of Container	:	Glass Bottle, HDPE Bottle & BOD Bottle
Environment Condition	:	All Tests carried out in Room Temperature

Sample ID. No.	Locations
1. ERSIPL/WA/038	1. Boiler Blow down of WHRB-3
2. ERSIPL/WA/039	2. Boiler Blow down of WHRB-4
3. ERSIPL/WA/040	3. Boiler Blow down of WHRB-5
4. ERSIPL/WA/041	3. Boiler Blow down of WHRB-6

TEST FINDINGS

S. No.	Test Parameters	Test Method	Unit	Result				Permissible Limit as per CTO
				ERSIPL /WA/ 038	ERSIPL /WA/ 039	ERSIPL /WA/ 040	ERSIPL /WA/ 041	
01	pH Value	IS 3025: Part 11: 1983 Reaffirmed-2017	--	8.33	8.51	8.47	9.29	xx
02	Total Suspended Solids	IS 3025: Part 17: 1984 Reaffirmed-2017	mg/L	3.5	3.9	4.1	3.7	100.0
03	Oil & Grease	IS 3025: Part 39: 1991 Reaffirmed-2019	mg/L	1.74	2.74	1.82	1.92	20.0
04	Iron (as Fe)	IS 3025: Part 53: 2003 Reaffirmed-2019	mg/L	0.08	0.06	0.07	0.07	1.0

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

END OF TEST REPORT

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(An ISO/IEC 17025: 2017 (NABL) Accredited Laboratory, OSPCB Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Certificate No.: TC-7440

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

ULR-TC744023000000037F **Test Report Format No.: ERSIPL/FM/40**

TEST REPORT (~~WATER~~/ WASTE WATER)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/WA/018**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Date of Sampling	:	14.01.2023
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	IS 3025: Part 1: 1987, Reaffirmed 2019
Quantity of Sample	:	2ltrs
Type of Container	:	Glass Bottle, HDPE Bottle & BOD Bottle
Environment Condition	:	All Tests carried out in Room Temperature

Sample ID. No.	Locations
1. ERSIPL/WA/042	1. Boiler Blow down of WHRB-7
2. ERSIPL/WA/043	2. Boiler Blow down of WHRB-8
3. ERSIPL/WA/044	3. Boiler Blow down of AFBC

TEST FINDINGS

S. No.	Test Parameters	Test Method	Unit	Result			Permissible Limit as per CTO
				ERSIPL /WA/ 042	ERSIPL /WA/ 043	ERSIPL /WA/ 044	
01	pH Value	IS 3025: Part 11: 1983 Reaffirmed-2017	--	8.74	8.35	8.77	xx
02	Total Suspended Solids	IS 3025: Part 17: 1984 Reaffirmed-2017	mg/L	4.2	2.6	3.5	100.0
03	Oil & Grease	IS 3025: Part 39: 1991 Reaffirmed-2019	mg/L	2.43	1.13	2.53	20.0
04	Iron (as Fe)	IS 3025: Part 53: 2003 Reaffirmed-2019	mg/L	0.08	0.07	0.08	1.0

(Authorized Signatory)
S.P Pattanayak
Tech.Manager

.....END OF TEST REPORT.....

CIN - U73100OR1995PTC003889

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(OSPCB 'A' Category Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha

Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

Test Report Format No.: ERSIPL/FM/40

TEST REPORT (~~WATER~~/ WASTE WATER)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/WA/T-017**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Date of Sampling	:	14.01.2023
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	IS 3025: Part 1: 1987, Reaffirmed 2019
Quantity of Sample	:	2ltrs
Type of Container	:	Glass Bottle, HDPE Bottle & BOD Bottle
Environment Condition	:	All Tests carried out in Room Temperature

Sample ID. No.	Locations
1. ERSIPL/WA/038	1. Boiler Blow down of WHRB-3
2. ERSIPL/WA/039	2. Boiler Blow down of WHRB-4
3. ERSIPL/WA/040	3. Boiler Blow down of WHRB-5
4. ERSIPL/WA/041	3. Boiler Blow down of WHRB-6

TEST FINDINGS

S. No.	Test Parameters	Test Method	Unit	Result				Permissible Limit as per CTO
				ERSIPL /WA/ 038	ERSIPL /WA/ 039	ERSIPL /WA/ 040	ERSIPL /WA/ 041	
01	Copper	IS 3025: Part 42: 1992 Reaffirmed-2019	mg/L	Not Detected				1.0

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

.....END OF TEST REPORT.....

CIN - U73100OR1995PTC003889

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(OSPCB 'A' Category Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha

Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

Test Report Format No.: ERSIPL/FM/40

TEST REPORT (~~WATER~~/ WASTE WATER)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/WA/T-018**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Date of Sampling	:	14.01.2023
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	IS 3025: Part 1: 1987, Reaffirmed 2019
Quantity of Sample	:	2ltrs
Type of Container	:	Glass Bottle, HDPE Bottle & BOD Bottle
Environment Condition	:	All Tests carried out in Room Temperature

Sample ID. No.	Locations
1. ERSIPL/WA/042	1. Boiler Blow down of WHRB-7
2. ERSIPL/WA/043	2. Boiler Blow down of WHRB-8
3. ERSIPL/WA/044	3. Boiler Blow down of AFBC

TEST FINDINGS

S. No.	Test Parameters	Test Method	Unit	Result			Permissible Limit as per CTO
				ERSIPL /WA/ 042	ERSIPL /WA/ 043	ERSIPL /WA/ 044	
01	Copper	IS 3025: Part 42: 1992 Reaffirmed-2019	mg/L	Not Detected			1.0

(Authorized Signatory)

S.P.Pattanayak

Tech.Manager

.....END OF TEST REPORT.....

CIN - U73100OR199SPTC003889

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(OSPCB 'A' Category Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha

Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

Test Report Format No.: ERSIPL/FM/40

TEST REPORT (~~WATER~~/ WASTE WATER)

Date: 31 Jan 2023 **Test Report No: ERSIPL/TR/WA/T-019**

Name and Address of the Customer	:	MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha
Date of Sampling	:	14.01.2023
Sample Collected by	:	Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	:	Representative of the Customer.
Sample Received on	:	24.01.2023
Analysis Started on	:	24.01.2023
Analysis Completed on	:	31.01.2023
Method of Sampling	:	IS 3025: Part 1: 1987, Reaffirmed 2019
Quantity of Sample	:	2ltrs
Type of Container	:	Glass Bottle, HDPE Bottle & BOD Bottle
Environment Condition	:	All Tests carried out in Room Temperature

Sample ID. No.	Locations
1. ERSIPL/WA/045	1. Cooling Tower Blow Down of WHRB-01 to 08 & Cooling Tower Blow Down of AFBC

S. No.	Test Parameters	Test Method	Unit	Result ERSIPL /WA/ 045	Permissible Limit as per CTO
01	Total Chromium (as Cr+6)	IS 3025:Part 52: 2003 Reaffirmed-2019	mg/L	Not Detected	2.0
02	Free Available Chlorine	IS 3025:Part 26: 1988 Reaffirmed-2019	mg/L	NIL	0.5
03	Zinc	IS 3025:Part 39: 1991 Reaffirmed-2019	mg/L	Not Detected	1.0

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

.....END OF TEST REPORT.....

Annexure IX

CIN - U73100OR1995PTC003889

GSTIN : 21AAACE6224D1ZE

Environmental Research and Services (India) Pvt. Ltd.

(OSPCB 'A' Category Empanelled Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha

Tel: +91-9437021932, +91-9937690329 , E-mail: ersibbsr@gmail.com

AMBIENT NOISE LEVEL MEASUREMENT REPORT

Date: 31 Jan 2023

Name and Address of the Customer : MSP Metallics Limited, Village: Marakuta, Tehsil: Jharsuguda, Dist: Jharsuguda, Odisha

Date of Measurement : 14.01.2023

Measurement taken by : Representative of ERS (I) Pvt. Ltd.

Measurement taken in presence of : Representative of the Customer.

Sl. No.	Location		Result in dB (A) Leq	
			Day Time (6.00 A. M. – 10.00 P.M.)	Night Time (10.00 P.M. – 6.00 A.M.)
1	Ambient	Near Main Gate	57.4	44.8
2		Near Administrative Building	59.8	48.6
3		Near Store Room	73.4	66.0
4	Source Places (Stationary Sources)	Near Boiler (WHRB-III)	71.3	65.4
5		Near Boiler (WHRB-IV)	69.3	64.0
6		Near Boiler (WHRB-V)	70.4	61.5
7		Near Boiler (WHRB-VI)	67.9	68.9
8		Near Boiler (WHRB-VII)	72.3	69.1
9		Near Boiler (WHRB-VIII)	74.0	64.8
10		Near Boiler AFBC	73.2	68.0

Ambient Noise Level Standards

Area Code	Category of Area / Zone	Limits in dB(A) L_{eq}	
		Day Time (6.00 a.m. to 10.00 p.m.)	Night Time (10.00 p.m. to 6.00 a.m.)
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

(Authorized Signatory)
S.P.Pattanayak
Tech.Manager

.....END OF TEST REPORT.....

