



**Regd. Office:** JSW Centre Bandra Kurla Complex,

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Website: www.jsw.in

Date: 18/11/2021

No. JSW/S/O/2021/247

To.

Deputy Director General of Forests (C),

Ministry of Environment, Forest and Climate Change,

Regional Office (Eastern Zone),

A/3, Chandersekharpur, Bhubaneswar – 751023

Sub: - Submission of Six-monthly EC compliance report in respect of Narayanposhi Iron & Manganese Ore Mine of M/s JSW Steel Ltd for the period April 2021 to September 2021.

Ref: - 1. Vesting Order dated 30<sup>th</sup> May 2020 issued by GoO, Steel and Mines Department.

2. Environment Clearance Letter dated 18.06.2019 issued by MOEF&CC, GOI.

Dear Sir,

We would like to submit that M/s JSW Steel Limited has been granted mining lease over the Narayanposhi Iron & Manganese Ore block after emerging as the 'Preferred Bidder' in the e-auction conducted by the State Government of Odisha in March, 2020. Subsequent to the issuance of grant order the lease deed has been executed and registered on 27/06/2020. Now the mining operation has already been commenced from the beginning of July, 2020.

Prior to issuance of grant order, the vesting order has been issued under Rule 9(A)(2) of the Minerals Concession (Amendment) Rules, 2020, by virtue of which M/S JSW Steel has been deemed to have acquired all valid rights, approvals, clearances, licenses and the like vested with the previous lessee for a period of two years. The list of such clearances which got vested with us includes Environment Clearance, FC, Mining Plan, CTO, CTE, Surface right groundwater drawl etc.

We are submitting herewith six-monthly EC compliance report of Narayanposhi Iron & Manganese Ore Mine, M/s JSW Steel Ltd. for the period April 2021 to September 2021 as per EIA





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notification 2006. The same is also attached in Soft copy to your good office on e-mail to <u>roez.bsr-mef@nic.in</u>; for your ready reference.

We trust that the measures taken towards environmental safeguards comply with the stipulated conditions. We look forward to your guidance which shall certainly help us in our endeavor for improving upon our environmental management practices.

Seeking your co-operation as always.

Thanking you,

Yours Faithfully

For JSW Steel Ltd

**Baswaraj M Dalgade** (Authorized Signatory)

Encl: As above

#### Copy to:

- 1. The Member Secretary, Central Ground Water Authority, Government of India, Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation, Bhujal Bhawan, CGO Complex, NH-IV, Faridabad- 121 001.
- 2. Zonal Office Kolkata, Central Pollution Control Board, South end Conclave, Block 502, 5th and 6th Floors, 1582 Razidanga Main Road, Kolkata, West Bengal 700107.
- 3. The Regional Director, Central Ground Water Board, South Eastern Region, Bhujal Bhawan, Khandagiri Square, NH-5, Bhubaneswar, Odisha, Pin-751001
- 4. The Member Secretary, State Pollution Control Board, A/118, Nilakantha Nagar, Bhubaneswar, Odisha-751012.
- 5. The Regional Officer, Regional Office, Rourkela Office of the State Pollution Control Board Rourkela Town Engineering Office Premises, Sector -5, Rourkela  $-769\,002$ , Odisha



#### ENVIRONMENT CLEARANCE COMPLIANCE STATUS -NARAYANPOSHI MINE

Compliance report of Environmental Clearance for Narayanposhi Iron & Manganese Ore Mine, JSW Steel Ltd.

**Reference letter from MoEF&CC, New Delhi-** J-11015/288/2008-IA.II(M), Dtd. 18.06.2019.

Capacity- 6.0 MTPA Iron Ore (ROM) & 0.036 MTPA Mn Ore and 2 MTPA Beneficiation Plant.

**Status**- Operating Mine of 6.0 MTPA Iron Ore & 0.036 MTPA Mn Ore. 2 MTPA Beneficiation Plant detailed engineering & procurement is in under progress and same will install within due course of time.

| Sl. No. | Specific Conditions                                 | Compliance                                 |
|---------|---|--|
| 1       | The enhance production shall be on pro-rata         | Not Applicable                             |
|         | basis for the effective period of valid             |  |
|         | environment clearance granted herein. The PP        |  |
|         | shall ensure its compliance by getting              |  |
|         | concurrence in mining plan approved by              |  |
|         | concern authority in this regard.                   |  |
| 2       | This EC for expansion proposal (iron ore            | 2 MTPA Beneficiation Plant detailed        |
|         | production from 3.0 MTPA to 6.0 MTPA (ROM)          | engineering & procurement is in under      |
|         | and existing 0.036 MTPA Manganese ore and           | progress and same will install within due  |
|         | establishment of Beneficiation Plant with           | course of time.                            |
|         | capacity of 2.0 Million TPA along with crusher      |  |
|         | and screening plant within the mine lease area)     | TOR has been approved from MOEF&CC         |
|         | shall be operational after submission of an         | on 31.12.2020 for the proposed project of  |
|         | undertaking through affidavit to MoEF & CC          | 6 MTPA Beneficiation Plant and             |
|         | within 15 days of receipt of this letter, for       | EIA/EMP report for the same is under       |
|         | compliance of all the conditions prescribed         | progress.                                  |
|         | herein.   |  |
| 3       | Project Proponent and Department of Steel &         | Not Applicable                             |
|         | wines, Govt. of Odisha shall ensure the             |  |
|         | implementation of recommendations of carrying       |  |
|         | capacity study report conducted by CSIR-            |  |
|         | NEERI w.r.t. mining proposal of iron Ore            |  |
|         | and/or manganese in the State of Odisha.            |  |
| 4       | Department of Steel & Mines, Govt. of Odisha        | Not Applicable                             |
|         | should prepare 5 years' regional plan for annual    |  |
|         | iron ore requirement from the state, which in turn  |  |
|         | shall be met from different mines/zones (e.g. Joda, |  |
|         | Koira.) in the state. Accordingly, sustainable      |  |
|         | annual production (SAP) for each zone/mine may      |  |
|         | be followed adopting necessary environmental        |  |
|         | protection measures.                                |  |
| 5       | Project Proponent shall construct the cement        | Being Complied. Existing cement concrete   |
|         | concrete road from mine entrance and exit to the    | road from mine entrance and exit to the    |
|         | main road with proper drainage system and green     | main road being maintained. In addition to |
|         | belt development along the roads and also           | existing, new cement concrete road, has    |
|         | construction of road with minimum 300 m inside      | been constructed in Gate No 2 area along   |
|         | the mine. This should be done within one year for   | with Automatic Wheel Washing facility.     |
|         | existing mines and new mine should have since       |  |
|         | beginning. The Department of Steel & Mines, Govt.   |  |
|         | of Odisha should ensure the compliance and should   |  |
|         | not issue the Mining Permits, if mine lease holder  |  |
|         | has not constructed proper cement concrete road as  |  |