Annexure-XI

DHH JHARSUGUDA

CR No: 211162300026288 **OPD CARD**

Patient Name: **PURNA CHANDRA PATEL**	Age/Sex : **50 Yr/M**
S/O: **MADHUSUDHAN PATEL**	Date & Time : **06-Jan-2023 10:50**
Address: **KHALIAMAL Jharsuguda,Odisha,India**	Queue No: : **39**
Category: **Free**	15
Department : **General Medicine-General Medicine Unit**	OPD Days : **Mon,Tue,Wed,Thu,Fri,Sat**
Counter Operator: **Lukesh Naik**	Patient Type: **Non MLC**

Vitals:	Chief Complaints:	Diagnosis/ Diagnosis(Prov.):
Ht:..........(Cms)	Mo [illegible] of occupational Desa[illegible]	
Wt:..........(Kg)	medically fit.	
Pulse:..........min	[illegible signature] [illegible]/1/23	Past History:
BP:..........mmHg		Hyper Tension: (Y/N)
Temp:..........°F		Diabetes: (Y/N)
RR:..........min		
SPO2:..........%		COPD: (Y/N)
Investigations:	Examination:	Oncology: (Y/N)
CBC/LFT/KFT		CAD: (Y/N)
Blood Sugar(R/F/PP)		Tuberculosis: (Y/N)
HB/TLC/DLC		Thyroid: (Y/N)
ESR/Blood Urea		Surgery: (Y/N)
S.Creatinine/S.Uric Acid		Other: (Y/N)
Serum Bilirubin		
SGOPT/SGPT		
Lipid Profile		
Blood Group	Treatment(Rx):	
T3,T4,TSH		
Urine R/M		
X-Ray Chest PA View		
USG Abdomen		
TMT/Echo,ECG		
Others		

ସରକାରୀ ଡାକ୍ତର ଖାନା ରେ ମିଳୁଥିବା ସମସ୍ତ ଔଷଧ ଗୁଣାତ୍ମକମାନ ପରୀକ୍ଷଣ
ପରେ ବଣ୍ଟନ କରାଯାଏ। ଏହାକୁ ବ୍ୟବହାର କରନ୍ତୁ।

DHH JHARSUGUDA

CR No:**211162300026296** **OPD CARD**

Patient Name: **PRAKASH GARUD**	Age/Sex : **50 Yr/M**
S/O: **LATE FAKIRA GARUD**	Date & Time : **06-Jan-2023 10:51**
Address: **REMJA Jharsuguda,Odisha,India**	Queue No. : **40**
Category: **Free**	15
Department : **General Medicine-General Medicine Unit**	OPD Days : **Mon,Tue,Wed,Thu,Fri,Sat**
Counter Operator: **Lukesh Naik**	Patient Type: **Non MLC**

Vitals:

Ht:.....(Cms)
Wt:.....(Kg)
Pulse:.....min
BP:.....mm/Hg
Temp:.....°F
RR:.....min
SPO2:.....%

Investigations:

CBC/LFT/KFT
Blood Sugar(R/F/PP)
HB%/TLC/DLC
ESR/Blood Urea
S.Creatinine/S Uric Acid
Serum Bilirubin
SGOPT/SGPT
Lipid Profile
Blood Group
T3,T4,TSH
Urine R/M
X-Ray Chest PA View
USG Abdomen
TMT/Echo,ECG
Others

Chief Complaints:

No Sign of occupational Disease
Medically Fit

Bp 120

Examination:

Treatment(Rx):

Diagnosis/
Diagnosis(Prov.)

Past History

Hyper Tension (Y/N)
Diabetes (Y/N)
COPD (Y/N)
Oncology (Y/N)
CAD (Y/N)
Tuberculosis (Y/N)
Thyroid (Y/N)
Surgery (Y/N)
Other (Y/N)

Signature & Full Name of the Doctor

ସରକାରୀ ଡାକ୍ତର ଖାନା ରେ ମିଳୁଥିବା ସମସ୍ତ ଔଷଧ ଗୁଣାତ୍ମକମାନ ପରୀକ୍ଷଣ ପରେ ବଣ୍ଟନ କରାଯାଏ। ଏହାକୁ ବ୍ୟବହାର କରନ୍ତୁ।

ଚିରାମୟ

DHH JHARSUGUDA

CR No:**211162300026318** **OPD CARD**

Patient Name: **RAGHUPATI BHOI**	Age/Sex : **51 Yr/M**
S/O: **SESHADEV BHOI**	Date & Time : **06-Jan-2023 10:52**
Address: **REMJA Jharsuguda,Odisha,India**	Queue No. : **41**
Category: **Free**	15
Department : **General Medicine-General Medicine Unit**	OPD Days : **Mon,Tue,Wed,Thu,Fri,Sat**
Counter Operator: **Lukesh Naik**	Patient Type: **Non MLC**

Vitals:

Ht:.....(Cms)
Wt:.....(Kg)
Pulse:.....min
BP:.....mm/Hg
Temp:.....°F
RR:.....min
SPO2:.....%

Investigations:

CBC/LFT/KFT
Blood Sugar(R/F/PP)
HB/TLC/DLC
ESR/Blood Urea
S Creatinine/S Uric Acid
Serum Bilirubin
SGOPT/SGPT
Lipid Profile
Blood Group
T3,T4,TSH
Urine R/M
X-Ray Chest PA View
USG Abdomen
TMT/Echo,ECG
Others

Chief Complaints:

No Sign of occupational Disease
Medically fit

Examination:

Treatment(Rx):

Diagnosis/ Diagnosis(Prov.)

Past History:

Hyper Tension	(Y/N)
Diabetes	(Y/N)
COPD	(Y/N)
Oncology	(Y/N)
CAD	(Y/N)
Tuberculosis	(Y/N)
Thyroid	(Y/N)
Surgery	(Y/N)
Other	(Y/N)

OSMC

ସରକାରୀ ଡାକ୍ତର ଖାନା ରେ ମିଳୁଥିବା ସମସ୍ତ ଔଷଧ ପ୍ରସ୍ତାବକମାନ ପରୀକ୍ଷଣ ପରେ ବଣ୍ଟନ କରାଯାଏ। ଏହାକୁ ବ୍ୟବହାର କରନ୍ତୁ।

Signature & Full Name of the Doctor

NATIONAL HEALTH MISSION

DHH JHARSUGUDA

CR No:**211162300026245** **OPD CARD**

Patient Name: **SADHU ALI**	Age/Sex : **47 Yr/M**
S/O: **SANTA ALI**	Date & Time : **06-Jan-2023 10:49**
Address: **PUDAPALI Jharsuguda,Odisha,India**	Queue No. : **37**
Category: **Free**	15
Department : **General Medicine-General Medicine Unit**	OPD Days : **Mon,Tue,Wed,Thu,Fri,Sat**
Counter Operator: **Lukesh Naik**	Patient Type: **Non MLC**

Vitals:

Ht:.....(Cms)
Wt:.....(Kg)
Pulse:...../min
BP:.....mm/Hg
Temp:.....°F
RR:...../min
SPO2:.....%

Investigations:

CBC/LFT/KFT
Blood Sugar(R/F/PP)
HB/TLC/DLC
ESR/Blood Urea
S.Creatinine/S Uric Acid
Serum Bilirubin
SGOPT/SGPT
Lipid Profile
Blood Group
T3,T4,TSH
Urine R/M
X-Ray Chest PA View
USG Abdomen
TMT/Echo,ECG
Others

Chief Complaints:

No Sign of occupational Disease
Medically fit

Examination:

Treatment(Rx):

Diagnosis/ Diagnosis(Prov.):

Past History:

Hypertension (Y/N)
Diabetes (Y/N)
COPD (Y/N)
Oncology (Y/N)
CAD (Y/N)
Tuberculosis (Y/N)
Thyroid (Y/N)
Surgery (Y/N)
Other (Y/N)

Signature & Name / Seal of the Doctor

ସରକାରୀ ଡାକ୍ତର ଖାନା ରେ ମିଳୁଥିବା ସମସ୍ତ ଔଷଧ ଗୁଣାତ୍ମକମାନ ପରୀକ୍ଷଣ ପରେ ବଣ୍ଟନ କରାଯାଏ। ଏହାକୁ ବ୍ୟବହାର କରନ୍ତୁ।

DHH JHARSUGUDA

CR No:**211162300026261**

OPD CARD

Patient Name: **HEMANTA BADI**
Age/Sex : **52 Yr/M**
S/O: **BIMBADHAR BADI**
Date & Time : **06-Jan-2023 10:50**
Address: **LEPRIPADA Sundargarh,Odisha,India**
Queue No. : **38**
Category: **Free**
15
Department : **General Medicine-General Medicine Unit**
OPD Days : **Mon,Tue,Wed,Thu,Fri,Sat**
Counter Operator: **Lukesh Naik**
Patient Type: **Non MLC**

Vitals:
Ht:........(Cms)
Wt:........(Kg)
Pulse:........../min
BP:........mmHg
Temp:........°F
RR:......../min
SPO2:........%

Investigations:
CBC/LFT/KFT
Blood Sugar(R/F/PP)
Hb/TLC/DLC
ESR/Bood Urea
S Creatinine/S Uric Acid
Serum Bilirubin
SGOPT/SGPT
Lipid Profile
Blood Group
T3,T4,TSH
Urine R/M
X-Ray Chest PA View
USG Abdomen
TMT/Echo,ECG
Others

Chief Complaints:

No sign of occupation Desey
Madically fit

[signature] 6/1/23

Examination:

Treatment(Rx):

Diagnosis/
Diagnosis(Prov.):

Past History:
Hyper Tension (Y/N)
Diabetes (Y/N)
COPD: (Y/N)
Oncology: (Y/N)
CAD: (Y/N)
Tuberculosis: (Y/N)
Thyroid: (Y/N)
Surgery: (Y/N)
Other: (Y/N)

ସରକାରୀ ଡାକ୍ତର ଖାନା ରେ ମିଳୁଥିବା ସମସ୍ତ ଔଷଧ ଗୁଣାତ୍ମକମାନ ପରୀକ୍ଷଣ
ପରେ ବଣ୍ଟନ କରାଯାଏ। ଏହାକୁ ବ୍ୟବହାର କରନ୍ତୁ।

DHH JHARSUGUDA

CR No:211162300026229

OPD CARD

Patient Name: **JUGAL PRADHAN**

S/O: **MAKUNDA PRADHAN**

Address: **KUTRADERA Jharsuguda,Odisha,India**

Category: **Free**

Department: **General Medicine-General Medicine Unit**

Counter Operator: **Lukesh Naik**

Age/Sex : **46 Yr/M**

Date & Time : **06-Jan-2023 10:48**

Queue No. : **36**

15

OPD Days : **Mon,Tue,Wed,Thu,Fri,Sat**

Patient Type: **Non MLC**

Vitals:	Chief Complaints:	Diagnosis/ Diagnosis(Prov.)
Ht:........(Cms) Wt:........(Kg) Pulse:........./min BP:..........mm/Hg Temp:..........°F RR:........./min SPO2:..........%	MO Sagh of oleopatent Dosa Moderaly fat 1/6/1/20	Past History Hyper Tension (Y/N) Diabetes (Y/N) COPD (Y/N) Oncology (Y/N) CAD (Y/N) Tuberculosis (Y/N) Thyroid (Y/N) Surgery (Y/N) Other (Y/N)
Investigations CBC/LFT/KFT Blood Sugar(R/F/PP) HB/TLC/DLC ESR/Blood Urea S.Creatinine/S Uric Acid Serum Bilirubin SGOPT/SGPT Lipid Profile Blood Group T3,T4,TSH Urine R/M X-Ray Chest PA View USG Abdomen TMT/Echo,ECG Others	Examination: Treatment(Rx):	

ସରକାରୀ ଡାକ୍ତର ଖାନା ରେ ମିଳୁଥିବା ସମସ୍ତ ଔଷଧ ଗୁଣାତ୍ମକମାନ ପରୀକ୍ଷଣ ପରେ ବଣ୍ଟନ କରାଯାଏ। ଏହାକୁ ବ୍ୟବହାର କରନ୍ତୁ।

Signature & Name of the Doctor

OSMC

NATIONAL HEALTH MISSION

ଚିରାମୟ

DHH JHARSUGUDA

CR No:**211162300026148** **OPD CARD**

Patient Name: **SANTHILI KUMAR**
Age/Sex : **48 Yr/M**
S/O: **PARUMAL**
Date & Time : **06-Jan-2023 10:45**
Address: **SARBAHAL Jharsuguda,Odisha,India**
Queue No. : **34**
Category: **Free**
15
Department : **General Medicine-General Medicine Unit**
OPD Days : **Mon,Tue,Wed,Thu,Fri,Sat**
Counter Operator: **Lukesh Naik**
Patient Type: **Non MLC**

Vitals:

Ht:_____(Cms)
Wt:_____(Kg)
Pulse:_____/min
BP:_____mm/Hg
Temp:_____°F
RR:_____/min
SPO2:_____%

Investigations

CBC/LFT/KFT
Blood Sugar(R/F/PP)
HB/TLC/DLC
ESR/Blood Urea
S.Creatinine/S Uric Acid
Serum Bilirubin
SGOPT/SGPT
Lipid Profile
Blood Group
T3,T4,TSH
Urine R/M
X-Ray Chest PA View
USG Abdomen
TMT/Echo,ECG
Others

Chief Complaints:

No Pain & Occupational Disease
Medically Fit

Examination:

Treatment(Rx):

Diagnosis/
Diagnosis(Prov.):

Past History

Hyper Tension: (Y/N)
Diabetes: (Y/N)
COPD: (Y/N)
Oncology: (Y/N)
CAD: (Y/N)
Tuberculosis: (Y/N)
Thyroid: (Y/N)
Surgery: (Y/N)
Others: (Y/N)

Signature or Full Name of the Doctor

ସରକାରୀ ଡାକ୍ତର ଖାନା ରେ ମିଳୁଥିବା ସମସ୍ତ ଔଷଧ ଗୁଣାତ୍ମକମାନ ପରୀକ୍ଷଣ ପରେ ବଣ୍ଟନ କରାଯାଏ। ଏହାକୁ ବ୍ୟବହାର କରନ୍ତୁ।

Annexure-XII

FromNo.31-A

HEALTHRECORD

Pre-employment / Periodical

[PrescribedunderRule62-I]

Date: ______________

SL.No.

1. Name of the Factory	: M S P Metallics Limited	
2. Name of the Employee	: Dhiraj Kumar	
3. Employee Distinguishing Number	: Bomas India Pvt Ltd	
4. Age of the Employee	: 21yr	
Identification Mark	: one black mole on chest	
Nature of the job	: 2nd class Boiler operator	
5. Date of Employment	: 28/04/23	
6. LengthofService inyears	:	
7. General Survey		
Health	: Good/Fair/Poor	
Height	: 165	Cms.
Weight	: 65	Kg.
8. BloodGroup	: O+ve	
9. Eye Vision	: Normal/Abnormal	
Useofglass	: Yes/No	
10. Hearing	: Normal/Abnormal	
11. RespiratorySystemandChestMeasurement		
Inspiration	: 86	Cms.
Expiration	: 82	Cms.
Respirationrate	: 16	/Min.
Remarks,If any	: NIL	
12. CardiovascularSystem		
Pulserate	: 82	Min.
B.P.	: 130/80	
Heart Sound	: Normal	
Remarks,If any	: NIL	
13. AbdomenTenderness	: Yes/No	
14. NervousSystem	: NIL	
HistoryofFits	: Yes/ No	
Epilepsy	: Yes/ No	
RemarksonMentalHealth	: good	

15. LocomoterSystem

16. SkinCondition: : Normal/Abnormal

Normal/Abnormal

17. RemarksonanySkinDiseasenoticed

18. Hernias : N/A

19. Hydrocele : Present/Absent

20. PresentComplain,Ifany : Present/Absent

: N/A

21. Summaryoffindings

HeartDisease :

Hypertension :

Diabetes :

T.B. :

Epilepsy :

Poisoning : Nil

Others :

: OccupationDisease,Ifany :

22. Recommendation,ifanyforauyfurther Investigation :

Shivraj Kumar

SignatureoftheEmployee

SignatureoftheMedicalOfficer

Regn.No 6256

Col.(Dr.) R. C. Sahu

(Retd.)

Medical Officer

MSP Metallics Ltd.

Marakuta,Jharsuguda

Ministry of Health & Family Welfare
Government of India

Certificate for COVID-19 Vaccination

Issued in India by Ministry of Health & Family Welfare, Govt. of India

Certificate ID 13426417562

Beneficiary Details

Beneficiary Name / लाभार्थी का नाम	**Dhiraj kumar**
Age / उम्र	**21**
Gender / लिंग	**Male**
ID Verified / पहचान पत्र सत्यापित	**Aadhaar # XXXXXXXX4266**
Unique Health ID (UHID)	**74-6548-1287-2773**
Beneficiary Reference ID	**77503189546800**
Vaccination Status / टीकाकरण की स्थिति	**Fully Vaccinated (2 Doses) and a Precaution Dose**

Vaccination Details

Vaccinated By / टीका लगाने वाले का नाम	**HARI PRAKASH**
Vaccination At / टीकाकरण का स्थान	**WORKPLACE TATA JAMADOBA PVT, Dhanbad, Jharkhand**

Dose Number खुराक की संख्या	Date of Dose खुराक की तारीख	Vaccine Name वैक्सीन का नाम	Batch Number बैच संख्या	Vaccine Type टीका का प्रकार	Manufacturer उत्पादक
1/2	08 Jun 2021	COVISHIELD	41212075	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India
2/2	12 Sep 2021	COVISHIELD	4121P184	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India
Precaution dose	11 Jul 2022	COVISHIELD	4121MC169	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India Pvt. Ltd.

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In case of any adverse events, kindly contact the nearest Public Health Center/ Healthcare Worker/District Immunization Officer/State Helpline No. 1075

टीकाकरण पश्चात किसी प्रतिकूल घटना के होने पर नजदीकी स्वास्थ्य केंद्र/स्वास्थ्य कार्यकर्ता/जिला टीकाकरण अधिकारी/राज्य हेल्प लाइन 1075 पर सम्पर्क करें

COWIN
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FromNo.31-A

HEALTHRECORD

Pre-employment / Periodical

[PrescribedunderRule62-1]

Sl.No.