|   | suggested. This Environmental Clearance for the   |  |
|---|---|--|
|   | expansion project shall be operated only after  |  |
|   | the compliance of the above mentioned specific  |  |
|   | condition.  |  |
| 6 | The Committee observed that as per the recommendations of NEERI report the PP needs to do regular vacuum cleaning of all mineral carrying roads aiming at "zero dust re-suspension" within 3 months. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.  | Regular water sprinkling through mobile water sprinkler tankers being carried out on haul roads and nearby mineral dispatch roads (NH) to avoid generation of dust during movement of vehicles.  Regular maintenance of Haul roads is being carried out to avoid generation of dust during movement of vehicles.  In addition to this, regular vacuum cleaning system procurement order has been awarded to M/s TPS and same is in process |
| 7 | Project Proponent shall monitor the environmental quality parameters as per EC and CTE/CTO conditions, and implementation of suggested measures for control of road dust and air pollution. Odisha State Pollution Control Board has to ensure the compliance of CTE/CTO. Regional office of the MoEF&CC, Bhubaneswar shall monitor the compliance of the EC conditions. Regional office of the Indian Bureau of Mines (IBM) shall monitor the compliance of mining plan and progressive mine closure plan. Any violation by mine lease holder may invite actions per the provisions of applicable Acts.                  | of supply of the machines.  Regular monitoring of environmental quality parameters as per EC and CTE/CTO conditions being carried out and Monitoring Reports are attached as Annexure 1a, 1b & 1c. Vendor is a recognized NABET, MoEF&CC accredited laboratory.  |
| 8 | Project Proponent shall ensure the compliance of Suggested Ore Transport Mode (SOTM) with association of the State Government of Odisha. All existing mines should ensure adoption of SOTM within next 5 years. New mines or mines seeking expansion should incorporate provision of SOTM in the beginning itself, and should have system in place within next 5 years.   | Project Proponent will follow the Suggested Ore Transport Mode (SOTM) in association with Government of Odisha. As proposed in new applied EC for which TOR approved on dated 31.12.2020, the ore will be transported through slurry pipeline/road/railway to the designated port or directly to the JSW Steel Plant or to Nuagaon Mine through road/pipe conveyor for onward transportation to end use plant through slurry pipe line.    |
| 9 | The State Govt. of Odisha shall ensure dust free roads in mining areas wherever the road transportation of mineral is involved. The road shoulders shall be paved with fence besides compliance with IRC guidelines. All the roads should have proper drainage system and apart from paving of entire carriage width the remaining right of way should have native plantation (dust capturing species). Further, regular maintenance should also be ensured by the Govt. of Odisha. Progress on development of dust free roads, implementation of SOTM, increased use of existing rail network, development of additional | The State Govt of Odisha will do the needful. Mobile water sprinkler tankers are provided for regular water sprinkling on nearby mineral dispatch roads (NH) to avoid generation of dust during movement of vehicles   |

|    | railway network/conveyor belt/ pipelines etc. shall  |   |
|----|--|---|
|    | be submitted periodically to Regional office of the  |   |
|    | MoEF&CC.   |   |
| 10 | Project Proponent shall develop the parking plazas for trucks with proper basic amenities/ facilities inside the mine. This should be done within one year for existing mines and new mines should have since beginning. <b>This Environmental Clearance</b>   | Existing parking plaza being maintained. Additional basic amenities will be provided, if required.  |
|    | for the expansion project shall be operated only   |   |
|    | after the compliance of the above mentioned  |   |
|    | specific condition.  |   |
| 11 | Department of Steel & Mines shall ensure the construction of NH 215 as minimum 4 lane road with proper drainage system and plantation and subsequent regular maintenance of the road as per IRC guidelines. Construction of other mineral carrying roads with proper width and drainage system along with road side plantation to be carried out. This shall be completed within 2 Years.  | Not Applicable.   |
| 12 | Regular vacuum cleaning of all mineral carrying roads aiming at "Zero Dust Re- suspension" shall be adopted by PWD / NHAI/ Mine Lease Holders within a time Period of 3 months for existing roads. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.   | Regular water sprinkling through mobile water sprinkler tankers being carried out on haul roads and nearby mineral dispatch roads (NH) to avoid generation of dust during movement of vehicles.  Regular maintenance of Haul roads is being carried out to avoid generation of dust during movement of vehicles.  In addition to this, regular vacuum cleaning system procurement order has been awarded to M/s TPS and same is in process of supply of the machines. |
| 13 | In case the total requirement of iron ore exceeds the suggested limit for that year, permission for annual production by an individual mine may be decided depending on approved EC capacity (for total actual dispatch) and actual production rate of individual mine during last year or any other criteria set by the State Govt., i.e. Dept. of Steel & Mines. Department of Steel and Mines in consultation with Indian Bureau of Mines-RO should prepare in advance mine-wise annual production scenario so that demand for iron ore can be anticipated, and actual production/dispatch does not exceed the suggested annual production. | Not Applicable  |
| 14 | R&D studies towards utilization of low-grade iron ore should be conducted through research/academic institutes like IMMT, Bhubaneswar, NML, Jamshedpur, and concerned metallurgical departments in IITs, NITs etc., targeting full utilization of low-grade iron ore (Fe content up to 45% by 2020 and up to 40% by 2025). In fact, life cycle assessment of whole process including environmental considerations should be done for   | The low grade ores being stacked in earmarked area. Once technology through R & D study for the beneficiation & commercial use is established same will be utilised.  Approved TOR dated 31.12.2020 having proposal of 6 MTPA Beneficiation Plant   |