Date: 28/04/23

1.	Name of the Factory	: M S P Metallics Limited	
2.	Name of the Employee	: Shyam Yadav	
3.	Employee Distinguishing Number	: Hiralal Yadav	
4.	Age of the Employee	: 19	
	Identification Mark	: A Blackmole on his left hand	
	Nature of the job	: Supervisor	
5.	Date of Employment	: 28/04/23	
6.	LengthofService inyears	: NIL	
7.	General Survey		
	Health	: ✓ Good/Fair/Poor	
	Height	: 166	Cms.
	Weight	: 66	Kg.
8.	BloodGroup	: O+ve	
9.	Eye Vision	: ✓ Normal/Abnormal	
	Useofglass	: Yes/No	
10.	Hearing	: ✓ Normal/Abnormal	
11.	RespiratorySystemandChestMeasurement		
	Inspiration	: 96	Cms.
	Expiration	: 88	Cms.
	Respirationrate	: 16	/Min.
	Remarks,If any	: NIL	
12.	CardiovascularSystem		
	Pulserate	: 92	Min.
	B.P.	: 120/80	
	Heart Sound	: Normal	
	Remarks,If any	: NIL ✓	
13.	AbdomenTenderness	: Yes/No	
14.	NervousSystem	: NIL ✓	
	HistoryofFits	: Yes/ No	
	Epilepsy	: Yes/ No ✓	
	RemarksonMentalHealth	: Good	

15. LocomoterSystem : Normal/Abnormal

16. SkinCondition: Normal/Abnormal

17. RemarksonanySkinDiseasenoticed : NIL

18. Hernias : Present/Absent

19. Hydrocele : Present/Absent

20. PresentComplain,Ifany : NIL

21. Summaryoffindings :

HeartDisease :

Hypertension :

Diabetes :

T.B. :

Epilepsy :

Poisoning : NIL

Others :

OccupationDisease,Ifany :

22. Recommendation,ifanyforanyfurther Investigation :

SignatureoftheEmployee

SignatureoftheMedicalOfficer

Regn.No 6956

Col.(Dr.) R. C. Sahu
(Retd.)
Medical Officer
MSP Metallics Ltd.
Kharaku, Jharsuguda

Ministry of Health & Family Welfare
Government of India

Certificate for COVID-19 Vaccination

Issued in India by Ministry of Health & Family Welfare, Govt. of India

Certificate ID 993760666934

Beneficiary Details

Beneficiary Name / लाभार्थी का नाम	Shyam Yadav
Age / उम्र	19
Gender / लिंग	Male
ID Verified / पहचान पत्र सत्यापित	Aadhaar # XXXXXXXX5835
Unique Health ID (UHID)	
Beneficiary Reference ID	91051663795869
Vaccination Status / टीकाकरण की स्थिति	Fully Vaccinated (2 Doses)

Vaccination Details

Vaccinated By / टीका लगाने वाले का नाम	Shushma Kor
Vaccination At / टीकाकरण का स्थान	Pakeridayal SDH HOSPITAL, East Champaran, Bihar

Dose Number खुराक की संख्या	Date of Dose खुराक की तारीख	Vaccine Name वैक्सीन का नाम	Batch Number बैच संख्या	Vaccine Type टीका का प्रकार	Manufacturer उत्पादक
1/2	27 Nov 2021	COVISHIELD	4121Z01MA	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India Pvt. Ltd.
2/2	01 Sep 2022	COVISHIELD	4121MC162	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India Pvt. Ltd.

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- प्रधानमंत्री नरेंद्र मोदी

In case of any adverse events, kindly contact the nearest Public Health Center/ Healthcare Worker/District Immunization Officer/State Helpline No. 1075

टीकाकरण पश्चात किसी प्रतिकूल घटना के होने पर नजदीकी लोक स्वास्थ्य केंद्र/स्वास्थ्य कार्य कर्मी/जिला टीकाकरण अधिकारी/राज्य हेल्प लाइन 1075 पर सम्पर्क करें

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Serving Your Health

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FromNo.31-A

HEALTHRECORD

Pre-employment / Periodical

[PrescribedunderRule62-1]

Date: 28/04/23

SL.No.

1.	Name of the Factory	: M S P Metallics Limited
2.	Name of the Employee	: Ajay Lakra
3.	Employee Distinguishing Number	: Jama Fabricator
4.	Age of the Employee	: 20
	Identification Mark	: A scar mark on (L) fore
	Nature of the job	: Fitter
5.	Date of Employment	: 28/04/23
6.	LengthofService inyears	: NIL
7.	General Survey	
	Health	: Good/Fair/Poor
	Height	: 166 Cms.
	Weight	: 55 Kg.
8.	BloodGroup	: O+ve
9.	Eye Vision	: Normal/Abnormal
	Useofglass	: Yes/No
10.	Hearing	: Normal/Abnormal
11.	RespiratorySystemandChestMeasurement	
	Inspiration	: 94 Cms.
	Expiration	: 86 Cms.
	Respirationrate	: 16 /Min.
	Remarks,If any	: NIL
12.	CardiovascularSystem	
	Pulserate	: 72 Min.
	B.P.	: 120/80
	Heart Sound	: Normal
	Remarks,If any	: NIL
13.	AbdomenTenderness	: Yes/No
14.	NervousSystem	: NIL
	HistoryofFits	: Yes/ No
	Epilepsy	: Yes/ No
	RemarksonMentalHealth	: Good

15. LocomoterSystem : Normal/Abnormal

16. SkinCondition: Normal/Abnormal

17. RemarksonanySkinDiseasenoticed : NIL

18. Hernias : Present/Absent

19. Hydrocele : Present/Absent

20. PresentComplain,Ifany : NIL

21. Summaryoffindings :

HeartDisease :

Hypertension :

Diabetes :

T.B. :

Epilepsy :

Poisoning : NIL

Others :

OccupationDisease,Ifany :

22. Recommendation,ifanyforanyfurther Investigation :

Ajay Lakra

SignatureoftheEmployee

Col Sahu

SignatureoftheMedicalOfficer

Regn.No 09756

Col (Dr.) R. C. Sahu
(Retd.)
Medical Officer
MSP Metaliks Ltd.
Kharkata, Jharsuguda

Ministry of Health & Family Welfare
Government of India

Certificate for COVID-19 Vaccination

Issued in India by Ministry of Health & Family Welfare, Govt. of India

Certificate ID 92928434657

Beneficiary Details

Beneficiary Name / ଉପଭୋକ୍ତାର ନାମ	Ajay Lakra
Age / ବୟସ	19
Gender / ଲିଙ୍ଗ	Male
ID Verified / ପରିଚୟ ସତ୍ୟାପିତ ହୋଇଛି	Aadhaar # XXXXXXXX1635
Unique Health ID (UHID)	
Beneficiary Reference ID	319618222177380
Vaccination Status / ଟୀକାକରଣ ସ୍ଥିତି	Fully Vaccinated (2 Doses)

Vaccination Details

Vaccinated By / ଟିକା ଦେଉଥିବା ବ୍ୟକ୍ତିଙ୍କ ନାମ	SANARTI HANUMAN
Vaccination At / ଟୀକାକରଣ ସ୍ଥାନ	Bileigarh PHC, Sundargarh, Odisha

Dose Number ଡୋଜର ନମ୍ବର	Date of Dose ଟୀକାକରଣ ତାରିଖ	Vaccine Name ଟିକା ନାମ	Batch Number ବ୍ୟାଚ ନମ୍ବର	Vaccine Type ଟିକା ପ୍ରକାର	Manufacturer ନିର୍ମାତା
1/2	17 Aug 2021	COVISHIELD	4121110043	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India
2/2	12 Nov 2021	COVISHIELD	4121200588	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India Pvt. Ltd.

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Together, India will defeat COVID-19"

- ପ୍ରଧାନମନ୍ତ୍ରୀ ନରେନ୍ଦ୍ର ମୋଦି

In case of any adverse events, kindly contact the nearest Public Health Center/ Health Worker/District Immunization Officer/State Helpline No. 1075

କୌଣସି ପ୍ରକାର ପ୍ରତିକୂଳ ଘଟଣା ଘଟିଲେ ଦୟାକରି ନିକଟସ୍ଥ ସାଧାରଣ ସ୍ୱାସ୍ଥ୍ୟ କେନ୍ଦ୍ର / ସ୍ୱାସ୍ଥ୍ୟ କର୍ମୀ / ଜିଲ୍ଲା ଟୀକାକରଣ ଅଧିକାରୀ / ରାଜ୍ୟ ସାହାଯ୍ୟକାରୀ ନମ୍ବର 1075 ଉପରେ ସମ୍ପର୍କ କରନ୍ତୁ

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15. Locomoter System : ~~Normal~~/Abnormal

16. Skin Condition: : ~~Normal~~/Abnormal

17. Remarks on any Skin Disease noticed : NIL

18. Hernias : ~~Present~~/Absent

19. Hydrocele : ~~Present~~/Absent

20. Present Complain ,If any : NIL

21. Summary of findings :

Heart Disease :

Hypertension :

Diabetes :

T.B. :

Epilepsy : - NIL

Poisoning :

Others :

Occupation Disease ,If any

22. Recommendation,if any foranу further Investigation :

SignatureoftheEmployee

SignatureoftheMedicalOfficer

Regn.No 6956

Col.(Dr.) R. C. Sahu
(Retd.)
Medical Officer
MSP Metallics Ltd.
Marakuta,Jharsuguda

Ministry of Health & Family Welfare
Government of India

Certificate for COVID-19 Vaccination

Partially Vaccinated : 1st Dose

Beneficiary Details

Beneficiary Name / लाभार्थी का नाम	**Sanjay**
Age / उम्र	**39**
Gender / लिंग	**Male**
ID Verified / पहचान पत्र सत्यापित	**Aadhaar # XXXXXXXX6536**
Unique Health ID (UHID)	
Beneficiary Reference ID	**34651904227105**

Vaccination Details

Vaccine Name / वैक्सीन का नाम	**COVISHIELD**
Date of 1st Dose / पहली खुराक की तारीख	**13 Sep 2021 (Batch no. 4121AA011M)**
Next due date / अगली नियत तिथि	**Between 06 Dec 2021 and 03 Jan 2022**
Vaccinated by / टीका लगाने वाले का नाम	**Vinod**
Vaccination at / टीकाकरण का स्थान	**CHC Muradnagar..., Ghaziabad, Uttar Pradesh**

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In case of any adverse events, kindly contact the nearest Public Health Center/ Healthcare Worker/District Immunization Officer/State **Helpline No. 1075**

टीकाकरण उपरांत किसी प्रतिकूल घटना के होने पर कृपया निकटतम लोक स्वास्थ्य केंद्र/स्वास्थ्य कर्मी/जिला टीकाकरण अधिकारी/राज्य हेल्प लाइन 1075 पर संपर्क करें

C WIN

FromNo.31-A

HEALTHRECORD

Pre-employment / Periodical

[PrescribedunderRule62-1]

Date: 28/04/23

SL.No.

1.	Name of the Factory	: M S P Metallics Limited
2.	Name of the Employee	: Chaitan Kr Rao
3.	Employee Distinguishing Number	: Jane Fabrication
4.	Age of the Employee	: 29
	Identification Mark	: A Blackmole on his face
	Nature of the Job	: A welder
5.	Date of Employment	: 28/04/23.
6.	LengthofService inyears	: NIL
7.	General Survey	
	Health	: Good/Fair/Poor
	Height	: 120 Cms.
	Weight	: 60 Kg.
8.	BloodGroup	: O+ve
9.	Eye Vision	: Normal/Abnormal
	Useofglass	: Yes/No
10.	Hearing	: Normal/Abnormal
11.	RespiratorySystemandChestMeasurement	
	Inspiration	: 94 Cms.
	Expiration	: 88 Cms.
	Respirationrate	: 17 /Min.
	Remarks,If any	: NIL
12.	CardiovascularSystem	
	Pulserate	: 72 Min.
	B.P.	: 120/80
	Heart Sound	: Normal
	Remarks,If any	: NIL
13.	AbdomenTenderness	: Yes/No
14.	NervousSystem	: NIL
	HistoryofFits	: Yes/ No
	Epilepsy	: Yes/ No
	RemarksonMentalHealth	: Good

15. LocomoterSystem : Normal/Abnormal

16. SkinCondition: Normal/Abnormal

17. RemarksonanySkinDiseasenoticed : NIL

18. Hernias : Present/Absent

19. Hydrocele : Present/Absent

20. PresentComplain,Ifany : NIL

21. Summaryoffindings :

HeartDisease :

Hypertension :

Diabetes :

T.B. :

Epilepsy : NIL

Poisoning :

Others :

OccupationDisease,Ifany :

22. Recommendation,ifanyforanyfurther

Investigation :

SignatureoftheEmployee

SignatureoftheMedicalOfficer

Regn.No 6956

Col.(Dr.) R. C. Sahu

(Retd.)

Medical Officer

MSP Metallics Ltd.

Marakuta,Jharsuguda

Ministry of Health & Family Welfare
Government of India

Certificate for COVID-19 Vaccination

Issued in India by Ministry of Health & Family Welfare, Govt. of India

Certificate ID 19513266472

Beneficiary Details

Beneficiary Name / लाभार्थी का नाम	**Chaitan Kumar Sao**
Age / उम्र	**28**
Gender / लिंग	**Male**
ID Verified / पहचान पत्र सत्यापित	**Ration Card # 223865088163**
Unique Health ID (UHID)	
Beneficiary Reference ID	**7130366801546**
Vaccination Status / टीकाकरण की स्थिति	**Fully Vaccinated (2 Doses)**

Vaccination Details

Vaccinated By / टीका लगाने वाले का नाम	**Manju Ekka**
Vaccination At / टीकाकरण का स्थान	**PHC JAMGAON, Raigarh, Chhattisgarh**

Dose Number खुराक की संख्या	Date of Dose खुराक की तारीख	Vaccine Name वैक्सीन का नाम	Batch Number बैच संख्या	Vaccine Type टीका का प्रकार	Manufacturer उत्पादक
1/2	19 Jun 2021	COVISHIELD	41212223	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India
2/2	18 Sep 2021	COVISHIELD	41212223	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India Pvt. Ltd.

"दवाई भी और कड़ाई भी।
Together, India will defeat COVID-19"
- प्रधानमंत्री नरेंद्र मोदी

In case of any adverse events, kindly contact the nearest Public Health Center/Healthcare Worker/District Immunization Officer/State Helpline No. 1075

टीकाकरण पश्चात किसी प्रतिकूल घटना के होने पर नजदीकी स्वास्थ्य केंद्र/स्वास्थ्य कर्मी/जिला टीकाकरण अधिकारी/राज्य हेल्प लाइन 1075 पर सम्पर्क करें

COWIN
Winning Over COVID

This certificate can be verified at

FromNo.31-A

HEALTHRE CORD

Pre-employment / Periodical

[Prescribed under Rule62-1]

SL.No.

Date:______________

1. Name of the Factory	: M S P Metallics Limited	
2. Name of the Employee	: Sanil Yadav	
3. Employee Distinguishing Number	: S.S. Construction	
4. Age of the Employee	: 39 yrs	
Identification Mark	: One cut mark on Nose	
Nature of the job	: Gas Cutter	
5. Date of Employment	: 29-04.23	
6. Length of Service in years	:	
7. General Survey		
Health	: Good/Fair/Poor	
Height	: 150	Cms.
Weight	: 50	Kg.
8. Blood Group	: B+ve	
9. Eye Vision	: Normal/Abnormal	
Use of glass	: Yes/No	
10. Hearing	: Normal/Abnormal	
11. Respiratory System and Chest Measurement		
Inspiration	: 86	Cms.
Expiration	: 82	Cms.
Respirationrate	: 18	/Min.
Remarks, If any	: No	
12. Cardiovascular System		
Pulserate	: 72	Min.
B.P.	: 120/80	
Heart Sound	: NAD	
Remarks, If any	: ~ – NA	
13. Abdomen Tenderness	: Yes/No	
14. Nervous System	:	
History of Fits	: Yes/ No	
Epilepsy	: Yes/ No	
Remarks on Mental Health	: Good	

15. Locomoter System : Normal/Abnormal

16. Skin Condition: : Normal/Abnormal

17. Remarks on any Skin Disease noticed : N.A.

18. Hernias : Present/Absent

19. Hydrocele : Present/Absent

20. Present Complain ,If any : N.A.

21. Summary of findings :

Heart Disease :

Hypertension :

Diabetes :

T.B. :

Epilepsy :

Poisoning :

Others :

Occupation Disease ,If any : - N.A.

22. Recommendation,if any forany further Investigation :

Sunil Yadav

SignatureoftheEmployee

SignatureoftheMedicalOfficer

Regn.No. 09756

Col.(Dr.) R. C. Sahu
(Retd.)
Medical Officer
M.P. Metallics Ltd.
Maraketa, Jharsuguda

Ministry of Health & Family Welfare
Government of India

Certificate for COVID-19 Vaccination

Issued in India by Ministry of Health & Family Welfare, Govt. of India

Certificate ID 76881269585

Beneficiary Details

Beneficiary Name / लाभार्थी का नाम	Sunil Yadav
Age / उम्र	39
Gender / लिंग	Male
ID Verified / पहचान पत्र सत्यापित	Aadhaar # XXXXXXXX5384
Unique Health ID (UHID)	
Beneficiary Reference ID	15245815603214
Vaccination Status / टीकाकरण की स्थिति	Fully Vaccinated (2 Doses)

Vaccination Details

Vaccinated By / टीका लगाने वाले का नाम	Abhilesha
Vaccination At / टीकाकरण का स्थान	HUSSAINABAD Health Centre, Palamu, Jharkhand

Dose Number खुराक की संख्या	Date of Dose खुराक की तारीख	Vaccine Name वैक्सीन का नाम	Batch Number बैच संख्या	Vaccine Type टीका का प्रकार	Manufacturer उत्पादक
1/2	01 Oct 2021	COVISHIELD	4121Z207	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India Pvt. Ltd.
2/2	31 Mar 2022	COVISHIELD	412UA052M	COVID-19 vaccine, non-replicating viral vector	Serum Institute of India Pvt. Ltd.

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- प्रधानमंत्री नरेंद्र मोदी

In case of any adverse events, kindly contact the nearest Public Health Center/ Healthcare Worker/District Immunization Officer/State Helpline No. 1075

टीकाकरण उपरांत किसी प्रतिकूल घटना के होने पर नजदीकी स्वास्थ्य केंद्र/स्वास्थ्य कर्मी/जिला टीकाकरण अधिकारी/राज्य हेल्प लाइन 1075 पर सम्पर्क करें

COWIN
Winning Over COVID

This certificate can be verified by scanning the QR code on

Annexure-XIII

FromNo.31-A

HEALTHRE CORD

Pre-employment / Periodical

[Prescribed under Rule62-1]

Date: 09/05/23

SL.No.