|          | tashna aganamia and anvironmental vishility  | and EIA/EMD report for the same is under           |
|----------|--|--|
|          | techno-economic and environmental viability. R&D studies on utilization of mine wastewater   | and EIA/EMP report for the same is under progress. |
|          | having high concentration of Fe content for  | progress.  |
|          | different commercial applications in industries  |  |
|          | such as cosmetics, pharmaceutical, paint industry  |  |
|          |  |  |
|          | should also be explored. Responsibility: IBM, Dept.  |  |
| 1.5      | of Steel & Mines, Individual Mine Lease Holders.   | N-4 A 1: - 1.1-                                    |
| 15       | The mining activity in Joda-Koira sector is expected   | Not Applicable                                     |
|          | to continue for another 100 years, therefore, it will  |  |
|          | be desirable to develop proper rail network in the   |  |
|          | region. Rail transport shall not only be pollution   |  |
|          | free mode but also will be much economical option  |  |
|          | for iron ore transport. The rail network and/or  |  |
|          | conveyor belt system up to public railway siding   |  |
|          | needs to be created. The total length of the conveyor  |  |
|          | belt system/ rail network to be developed from   |  |
|          | mines to nearest railway sidings by 11 mines in Joda   |  |
|          | region is estimated to be about 64 km. Similarly, in   |  |
|          | Koira region, total length of rail network/conveyor  |  |
|          | system for 8 mines (under SOTM 1 & 2) is   |  |
|          | estimated to be around 95 km. Further, it is   |  |
|          | suggested to develop a rail network connecting   |  |
|          | Banspani (Joda region) and Roxy railway sidings  |  |
|          | in Koira region. Responsibility: Dept. of Steel &  |  |
|          | Mines, Govt. of Odisha and Concerned Mines   |  |
|          | along with Indian Railways. Time Period:   |  |
|          | Maximum 7 years (by 2025). The Department of   |  |
|          | Steel & Mines, Govt. of Odisha should follow-up  |  |
|          | with the concerned Departments and railways so   |  |
|          | that proposed proper rail network is in place by   |  |
|          | 2025.  |  |
| 16       | State Govt. of Odisha shall make all efforts to  | Not Applicable.                                    |
|          | ensure exhausting all the iron & manganese ore   |  |
|          | resources in the existing working mines and from   |  |
|          | disturbed mining leases/zones in Joda and Koira  |  |
|          | region. The criteria suggested shall be applicable   |  |
|          | while suggesting appropriate lease area and  |  |
|          | sustainable mining rate. Responsibility: Dept. of  |  |
|          | Steel & Mines, Govt. of Odisha.  |  |
| 17       | Mining Operations/Process Related: Project   | Mining being carried out as per approved           |
|          | Proponent shall implement the following mitigation   | mine plan. Dust Suppression System (Dry            |
|          | measures: (i) Appropriate mining process and   | fog system) being provided at all                  |
|          | machinery (viz. right capacity, fuel efficient) should   | appropriate places of mineral handling             |
|          | be selected to carry out various mining operations   | plants (crusher & screening plant) and             |
|          | that generate minimal dust/air pollution, noise,   | other areas. Same are being maintained for         |
|          | wastewater and solid waste. e.g. drills should either  | proper dust control.                               |
|          | be operated with dust extractors or equipped with  | DGPS Surveyed Mining lease boundary                |
|          | water injection system. (ii) After commencement of   | superimposed on High Resolution Satellite          |
|          | mining operation, a study should be conducted to   | image of Narayanposhi Iron & Mn Mine               |
|          | assess and quantify emission load generation (in   | duly vetted by M/s ORSAC has already               |
|          | terms of air pollution, noise, waste water and solid   | been submitted along with last half yearly         |
|          | waste) from each of the mining activity (including   | compliance report vide letter dated                |
|          | transportation) on annual basis. Efforts should be   | 21.05.2021.  |
| <u> </u> | The state of the s | 1  |

made to further eliminate/ minimize generation of air pollution/dust, noise, wastewater, solid waste generation in successive years through use of better technology. This shall be ensured by the respective lease holders. (iii) Various mine machineries/equipment selected (viz. dumpers, excavators, crushers, screen plants etc.) and transport means should have optimum fuel/power consumption, and their fuel/power consumption should be recorded on monthly basis. inspection and maintenance of all the machineries/ equipment/ transport vehicles should be followed as per manufacturer's instructions/ recommended time schedule and record should be maintained by the respective mine lease holders.

(iv) Digital processing of the entire lease area using remote sensing technique should be carried out regularly once in 3 years for monitoring land use pattern and mining activity taken place. Further, the extent of pit area excavated should also be demarcated based on remote sensing analysis. This should be done by ORSAC (Odisha Space Applications Centre, Bhubaneswar) or an agency of national repute or if done by a private agency, the report shall be vetted/ authenticated by ORSAC, Bhubaneswar. Expenses towards the same shall be borne by the respective mine lease holders. Responsibility: Individual Mine Lease Holders.

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Air Environment Related: Project Proponent shall implement the following mitigation measures: (i) Fugitive dust emissions from all the sources should be controlled regularly on daily basis. Water spraying arrangement on haul roads, loading and unloading and at other transfer points should be provided and properly maintained. Further, it will be desirable to use water fogging system to minimize water consumption. It should be ensured that the ambient air quality parameters conform to the norms prescribed by the CPCB in this regard. (ii) The core zone of mining activity should be monitored on daily basis. Minimum four ambient air quality monitoring stations should be established in the core zone for SPM, PM10, PM2.5, SO2, NOx Location of air quality and CO monitoring. monitoring stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board (based on Emission Load Assessment Study). The number of monitoring locations may be more for larger capacity mines and working in Existing Fixed water sprinkling being maintained and operated. For, additional Fixed auto sprinklers on both sides of major haul road and approach roads of the mine is in commissioning phase. However, as an interim arrangement frequency of the Mobile water tankers sprinkling has been increased to suppress the dust emission generated due to transportation of vehicles.

Regular water sprinkling through mobile water sprinkler tankers being carried out on haul roads and nearby mineral dispatch roads (NH) to avoid generation of dust during movement of vehicles. Regular maintenance of Haul roads is being carried out to avoid generation of dust during movement of vehicles. Regular Monitoring of ambient air quality parameters being carried out at four AAQ monitoring stations in core zone and four stations in buffer zone. Monitoring reports are attached as **Annexure 1a**.

larger area. Out of four stations, one should be online monitoring station in the mines having more than 3 MTPA EC Capacity. (iii) Monitoring in buffer zone should be carried out by SPCB or through NABET accredited agency. In addition, air quality parameters (SPM, PM10, PM2. 5, 5O2, NOx and CO) shall be regularly monitored at locations of nearest human habitation including schools and other public amenities located nearest to source of the dust generation as applicable.