1.	Name of the Factory	: M S P Metallics Limited
2.	Name of the Employee	: Sukanta Haldar
3.	Employee Distinguishing Number	: MSP00537
4.	Age of the Employee	: 42
	Identification Mark	: A Burn mark on L/J (R) hand.
	Nature of the job	: MOP (Manager) operation
5.	Date of Employment	: 09/05/23
6.	Length of Service in years	: NIL
7.	General Survey	: Good/Fair/Poor
	Health	: 160 Cms.
	Height	: 47 Kg.
	Weight	: Good
8.	Blood Group	: Normal/Abnormal
9.	Eye Vision	: Yes/No
	Use of glass	: Normal/Abnormal
10.	Hearing	
11.	Respiratory System and Chest Measurement	
	Inspiration	: 92 Cms.
	Expiration	: 83 Cms.
	Respirationrate	: 17 /Min.
	Remarks, If any	: NIL
12.	Cardiovascular System	
	Pulserate	: 72 Min.
	B.P.	: 120/80
	Heart Sound	: Normal
	Remarks, If any	: NIL
13.	Abdomen Tenderness	: Yes/No
14.	Nervous System	: NIL
	History of Fits	: Yes/ No
	Epilepsy	: Yes/ No
	Remarks on Mental Health	: Good

15. Locomoter System : ✓ Normal/Abnormal

16. Skin Condition: ✓ Normal/Abnormal

17. Remarks on any Skin Disease noticed : NIL

18. Hernias : Present/Absent ✓

19. Hydrocele : Present/Absent ✓

20. Present Complain ,If any : Nil

21. Summary of findings :

Heart Disease :

Hypertension :

Diabetes :

T.B. :

Epilepsy : NIL

Poisoning :

Others :

Occupation Disease ,If any :

22. Recommendation,if any forany further Investigation :

Sunita Handur.

SignatureoftheEmployee

SignatureoftheMedicalOfficer

Regn.No 6986

Col.(Dr.) R. C. Sethi
(Retd.)
Medical Officer
MSP Metallics Ltd.
Marakuta, Jharsuguda

Dr. R. K. Chakraborty
M.B.B.S (Cal.)
General Physician
Reg. No.-27338

Chamber :
Locknath Clinic
Cooper's Bazar, Ranaghat,
Nadia, Pin-741232

Date. 07-05-2023
Age :- 42
Sex : M

This is to Certify That Surkanta Haldar age- 42 years S/o Late Janardan Haldar of Cooper's Camp NAA ward No-7 Post Cooper's Camp P.S. Ranaghat Dist Nadia His Hight 5 fit 2 Inch weight 49 Kgs Chest 39 Inch Eye-6/6 normal Rt Left Eye-6/6 normal V.D.R.L. Negative No Cronic disease is seen. He fit to any kinds of job.

Dr. R.K. Chakraborty
MBBS
General Physician
Reg. No. 27338

Remarks on Mental Health

From No. 31-A

HEALTH RECORD

Pre-employment / Periodical
[Prescribed under Rule 62-1]

SL. No.

Date: _____

1. Name of the Factory	:	M SP Metallen Ltd
2. Name of the Employee	:	Dheeraj ku Yadav
3. Employee Distinguishing Number	:	M SP 000 555
4. Age of the Employee	:	29yr
Identification Mark	:	one black mole on fore head
Nature of the job	:	Sr Engineer
5. Date of Employment	:	2.5.23.
6. Length of Service in years	:	
7. General Survey		
Health	:	Good/Fair/Poor
Height	:	168 Cms.
Weight	:	65 Kg.
8. Blood Group	:	A+ve
9. Eye Vision	:	Normal / Abnormal
Use of glass	:	Yes / No
10. Hearing	:	Normal / Abnormal
11. Respiratory System and Chest Measurement		
Inspiration	:	86 Cms.
Expiration	:	82 Cms.
Respiration rate	:	19 /Min.
Remarks, If any	:	Nil
12. Cardiovascular System		
Pulse rate	:	72 Min.
B. P.	:	120/80 mm Hg
Heart Sound	:	Nil — NSF
Remarks, If any	:	
13. Abdomen Tenderness	:	Yes / No
14. Nervous System	:	
History of Fits	:	Yes / No
Epilepsy	:	Yes / No
Remarks on Mental Health	:	Good

15. Locomoter System : Normal / Abnormal

16. Skin Condition : Normal / Abnormal

Remarks on any Skin Disease noticed : NIL

17. Hernias : Present / Absent

18. Hydrocele : Present / Absent

19. Present Complain , If any : NIL

20. Summary of findings :

Heart Disease :

Hypertension :

Diabetes :

T. B. :

Epilepsy :

Poisoning :

Others :

Occupation Disease, If any : - NIL

21. Recommendation, if any for any further Investigation :

Signature of the Employee

Signature of the Medical Officer

Regn. No 6956

Col.(Dr.) R. C. Sahu
(Retd.)
Medical Officer
MSP Metallics Ltd.
Maraguda, Jharsuguda

MEDICAL FITTNESS CERTIFICATE

Add.PHC Singramau Jaunpur.

OPD Regd. No.- 11976

Date:- 25/4/22

This is to certify that Shri/Smt./Km... Dheeraj Kr. yadav S/o,W/o,D/o,... Ram Prasad Yadav R/o Vill. Dhakwa Post Purva Dhakwa Distt. Pratapgarh Age about ...29... Years whose signature is attested below appeared personally before me for his/her medical examination today.

I Examined him/her today and now He/She is Fit to resume his/her normal duties onwards.In my opinion.

Signed of----- RTI/LTI

Attested

Medical officer Incharge
Add. PHC..Singramau... Jaunpur.

Medical Officer I/c
P.H.C. Singaramau
Jaunpur.

25/4/22
Medical Officer I/c
P.H.C. Singaramau
Medical officer Incharge
Add. PHC..Singramau... Jaunpur.

FromNo.31-A

HEALTHRE CORD

Pre-employment / Periodical

[Prescribed under Rule62-1]

SL.No.

Date:_____

1. Name of the Factory : M S P Metallics Limited
2. Name of the Employee : Jarendra Jena
3. Employee Distinguishing Number : MSPO 00583/ Sinter
4. Age of the Employee : 37yr
   Identification Mark : one black mole on chest
   Nature of the job : CRO
5. Date of Employment : 5/5/23
6. Length of Service in years :
7. General Survey
   Health : ✓ Good/Fair/Poor
   Height : 168 Cms.
   Weight : 67 Kg.
8. Blood Group : Ote
9. Eye Vision : ✓ Normal/Abnormal
   Use of glass : ✓ Yes/No
10. Hearing : ✓ Normal/Abnormal
11. Respiratory System and Chest Measurement
    Inspiration : 86 Cms.
    Expiration : 82 Cms.
    Respirationrate : 18 /Min.
    Remarks, If any : nil
12. Cardiovascular System
    Pulserate : 72 Min.
    B.P. : 120/74
    Heart Sound : N-N
    Remarks, If any : - N-N
13. Abdomen Tenderness : ✓ Yes/No
14. Nervous System :
    History of Fits : ✓ Yes/ No
    Epilepsy : ✓ Yes/ No
    Remarks on Mental Health : good

15. Locomoter System	:	Normal/Abnormal
16. Skin Condition:		Normal/Abnormal
17. Remarks on any Skin Disease noticed	:	N.A
18. Hernias	:	Present/Absent
19. Hydrocele	:	Present/Absent
20. Present Complain ,If any	:	N.A

21. Summary of findings	:	
Heart Disease	:	
Hypertension	:	
Diabetes	:	
T.B.	:	
Epilepsy	:	
Poisoning	:	
Others	:	
Occupation Disease ,If any	:	
		- N.A
22. Recommendation,if any forany further Investigation	:	

Sarandra Jena

SignatureoftheEmployee

Col Sahu

SignatureoftheMedicalOfficer

Regn.No 6956

Col.(Dr.) R. C. Sahu
(Retd.)
Medical Officer
MSP Metallics Ltd.
Maraluta, Jharsuguda

Dr. J. C. Patjoshi
M.B.B.S.
Ex.A.D.M.O. (FW. Immu), Jharsuguda
LOW MEDICAL OFFICER I/C U.P.H.C., MANGAL BAZAR, JHARSUGUDA
GENERAL PRACTIONAR, BEHERAMAL, JHARSUGUDA
Regd. No. 3856 (O)

Place .....

Date .....

This is to certify that Surendra Jena of present at Sardakela Jharsuguda is examined by me and cannot discover any disease deformity or fully infirmity except this. He is physically and mentally fit for any type of service.