(iv) Emissions from vehicles as well as heavy machinery should be kept under control and regularly monitored. Measures should be taken for regular maintenance of vehicles used in mining operations and in transportation of mineral. (v) The vehicles shall be covered with a tarpaulin and should not be overloaded. Further, possibility of closed container trucks should be explored for direct to destination movement of iron ore. Air quality monitoring at one location should also be carried out along the transport route within the mine (periodically, near truck entry and exit gate), Responsibility: Individual Mine Lease Holders and SPCB

Mineral carrying trucks are not allowed to go out of the lease area without tarpaulin cover and is being monitored by security personnel at the exit gate.

Vehicular emissions will be regularly monitored. Also, Security personnel are also do not allow the vehicles to enter into the mines without having valid PUC.

Noise and Vibration Related: Project Proponent shall implement the following mitigation measures:

(i) Blasting operation should be carried out only during daytime. Controlled blasting such as Nonel, should be practiced. The mitigation measures for control of ground vibrations and to arrest fly rocks boulders should be implemented. Appropriate measures should be taken for control of noise levels below 85 DB in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs. (iii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone. Further, date, time and distance of measurement should also be indicated with the noise levels in the report. The data should be used to map the noise generation from different activities and efforts should be made to maintain the noise levels with the acceptable limits of CPCB (CPCB, 2000) (iv) Similarly, vibration at various sensitive locations should be monitored at least once in month, and mapped for any significant changes due to successive mining operations. Responsibility: Individual Mine Lease Holders.

Noise producing equipment's are covered as far as practicable. Workers engaged in Operations are provided with ear plugs / muffs. Besides this, acoustic enclosures are provided for all machines operating within the mines. Controlled blasting is in place. Regular Noise Monitoring being carried out at 10 stations in core zone and buffer zone and Monitoring reports are attached as **Annexure 1c**. Vendor is a recognized NABET, MoEF & CC accredited laboratory.

Water/Wastewater Related: Project Proponent shall implement the following mitigation measures:

(i) In general, the mining operations should be restricted to above ground water table and it should not intersect groundwater table. However, if enough

No natural water courses and/or water resources are obstructed due to mining operation. Majority of the runoff is channelized to in-pit settling cum percolation pits.

resources are estimated below the ground water table, the same may be explored after conducting detailed geological studies by GSI and hydrogeological studies by CGWB or NIH or institute of national repute, and ensuring that no damage to the land stability/ water aquifer system shall happen. The details/ outcome of such study may be reflected/incorporated in the EIA/EMP report of the mine appropriately. (ii) Natural watercourse and/or water resources should not be obstructed due to any mining operations. Regular monitoring of the flow rate of the springs and perennial nallas should be carried out and records should be maintained. Further, regular monitoring of water quality of nallas and river passing thorough the mine lease area (upstream and downstream locations) should be carried out on monthly basis. (iii) Regular monitoring of ground water level and its quality should be carried out within the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out on monthly basis. (iv) In order to optimize water requirement, suitable conservation measures to augment ground water resources in the area should be undertaken in consultation with Central Ground Water Board (CGWB). (v) Suitable rainwater harvesting measures on long term basis should be planned and implemented in consultation with CGWB, to recharge the ground water source. Further, CGWB can prepare a comprehensive plan for the whole region. (vi) Appropriate mitigation measures (viz. ETP, STP, garland drains, retaining walls, collection of runoff etc.) should be taken to prevent pollution of nearby river/other water bodies. Water quality monitoring study should be conducted by State Pollution Control Board to ensure quality of surface and ground water sources on regular basis. The study can be conducted through NABL/ NABET approved water testing laboratory. However, the report should be vetted by SPCB. (vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated in ETP so as to conform to the discharge standards applicable. (viii) Oil and grease trap should be installed before discharge of workshop effluents. Further, sewage treatment plant should be installed for the employees/colony, wherever applicable. (ix) Mine lease holder should ensure that no silt originating due to mining activity is transported in the surface water course or any other water body. Appropriate measures for prevention and control of soil erosion and

Regular monitoring of water quality of upstream and downstream being carried out and Monitoring Reports are attached as **Annexure 1b**. Vendor is a recognized NABET, MoEF & CC accredited laboratory.

Existing water conservation measures are being maintained for collecting rain water in the mining lease area. New conservation measures if required will be implemented in consultation with CGWB.

The waste water generated from workshop will be treated by ETP/Mechanized Oil Grease Trap System and automatic wheel washing system (with complete recirculation system).

Existing Retention wall, Garland drains and setting pits being maintained and will be desilted before monsoon season. Runoff discharge being maintained within standard. New Garland Drains, settling pit will be constructed as per approved mine plan requirement, if any, to prevent any direct flow of runoff to nearby water bodies.

silt should be undertaken. management of Quantity of silt/soil generated should be measured on regular basis for its better utilization. (x) Erosion from dumps site should be protected by providing geo-textile matting or other suitable material, and thick plantation of native trees and shrubs should be carried out at the dump slopes. Further, dumps should be protected by retaining walls. Trenches/ garland drain should be constructed at the foot of dumps to arrest silt from being carried to water bodies. Adequate number of check dams should be constructed across seasonal/perennial nallas (if any) flowing through the mine lease areas and silt be arrested. De-silting at regular intervals should be carried out and quantity should be recorded for its better utilization, after proper soil quality analysis. (xii) The water so collected in the reservoir within the mine should be utilized for the sprinkling on hauls roads, green belt development etc. (xiii) There should be zero waste water discharge from the mine. Based on actual water and consumption/ utilization in withdrawal different activities, water balance diagram should be prepared on monthly basis, and efforts should be made to optimize consumption of water per ton of ore production in successive years. Responsibility: Individual Mine Lease Holders, SPCB and CGWB.

Related:

Proiect

the following

mitigation measures: (i) The top soil should temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long (not more than 3 years or as per provisions mentioned in the mine plan/ scheme). The topsoil should be used for land reclamation and plantation appropriately. (ii) Fodder plots should be developed in the non-mineralised area in lieu of use of grazing land, if any. (iii) Over burden/ low grade ore should be stacked at earmarked dump site (s) only and should not be kept active for long period. The dump height should be decided on case to case basis, depending on the size of mine and quantity of waste material generated. However, slope stability study should be

conducted for larger heights, as per IBM approved

mine plan and DGMS guidelines. The OB dump

should be scientifically vegetated with suitable

native species to prevent erosion and surface run

off. In critical areas, use of geo textiles should be

Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-

sustaining. Proper records should be maintained

regarding species, their growth, area coverage etc.

for stabilization of the

Land/Soil/Overburden

undertaken

Proponent shall implement

Working is restricted into broken-up area only. However, if any, Top soil generation, same will be stored at earmarked site and will be used for land reclamation, plantation purpose or stabilized with plantation.

Over burden being generated and stacked at earmarked site as per approved Mine Plan. Active dump will be stabilised with plantation after maturity.

Hazardous waste storage area having covered shed constructed in mine. Same is being used for storage of the hazardous waste and subsequently disposed to the authorised recyclers

Existing Retention wall, Garland drains and setting pits being maintained and will be desilted before monsoon season. Runoff discharge being maintained within standard. New Garland Drains, settling pit will be constructed as per approved mine plan requirement, if any, to prevent any direct flow of runoff to nearby water bodies.

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(iv) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine operation, soil, OB and mineral dumps. The water so collected can be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly de-silted, particularly after monsoon and should be maintained properly. Appropriate documents should be maintained. Garland drain of appropriate size, gradient and length should be constructed for mine pit, soil. OB and mineral dumps and sump capacity should be designed with appropriate safety margin based on long term rainfall data. Sump capacity should be provided for adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and de-silted at regular intervals. (v) Backfilling should be done as per approved mining plan/scheme. There should be no OB dumps outside the mine lease area. The backfilled area should be afforested, aiming to restore the normal ground level. Monitoring and management of rehabilitated areas should continue till the vegetation is established and becomes selfgenerating. (vi) Hazardous waste such as, waste oil, lubricants, resin, and coal tar etc. should be disposed off as per provisions of Hazardous Waste Management Rules, 2016, as amended from time to time. Responsibility: Individual Mine Lease Holders.

> This instant mining lease was executed on 27.06.2020 and the working has been continuing with the strength of vesting

More than 2500 Saplings have been planted in FY 2021-22 as per the approved mine plan in the safety zone area and in the old dump area.

No Wild Life Sanctuary/Tiger Reserve/National Park/ Elephant corridor within the core as well as within the buffer zone of the project.

As regards to Site specific conservation plan, we have submitted the new Site Specific Conservation plan for approval and will be submitted to your good office after approval from PCCF (WL) cum Chief Wildlife Warden.

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Ecology/Biodiversity (Flora-Fauna) Related: Project Proponent shall implement the following mitigation measures: (i) All precautionary measures should be taken during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear etc. spotted in the study area. Action plan for conservation of flora and fauna be prepared and implemented should consultation with the State Forest and Department within the mine lease area, whereas outside the mine lease area, the same should be maintained by State Forest Department. (ii) Afforestation is to be done by using local and mixed species saplings within and outside the mining lease area. The reclamation and afforestation is to be done in such a manner like exploring the growth of fruit bearing trees which will attract the fauna and thus maintaining the biodiversity of the area. afforestation done so far is very less, forest department needs to identify adequate land and do afforestation by involving local people in a time bound manner. (iii) Green belt development carried out by mines should be monitored regularly in every

like under and parameters area season vegetation/plantation, type of plantation, type of tree species /grass species/scrubs etc., distance between the plants and survival rate should be recorded. (iv) Green belt is an important sink of air pollutants including noise. Development of green cover in mining area will not only help reducing air and noise pollution but also will improve the ecological conditions and prevent soil erosion to a greater extent. Further, selection of tree species for green belt should constitute dust removal/dust capturing plants since plants can act as efficient biological filters removing significant amounts of particulate pollution. Thus, the identified native trees in the mine area may be encouraged for plantation. Tree species having small leaf area, dense hair on leaf surface (rough surface), deep channels on leaves should be included for plantation. (v) Vetiver plantation on inactive dumps may be encouraged as the grass species has high strength of anchoring besides medicinal value. (vi) Details of compensatory afforestation done should be recorded and documented by respective forest divisions, and State Forest Department should present mine-wise annual status, along with expenditure details. Responsibility: Individual Mine Lease Holders and State Forest & Wildlife Department.

Being complied. Narayanposhi Mining operation was started from 1<sup>st</sup> July 2020 and various community development initiatives are under implementation for community upliftment.

Need based assessment survey has been completed and action plan is under implementation for the compliance.

Socio-Economic Related: Project Proponent shall implement the following mitigation measures: (i) Public interaction should be done on regular basis and social welfare activities should be done to meet the requirements of the local communities. Further, basic amenities and infrastructure facilities like education, medical, roads, safe drinking water, sanitation, employment, skill development, training institute etc. should be developed to alleviate the quality of life of the people of the region. (ii) Land outees and land losers/affected people, if any, should be compensated and rehabilitated as per the national/state policy on Resettlement Rehabilitation. (iii) The socio-economic development in the region should be focused and aligned with the guidelines/initiatives of Govt. of India/ NITI Aayog around prosperity, equality, justice, cleanliness, transparency, employment, respect to women, hope etc. This can be achieved by providing adequate and quality facilities for education, medical and developing skills in the people of the region. District administration in association with mine lease holders should plan for "Samagra Vikas" of these blocks well as other blocks of the district. While planning for different

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schemes in the region, the activities should be prioritized as per Pradhan Mantri Khanij Kshetra Kalyan Yojna (PMKKKY), notified by Ministry of Mines, Govt. of India, vide letter no. 16/7/2017-M.VI (Part). dated September 16. 2015. Responsibility: District Administration and Individual Mine Lease Holders. 24 Road Transport Related: Project Proponent shall Project Proponent will follow the implement the following mitigation measures: (i) Suggested Ore Transport Mode (SOTM) in All the mine lease holders should follow the association with Government of Odisha. suggested ore transport mode (SOTM), based on its As proposed in new applied EC for which TOR approved on dated 31.12.2020, the EC capacity within next 5 years. (ii) The mine lease holders should ensure construction of cement road ore will be transported through slurry of appropriate width from and to the entry and exit pipeline/road/railway to the designated gate of the mine. Further, maintenance of all the port or directly to the JSW Steel Plant or to roads should be carried out as per the requirement Nuagaon Mine through road/pipe conveyor ensure dust free road transport. for onward transportation to end use plant through slurry pipe line. Transportation of ore should be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore/dust takes Existing cement concrete road from mine place. Further, air quality in terms of dust, PM:t0 entrance and exit to the main road being should be monitored near the roads towards entry & maintained. In addition to existing, new exit gate on regular basis, and be maintained within cement concrete road, has been constructed the acceptable limits. Responsibility: Individual in Gate No 2 area along with Automatic Mine Lease Holders and Dept. of Steel & Mines. Wheel Washing facility. Mineral carrying trucks are not allowed to go out of the lease area without tarpaulin cover and is being monitored by security personnel at the exit gate. Vehicular emissions will be regularly monitored. Also, Security personnel are also do not allow the vehicles to enter into the mines without having valid PUC. Personnel working in dusty areas are 25 Occupational Health Related: Project Proponent shall implement the following mitigation measures: provided with nose mask, safety glass and (i) Personnel working in dusty areas should wear ear plug with proper safety training. protective respiratory devices and they should also be provided with adequate training and information Dust Suppression System (Dry fog system) on safety and health aspects periodically. (ii) being provided at all appropriate places of Occupational health surveillance program for all the mineral handling plants (crusher screening plant) and other areas. Same are employees/workers (including casual workers) should be undertaken periodically (on annual basis) being maintained for proper dust control. to observe any changes due to exposure to dust, and corrective measures should be taken immediately, if Workers engaged in Operations are provided with PPE's. Besides this, acoustic needed. enclosures are provided for all machines (iii) Occupational health and safety measures