Surendra Jena
Attested
Signature

3-1-2023

Dr. J. C. Patjoshi, M.B.B.S.
Medical Officer I/C.
U.P.H.C.,Jharsuguda
Health & F.W. Dept.
Govt. of Odisha
Regd. No.3856(O)

Office of Medical Officer I/C
U.P.H.C. Mangal Bazar, Jharsuguda

3-1-2023

Dr. J. C. Patjoshi, M.B.B.S.
Medical Officer I/C.
U.P.H.C.,Jharsuguda
Health & F.W. Dept.
Govt. of Odisha
Regd. No.3856(O)

Epilepsy : Yes / No

Remarks on Mental Health : Good

From No. 31-A

HEALTH RECORD

Pre-employment / Periodical
[Prescribed under Rule 62-1]

Sl. No. Date: _____

1. Name of the Factory : MSP Metaller Ltd
2. Name of the Employee : Bhabani Sankar Rout
3. Employee Distinguishing Number : MSP00517
4. Age of the Employee : 33y
   Identification Mark : one black mole on chin
   Nature of the job : Sr Engg (Pellet Operation)
5. Date of Employment : 31/5/23
6. Length of Service in years :
7. General Survey
   Health : Good/Fair/Poor
   Height : 158 Cms.
   Weight : 68 Kg.
8. Blood Group : A +ve
9. Eye Vision : Normal / Abnormal
   Use of glass : Yes / No
10. Hearing : Normal / Abnormal
11. Respiratory System and Chest Measurement
    Inspiration : 86 Cms.
    Expiration : 84 Cms.
    Respiration rate : 18 /Min.
    Remarks, If any : NO
12. Cardiovascular System
    Pulse rate : 72 Min.
    B. P. : 110/80 mm/Hg
    Heart Sound : Normal
    Remarks, If any : NAD
13. Abdomen Tenderness : Yes / No
14. Nervous System :
    History of Fits : Yes / No
    Epilepsy : Yes / No
    Remarks on Mental Health : Good

15. Locomoter System : Normal / Abnormal

16. Skin Condition : Normal / Abnormal

Remarks on any Skin Disease noticed : Nil

17. Hernias : Present / Absent

18. Hydrocele : Present / Absent

19. Present Complain , If any : Nil.

20. Summary of findings :

Heart Disease :

Hypertension :

Diabetes :

T. B. :

Epilepsy :

Poisoning :

Others :

Occupation Disease, If any :

21. Recommendation, if any for any further Investigation :

– Nil.

Signature of the Employee

Signature of the Medical Officer

Regn. No 8956

Col.(Dr.) R. C. Sahu (Retd.)
Medical Officer
MSP Metallics Ltd.
Marakuta,Jharsuguda

CERTIFICATE OF MEDICAL FITNESS
(TO BE DEPOSITED A T THE TIME OF JOINING)

To be obtained only from Gazetted Government Medical officer/Medical Officer of a Government Undertaking. (Please note that in no other form this certificate will be accepted. Medical Certificates issued by private medical practitioners will not be accepted.)

Name BHABANI SANKAR ROUL
(in Block Letters)

Father's Name : Bhagirathi Roul

Blood group/Anemic (Blood Count) 'A' +ve.

Height : 5' 8" Weight 68kg.

Chest 38"

Heart and Lungs : N.A.D.

Vision : L : 6/6 R : 6/6

Colour Vision : No colour blindness.

Hearing : Normal

Hernia/Hydrocele/Piles : Not done

Any other disease diagnosed in past : not done

Allergies, if any : Not known

List of prescribed medication, If any

1. .....
2. .....
3. .....

Any other Remarks : Nil Pregnancy

I certify that I have carefully examined Mr./Ms. Bhabani Sankar Roul son/daughter of Mr. Bhagirath Raut who has signed in my presence. He/she has no mental and physical disease and is FIT.

Bhabani Sankar Roul
Signature of the candidate

Station : .....

Date : .....

15.5.23
Medical Officer (AYUSH)
P. H. C. (M) Chhatrapur
Dist. Ganjam

Signature of the Medical Officer with legible seal.

FromNo.31-A

HEALTH RECORD

Pre-employment / Periodical

[Prescribed under Rule62-1]

SL.No.

Date: 15/05/23

1.	Name of the Factory	: M S P Metallics Limited	
2.	Name of the Employee	: Rakesh majhi	
3.	Employee Distinguishing Number	: MSP 00550.	
4.	Age of the Employee	: 26	
	Identification Mark	: A mole on his nose	
	Nature of the job	: Sr. chemist	
5.	Date of Employment	: 15/05/23	
6.	Length of Service in years	: NIL	
7.	General Survey		
	Health	: Good/Fair/Poor	
	Height	: 170	Cms.
	Weight	: 74	Kg.
8.	Blood Group	: O+ve	
9.	Eye Vision	: Normal/Abnormal	
	Use of glass	: Yes/No	
10.	Hearing	: Normal/Abnormal	
11.	Respiratory System and Chest Measurement		
	Inspiration	: 90	Cms.
	Expiration	: 88	Cms.
	Respirationrate	: 16	/Min.
	Remarks, If any	: NIL	
12.	Cardiovascular System		
	Pulserate	: 72	Min.
	B.P.	: 120/80	
	Heart Sound	: Normal	
	Remarks, If any	: NIL	
13.	Abdomen Tenderness	: Yes/No	
14.	Nervous System	: NIL	
	History of Fits	: Yes/ No	
	Epilepsy	: Yes/ No	
	Remarks on Mental Health	: Good	

15. Locomoter System : Normal/Abnormal

16. Skin Condition: Normal/Abnormal

17. Remarks on any Skin Disease noticed : Nil

18. Hernias : Present/Absent

19. Hydrocele : Present/Absent

20. Present Complain ,If any : Nil

21. Summary of findings :

Heart Disease :

Hypertension :

Diabetes :

T.B. :

Epilepsy : Nil

Poisoning :

Others :

Occupation Disease ,If any :

22. Recommendation,if any forany further

Investigation :

Ranesh Majhi

SignatureoftheEmployee

SignatureoftheMedicalOfficer

Regn.No 6956

15. Locomoter System : Normal/Abnormal

16. Skin Condition: Normal/Abnormal

17. Remarks on any Skin Disease noticed : Nil

18. Hernias : Present/Absent

19. Hydrocele : Present/Absent

20. Present Complain ,If any : Nil

21. Summary of findings :

Heart Disease :

Hypertension :

Diabetes :

T.B. :

Epilepsy : Nil

Poisoning :

Others :

Occupation Disease ,If any :

22. Recommendation,if any forany further

Investigation :

Ranesh Mazumi

SignatureoftheEmployee

Col Sahu

SignatureoftheMedicalOfficer

Regn.No 6956

Form No. 31 - A

Aadhaar No.

PO No.

HEALTH RECORD

(Pre-employment / Periodical)
(Prescribed under Rule 62-J)

Date : 10/5/23

Sl. No. 22

Photo

1. Name of the Factory : MSP metalic Ltd.
2. Name of the Employee : Rakesh majhi
3. Name of the Agency :
4. Employee Distinguishing Number :
5. Age of the Employee : 36/m
   Identification Mark : A mole on nose
   Nature of Job : Sr. chemist.
6. Date of Employment :
7. Length of service in years : New
8. General Survey :
   Health : ~~Good~~ / Fair / Poor
   Height : 170 cm.
   Weight : 72 Kg.
9. Blood Group : O +ve
10. Eye Vision : ~~Normal~~ / Abnormal
    use glass : ~~Yes~~ / ~~No~~
11. Hearing : ~~Normal~~ / Abnormal
12. Respiratory System & Chest Measurement
    Inspiration : 90 cm
    Expiration : 88 cm
    Respiration rate / min : 20/min
    Remarks, if any : NAD
13. Cardiovascular system :
    Pulse rate : 84/min
    B.P. : 110/72 mmhg
    Heart Sound : S_1 S_2 (N)
    Remarks, if any : NAD

14. Abdoment Tenderness : NAD

15. Nervous System :

History of Fits : Yes / No

Epilepsy : Yes / No

Remarks on Mental Health : good

16. Locomotor System : Normal / Abnormal

17. Skin condition : Normal / Abnormal

Remarks on any skin condition noticed : good

18. Hernias : Present / Absent

19. Hydrosol : Present / Absent

20. Present Complain, if any : NO

21. Summary of Findings :

Heart Disease :

Hypertension :

Diabetes :

T.B. :

Epilepsy :

Poisoning :

Others :

Occupational disease, if any :

NAD

22. Recommendation, if any further investigation : fit for work.

12.5.23

Dr. Raghunath Behura
M.B.B.S.
Retired ADM
Regd. No. 7618

Ramesh Majhi

Signature of the Employee

Signature of the Medical Officer

Form No. 25

(Rule 96)

Certificate of Fitness for dangerous operation

I certify that I have perseonally examined

Sri/Smt. Rakesh Majhi

S/o., D/o. Narayan Majhi

residing at Debagarh who

is desirous of being employed as Sr. Chemist in

of Deptt. And that as nearly as can be

ascertained from my examination is FIT/UNFIT for employment at the above noted factory.

2. He is fit to be employed and may be employed for some other non hazardous operation

such as Sr. Chemist

3. He/She may be produced for further examination after a period of

One year

4. He/She is advised following further examination. Nil

5. He/She is advised following further treatment. Nil

The serial no. of previous certificate is Nil

Dr. Raghunath Behura
M.B.B.S.
Retired ADM
Regd. No. 7618

Rakesh Majhi.