operating within the mines. The noise

level is being monitored by Noise Level

Meter; the results reveal that the parameter

is well within the prescribed norms.

related awareness programs including identification

of work related health hazard, training on malaria

eradication, HIV and health effects on exposure to

mineral dust etc., should be carried out for all the

workers on regular basis. A full time qualified

doctor should be engaged for the purpose. Periodic monitoring (on 6 monthly basis) for exposure to respirable minerals dust on the workers should be conducted, and record should be maintained including health record of all the workers. Review of impact of various health measures undertaken (at an interval of 3 years or less) should be conducted followed by follow-up of actions, wherever required. Occupational health centre should be established near mine site itself. Responsibility: Individual Mine Lease Holders and District Administration (District Medical Officer).

Initial Medical Examination & Periodical Medical Examination of the workers engaged in the project are being carried periodically and records are maintained.

A medical dispensary with full time Doctor has been appointed at mine area for the health check-up of employees and also the locals.

Medical health camps will be organized in the nearby villages after the ongoing Covid-19 pandemic over and as per the Guidelines of State Government

Existing Fixed water sprinkling being maintained and operated. For, additional Fixed auto sprinklers on both sides of major haul road and approach roads of the mine is in commissioning phase. However, as an interim arrangement frequency of the Mobile water tankers sprinkling has been increased to suppress the dust emission generated due to transportation of vehicles.

Mobile water sprinkler tankers are provided for regular water sprinkling on haul roads and nearby mineral dispatch roads (NH) to avoid generation of dust during movement of vehicles. Regular maintenance of Haul roads is being carried out to avoid generation of dust during movement of vehicles.

Regular Monitoring of ambient air quality parameters being carried out. Monitoring reports are attached as **Annexure 1a.** 

| Sl. No. | Standard Conditions                             | Compliance                                    |
|---------|---|---|
|         | I. Statutory Complia                            | nce   |
| 1       | This Environmental Clearance (EC) is subject    | Not applicable                                |
|         | to orders/ judgment of Hon'ble Supreme          |   |
|         | Court of India, Hon'ble High Court, Hon'ble     |   |
|         | NGT and any other Court of Law, Common          |   |
|         | Cause Conditions as may be applicable.          |   |
| 2       | This EC is valid up to 31.03.2020 as the lease  | EC has been vested to JSW Steel Ltd for 2     |
|         | validity i.e. valid up to 31" March 2020 as Der | years. As per MOEF&CC OM dated                |
|         | the Amended MMDR Act. 2015                      | 13.07.2021, EC transfer till life of the mine |
|         |   | has been applied and same is in process.      |
|         |   | TOR has been approved dated 31.12.2020        |

|   |  | for new EC, and EIA report is under   |
|---|--|---|
|   |  | process.  |
| 3 | The Project proponent complies with all the  | Not applicable  |
|   | statutory requirements and judgment of   |   |
|   | Hon'ble Supreme Court dated 2nd August,2017  |   |
|   | in Writ Petition (Civil) No. 114 of 2014 in matter                                       |   |
|   | of Common Cause versus Union of India & Ors. before commencing the mining operations.    |   |
| 4 | The State Government concerned shall ensure  | Not applicable  |
| - | that mining operation shall not be commenced   | Two applicable  |
|   | till the entire compensation levied, if any, for   |   |
|   | illegal mining paid by the Project Proponent   |   |
|   | through their respective Department of Mining  |   |
|   | & Geology in strict compliance of Judgment of  |   |
|   | Hon'ble Supreme Court dated 2nd August,  |   |
|   | 2017 in Writ Petition (Civil) No. 114 of 2014  |   |
|   | in matter of Common Cause versus Union of  |   |
|   | India & Ors.   | N   |
| 5 | This Environmental Clearance shall become  | No Wild Life Sanctuary/Tiger  |
|   | operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the    | Reserve/National Park/ Elephant corridor within the core as well as within the buffer |
|   | recommendations of the Standing Committee of   | zone of the project. As regards to Site   |
|   | National Board for Wildlife, if applicable to the  | specific conservation plan, we would like   |
|   | Project.   | to submit that we have submitted new Site   |
|   | 3  | Specific Conservation plan for approval   |
|   |  | from PCCF (WL) cum Chief Wildlife   |
|   |  | Warden and same will be submitted after   |
|   |  | approval.   |
| 6 | This Environmental Clearance shall become  | The present mining operation is restricted  |
|   | operational only after receiving formal Forest   | within vested Forest area only as per FC  |
|   | Clearance (FC) under the provision of Forest   | F.No.8-34/2000-FC (Vol-I),  |
|   | Conservation Act, 1980, if applicable to the Project.                                    | Dt:15.11.2007 over 244.327 ha. The fresh FC proposal has been applied for             |
|   | Froject.   | 252.179 ha vide Proposal No.  |
|   |  | FP/OR/MIN/51059/2020 dated  |
|   |  | 14.10.2020 and same is under evaluation.  |
|   |  | Advance NPV has already been paid.  |
|   |  | Further, as per MMDR Amendment Act  |
|   |  | 2021, the Forest clearances and other   |
|   |  | permissions continue to be valid even after   |
|   |  | expiry or permission of lease till the  |
|   |  | minerals exhausted. Hence, the Forest   |
|   |  | Clearance for 244.327 ha. will be valid till  |
| 7 | Draigat Drapanant (DD) shall shain Consent to  | life of the mine.   |
| 7 | Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively | Being Complied. CTO has been vested to JSW Steel Ltd for 2 years. New CTO vide        |
|   | implement all the conditions stipulated therein.   | letter no 5453/IND-I-CTO-2258 dated   |
|   | The mining activity shall not commence prior to  | 31.03.2021 has been obtained from   |
|   | obtaining Consent to Establish / Consent to  | OSPCB.  |
|   | Operate from the concerned State Pollution   |   |
|   | Control Board/Committee.   |   |
| 8 | The PP shall adhere to the provision of the Mines  | Noted and being complied.   |
|   | Act, 1952, Mines and Mineral (Development &  | i   |

|    | Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.  |  |
|----|--|--|
| 9  | The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.   | The present mining operation is restricted within vested Surface right granted over 324.800 ha for 2 years. Further, as per MMDR Amendment Act 2021, the Surface rights and other permissions continue to be valid even after expiry or permission of lease till the minerals exhausted. |
| 10 | The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".  | Noted and being complied.  |
| 11 | The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.  | NOC from CGWA for 1715 m3/day is already vested to JSW for 2 years.  New application for the NOC has been applied.   |
| 12 | A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.  | Not Applicable.  |
| 13 | State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.  | Not Applicable.  |
| 14 | The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record. | Not Applicable.  |
| 15 | The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per  | Noted and being complied.  |

|    | manisians of the mans 11 of EIA Notification 2006   |  |
|----|---|--|
|    | provisions of the para 1I of EIA Notification, 2006 as amended from time to time  |  |
|    | II. Air quality monitoring and  | Invacantation  |
| 16 | The Project Proponent shall install a minimum of 3  | Three Continuous Ambient Air Quality   |
|    | (three) online Ambient Air Quality Monitoring<br>Stations with 1 (one) in upwind and 2 (two) in<br>downwind direction based on long term<br>climatological data about wind direction such that  | Monitoring Stations (CAAQMS) and Digital Display Board have been installed in consultation with Regional Officer, Rourkela.  |
|    | an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/2o/go/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the  | All 3 CAAQMS are equipped with data transfer facility to SPCB and we have authorized Phoenix Robotix Pvt. Ltd. (Datoms) for transmitting data to OSPCB and already completed the necessary setup for data transfer from all 3 locations to OSPCB Server. Data is transmitting from all 3 CAAQMS to OSPCB server.   |
|    | site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.   | Regular Ambient air quality monitoring being carried out at four AAQ monitoring stations in core zone and four stations in buffer zone. Monitoring Reports are attached as <b>Annexure 1a</b> .  |
| 17 | Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipment's/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/Central Pollution Control Board. | Existing Fixed water sprinkling being maintained and operated. For, additional Fixed auto sprinklers on both sides of major haul road and approach roads of the mine is in commissioning phase. However, as an interim arrangement frequency of the Mobile water tankers sprinkling has been increased to suppress the dust emission generated due to transportation of vehicles.  Regular Ambient air quality monitoring being carried out at four AAQ monitoring stations in core zone and four stations in buffer zone. Monitoring Reports are attached as Annexure 1a. |
|    | III. Water quality monitoring ar  | nd preservation  |
| 10 | In case immediate mining scheme enviseess   | The mining plan enviseers interesting of   |
| 18 | In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.   | The mining plan envisages intersection of Ground water at Manganese working zone and NOC from CGWA for 1715 m3/day is already vested to JSW for 2 years.  New application for the NOC has been applied.  |

| 19 | Regular monitoring of the flow rate of the springs   | No natural watercourse and water  |
|----|--|---|
|    | and perennial nallahs flowing in and around the  | resources are obstructed due to mining  |
|    | mine lease shall be carried out and records  | operations & the same will be taken care  |
|    | maintain. The natural water bodies and or streams  | of.   |
|    | which are flowing in an around the village, should   | Monitoring of flow rate measurement of  |
|    | not be disturbed. The Water Table should be  | the different water bodies is being carried   |
|    | nurtured so as not to go down below the pre-mining   | out and Monitoring Reports are attached as  |
|    | period. In case of any water scarcity in the area, the   | Annexure 1b.  |
|    | Project Proponent has to provide water to the  | Drinking water to the villagers being   |
|    | villagers for their use. A provision for regular   | provided through mobile water tankers.  |
|    | monitoring of water table in open dug wall located   | provided unough moone water cameres.  |
|    | in village should be incorporated to ascertain the   |   |
|    | impact of mining over ground water table. The  |   |
|    | Report on changes in Ground water level and  |   |
|    | quality shall be submitted on six- monthly basis to  |   |
|    | the Regional Office of the Ministry, CGWA and  |   |
|    | State Groundwater Department / State Pollution   |   |
|    | Control Board  |   |
| 20 | Project Proponent shall regularly monitor and  | Regular monitoring of ground water level  |
|    | maintain records w.r.t. ground water level and   | and quality being carried out and   |
|    | quality in and around the mine lease by  | Monitoring Reports are attached as  |
|    | establishing a network of existing wells as well as  | Annexure 1b.  |
|    | new piezo-meter installations during the mining  |   |
|    | operation in consultation with Central Ground  |   |
|    | Water Authority/ State Ground Water Department.  |   |
|    | The Report on changes in Ground water level and  |   |
|    | quality shall be submitted on six-monthly basis to   |   |
|    | the Regional Office of the Ministry, CGWA and  |   |
|    | State Groundwater Department / State Pollution   |   |
|    | Control Board.   |   |
| 21 | The Project Proponent shall undertake regular  |   |
|    | monitoring of natural water course/ water  | upstream and downstream being carried   |
|    | resources/ springs and perennial nallahs existing/   | out and Monitoring Reports are attached as  |
|    | flowing in and around the mine lease and maintain  | Annexure 1b. Vendor is a recognized   |
|    | its records. The project proponent shall undertake   | NABET, MoEF & CC accredited   |
|    | regular monitoring of water quality upstream and   | laboratory.   |
|    | downstream of water bodies passing within and  | No motivida and a second  |
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|    |  | water bodies.   |
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|    | <u> </u>   |   |
| 1  | (November) and winter (January) and the record of  |   |
|    | nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall Carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/bodies existing in lease area shall be carried out four times in a Year viz. pre- monsoon (April-May). monsoon (August), post-monsoon | No natural watercourse and water resources are obstructed due to mining operations & the same will be taken carrof. Existing check dams being maintained to prevent any pollution of the nearby water bodies. |