Signature of Person Examined

Signature of Certifying Surgeon

GST - 21AXCPS6500N3ZE
ISO-9001:2015
Regd. No. : 09/2019

SUVHAM DIAGNOSTICS

PATIENTS NAME: RAKESH MAJHI **AGE: 36 Yrs SEX MALE**

DATE:10-May-2023

SAMPLE ID : 22

PATHOLOGICAL INVESTIGATION REPORT

TEST	RESULT
Blood Group&Rh typing :	`O' (+ve) Positive

****END OF THE REPORTS****

Dr. Raghunath Behura
M.B.B.S.
Retired ADM
Regd. No. 7613

- Required tests are conducted with the help of chemicals & analysers. The report should only be interpreted by medical professionals, who understand reporting units, reference range and limitations of technology.
- Results may vary from lab to lab and in some parameters from time to time same patient. This report is not meant for medicolegal purpose.

HEAD OFFICE : JHARASUGUDA, BRANCH OFFICE : BHUBANESWAR & BERHAMPUR
Cell : 9337367071, 7008714167
E-mail : suvhamdiagnostics07@gmail.com

FromNo.31-A

HEALTH RECORD

Pre-employment / Periodical

[Prescribed under Rule62-1]

Date: 20/05/23

SL.No.

1.	Name of the Factory	: M S P Metallics Limited	
2.	Name of the Employee	: Tanjeelan Maher	
3.	Employee Distinguishing Number	: MSP000608	
4.	Age of the Employee	: 32	
	Identification Mark	: A mole on his nose	
	Nature of the job	: Sr. Technician.	
5.	Date of Employment	: 20/05/23	
6.	Length of Service in years	: Nil	
7.	General Survey	: Good/Fair/Poor	
	Health	: 168	Cms.
	Height	: 92	Kg.
	Weight	: A +ve	
8.	Blood Group	: Normal/Abnormal	
9.	Eye Vision	: Yes/No	
	Use of glass	: Normal/Abnormal	
10.	Hearing		
11.	Respiratory System and Chest Measurement		
	Inspiration	: 109	Cms.
	Expiration	: 103	Cms.
	Respirationrate	: 17	/Min.
	Remarks, If any	: Nil	
12.	Cardiovascular System		
	Pulserate	: A 2	Min.
	B.P.	: 120/80	
	Heart Sound	: Normal	
	Remarks, If any	: Nil	
13.	Abdomen Tenderness	: Yes/No	
14.	Nervous System	: Nil	
	History of Fits	: Yes/ No	
	Epilepsy	: Yes/ No	
	Remarks on Mental Health	: Good	

15. Locomoter System : Normal/Abnormal

16. Skin Condition: Normal/Abnormal

17. Remarks on any Skin Disease noticed : NIL

18. Hernias : Present/Absent

19. Hydrocele : Present/Absent

20. Present Complain ,If any : NIL

21. Summary of findings :

Heart Disease :

Hypertension :

Diabetes :

T.B. : NIL

Epilepsy :

Poisoning :

Others :

Occupation Disease ,If any :

22. Recommendation,if any forany further Investigation :

SignatureoftheEmployee

SignatureoftheMedicalOfficer

Regn.No 0956

REG NO 01/2017

DR LATH'S POLYCLINIC

MEDICAL FITNESS CERTIFICATE

TO WHOMEVER IT MAY CONCERN

DATE:05.05.2023

This is to certify that**TRILOCHAN MEHER**. AGE: 32 YRS SEX: MALE .S/O **DINABANDHU MEHER** examined by me and found to be normal on physical examination and is not suffering from any serious or communicable disease and medically fit for the JOB .

His brief details are given as described below:

Height:168CMS.

Weight:72kgs.

CHEST:INSP:108CMS

EXP:103CMS

PULSE RATE:72 /MIN

RESPIRATORY RATE:20/MIN

BP: 120/80 MM/Hg

COLOUR VISION: NORMAL

VISION: NORMAL

BLOOD GROUP:'A' Rh-positive

SKIN:NORMAL

ENT EXAMINATION:NORMAL

DR. SHIV[illegible] LATH
MBBS, MD, FEAC
Regd No [illegible] (Odisha)

Dr S K Lath,MD.
Dr Lath Polyclinic, Jharsuguda, 768201
PH:9438226633

Trilochan meher

FromNo.31-A

HEALTHRE CORD

Pre-employment / Periodical

[Prescribed under Rule62-1]

Date: 11/05/17

SL.No.

1.	Name of the Factory	: M S P Metallics Limited
2.	Name of the Employee	: Chanashyam yadav
3.	Employee Distinguishing Number	: MSP08543
4.	Age of the Employee	: A/M 37
	Identification Mark	: A cut mark on his eye side
	Nature of the job	: Asst. Manager (MBF)
5.	Date of Employment	: 11/05/17
6.	Length of Service in years	: NIL
7.	General Survey	: Good/Fair/Poor
	Health	: MST Cms.
	Height	: 70 Kg.
	Weight	: Blue
8.	Blood Group	: Normal/Abnormal
9.	Eye Vision	: Yes/No
	Use of glass	: Normal/Abnormal
10.	Hearing	
11.	Respiratory System and Chest Measurement	
	Inspiration	: 94 Cms.
	Expiration	: 98 Cms.
	Respirationrate	: 16 /Min.
	Remarks, If any	: NIL
12.	Cardiovascular System	
	Pulserate	: 72 Min.
	B.P.	: 120/80
	Heart Sound	: normal
	Remarks, If any	: NIL
13.	Abdomen Tenderness	: Yes/No
14.	Nervous System	: NIL
	History of Fits	: Yes/ No
	Epilepsy	: Yes/ No
	Remarks on Mental Health	: Good

15. Locomoter System : Normal/Abnormal

16. Skin Condition: Normal/Abnormal

17. Remarks on any Skin Disease noticed : NIL

18. Hernias : Present/Absent

19. Hydrocele : Present/Absent

20. Present Complain ,If any : NIL

21. Summary of findings :

Heart Disease :

Hypertension :

Diabetes :

T.B. : NIL

Epilepsy :

Poisoning :

Others :

Occupation Disease ,If any :

22. Recommendation,if any forany further Investigation :

11/5/23

SignatureoftheEmployee

SignatureoftheMedicalOfficer

Regn.No 098

Form No. 25

(Rule 96)

Certificate of Fitness for dangerous operation

I certify that I have perseonally examined

Sri/Smt. Ghanashyam Yadav

S/o., D/o. Jagdish Yadav.

residing at Tharkhand who

is desirous of being employed as ..... in .....

of ..... Deptt. And that as nearly as can be

ascertained from my examination is FIT/UNFIT for employment at the above noted factory.

2. He is fit to be employed and may be employed for some other non hazardous operation

such as .....

3. He/She may be produced for further examination after a period of .....

One year

4. He/She is advised following further examination. Nil

5. He/She is advised following further treatment.

The serial no. of previous certificate is Nil

Signature of Person Examined

Dr. Raghunath Behura
M.B.B.S.
Retired AGM
Regd. No. 7618
Signature of Certifying Surgeon

Form No. 31 - A

Aadhaar No.

PO No.

HEALTH RECORD

(Pre-employment / Periodical)
(Prescribed under Rule 62-J)

Date : 08/05/2023

Sl. No.

Photo

1. Name of the Factory : MSP METALLICS LIMITED
2. Name of the Employee : Ghanashyam Yadav.
3. Name of the Agency :
4. Employee Distinguishing Number : 8901 7110 9354.
5. Age of the Employee : 37 Yrs
   Identification Mark : A cut mark on left eye side.
   Nature of Job :
6. Date of Employment :
7. Length of service in years : Nil.
8. General Survey :
   - Health : Good / Fair / Poor
   - Height : 155 cm.
   - Weight : 70 Kg.
9. Blood Group : B+ve.
10. Eye Vision : Normal / Abnormal
    - use glass : Yes / No
11. Hearing : Normal / Abnormal
12. Respiratory System & Chest Measurement
    - Inspiration : 98 cm.
    - Expiration : 94 cm
    - Respiration rate / min : 20 / min
    - Remarks, if any : NAD
13. Cardiovascular system :
    - Pulse rate : 82 / min
    - B.P. : 128 / 72 mm Hg.
    - Heart Sound : S1 S2 (N)
    - Remarks, if any : NAD

14. Abdoment Tenderness : NAD

15. Nervous System :

History of Fits : Yes / No

Epilepsy : Yes / No

Remarks on Mental Health : Good

16. Locomotor System : Normal / Abnormal

17. Skin condition : Normal / Abnormal

Remarks on any skin condition noticed : N

18. Hernias : Present / Absent

19. Hydrosol : Present / Absent

20. Present Complain, if any : NAD

21. Summary of Findings :

Heart Disease :

Hypertension :

Diabetes :

T.B. :

Epilepsy :

Poisoning : NAD

Others :

Occupational disease, if any :

22. Recommendation, if any further investigation : Fit for work

Signature of the Employee

Dr. Raghunath Behura
M.B.B.S.
Retired ADM
Signature of the Medical Officer

GST - 21AXCPS6500N3ZE
ISO-9001:2015
Regd. No. : 09/2019

SUVHAM DIAGNOSTICS

PATIENTS NAME: GHANASHYAM YADAV	**AGE: 37 Yrs SEX**
	DATE:08-May-2023
SAMPLE ID : 01	**LAB ID : SD200**

PATHOLOGICAL INVESTIGATION REPORT

TEST	RESULT
Blood Group&Rh typing :	'B'(+ve) Positive

****END OF THE REPORTS****

Dr. Raghunath Behura
M.B.B.S.
Retired ADM
Regd. No. 7618

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