|    |  | <del>,</del>  |
|----|--|---|
|    | monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.  |   |
| 22 | Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1/2006- IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard. | No polluted water generated from the Mine.  Regular monitoring of water quality of being carried out and Monitoring Reports are attached as Annexure 1b. Vendor is a recognized NABET, MoEF & CC accredited laboratory. Digital Display board showing monitored data being provided at Main Gate for general public. Monthly water quality monitoring data is regularly being uploaded in JSW website and Link of the same is <a href="https://www.jsw.in/investors/steel/jsw-steel-investor-information-environmental-clearances#">https://www.jsw.in/investors/steel/jsw-steel-investor-information-environmental-clearances#</a> |
| 23 | Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.  | Maximum rain water has already been channelized to Mine Pits and same is being utilized in dust suppression and other mining activities.  Existing surface run-off Retention wall, Garland drains, Check Dams and setting pits being maintained.  Detailed Hydrology study is under progress, recommendations of the study and consultation with CGWB, additional rain water harvesting measures/structures will be implemented for rainwater harvesting.   |
| 24 | Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.   | Workshop along with ETP/Oil Grease Trap System being developed in the mine. No process water being discharged from the mine.  The waste water generated from workshop being treated by ETP/Mechanized Oil Grease Trap System and automatic wheel washing system (with complete recirculation system).  Regular Monitoring of water quality parameters being carried out by NABET Accredited laboratory.   |
| 25 | The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.  | Rain water collected in pits being utilising for dust suppression in the mining operations. Fixed Sprinklers, Pressurised mobile water tankers, Mist Gun for dust   |

|    |  | suppression being provided for reducing  |
|----|--|--|
|    |  | the water consumption.   |
|    |  | the water consumption.   |
|    | IV. Noise and vibration monitoring and preve   | ention   |
| 26 | The peak particle velocity at 500m distance or   | Being Complied. Controlled blasting is in  |
|    | within the nearest habitation, whichever is closer   | place.   |
|    | shall be monitored periodically as per applicable  |  |
|    | DGMS guidelines.   |  |
| 27 | The illumination and sound at night at project sites   | Mining is being carried out in the already   |
|    | disturb the villages in respect of both human and  | broken up area as per approved mine plan.  |
|    | animal population. Consequent sleeping disorders   | Illumination and sound is restricted into  |
|    | and stress may affect the health in the villages   | core zone only. No project sites disturb the                                       |
|    | located close to mining operations. Habitations  | villages in respect of both human and  |
|    | have a right for darkness and minimal noise levels   | animal population.   |
|    | at night. PPs must ensure that the biological clock  |  |
|    | of the villages is not disturbed; by orienting the   |  |
|    | floodlights/ masks away from the villagers and   |  |
|    | keeping the noise levels well within the prescribed  |  |
| 20 | limits for day /night hours.   | Naine and decine a main and (2)  |
| 28 | The Project Proponent shall take measures for control of noise levels below 85 dBA in the work | Noise producing equipment's are covered  |
|    |  | as far as practicable. Workers engaged in Operations are provided with ear plugs / |
|    | environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs | muffs. Besides this, acoustic enclosures are                                       |
|    | /muffs. All personnel including labourers working  | provided for all machines operating within   |
|    | in dusty areas shall be provided with protective   | the mines. Regular Noise Monitoring  |
|    | respiratory devices along with adequate training,  | being carried out and Monitoring reports   |
|    | awareness and information on safety and health   | are attached as <b>Annexure 1c</b> .   |
|    | aspects. The PP shall be held responsible in case it   |  |
|    | has been found that workers/ personals/ labourers  |  |
|    | are working without personal protective  |  |
|    | equipment.   |  |
|    | V. Mining Plan   |  |
| 29 | The Project Proponent shall adhere to the working  | All mining activities being carried out in   |
|    | parameters of mining plan which was submitted at   | accordance with approved mining plan and   |
|    | the time of EC appraisal wherein year-wise plan  | EC conditions.   |
|    | was mentioned for total excavation i.e. quantum of   |  |
|    | mineral, waste, over burden, inter burden and top  |  |
|    | soil etc. No change in basic mining proposal like  |  |
|    | mining technology, total excavation, mineral &   |  |
|    | waste production, lease area and scope of working  |  |
|    | (viz. method of mining, overburden & dump  |  |
|    | management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.)     |  |
|    | shall not be carried out without prior approval of   |  |
|    | the Ministry of Environment, Forest and Climate  |  |
|    | Change, which entail adverse environmental   |  |
|    | impacts, even if it is a part of approved mining plan  |  |
|    | modified after grant of EC or granted by State   |  |
|    | Govt. in the form to Short Term Permit (STP),  |  |
|    | Query license or any other name.   |  |
| 30 | The Project Proponent shall get the Final Mine   | As per Fresh Approved Mining Plan in   |
|    | Closure Plan along with Financial Assurance  | favour of JSW, the life of the mine is   |
|    | approved from Indian Bureau of   | estimated ~18 years for iron ore and ~14   |

|    |   | 7  |
|----|---|--|
| 31 | Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.  The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-â-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas | for manganese ore. The same will be submitted 2 years' prior the exhaustion of ore as per statutes.  Noted and being complied as per approved mine plan. |
|    | until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.   |  |
|    | VI. Land Reclamati  | ion  |
| 32 | The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.   | Being complied. Over burden being stacked at earmarked site and after maturity same will be stabilized with plantation.                                  |
| 33 | The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.   | Being complied.  |
| 34 | The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.   | Noted and being complied as per approved Mine Plan.  |
| 35 | The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it   | Being complied. Over burden being stacked at earmarked site and after maturity same will be stabilized with plantation.                                  |

|    | impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/compactors thereby ensuring proper filling/levelling of dump mass. In critical areas, use of geo textiles/geo-membranes/clay liners/Bentonite etc. shall be undertaken for stabilization   |  |
|----|--|--|
| 36 | of the dump.  The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC.   | Noted and being complied.  |
| 37 | Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.   | Existing Garland drains and siltation ponds being maintained to prevent any direct flow of runoff to nearby water bodies. New garland drains will be constructed as per requirement of approved mine plan. Desilting of the settling pond being carried out on regular interval.             |
| 38 | Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years' data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains. | Existing Check dams, Garland drains and siltation ponds being maintained to prevent any direct flow of runoff to nearby water bodies. New garland drains will be constructed as per requirement of approved mine plan. Desilting of the settling pond being carried out on regular interval. |
| 39 | The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.   | Working is restricted into broken-up area only. However, if any, Top soil generation, same will be stored at earmarked site and will be used for land reclamation, plantation purpose or stabilized with plantation.   |
|    | VII. Transportatio   |  |
| 40 | No Transportation of the minerals shall be allowed in case of roads passing through villages/habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be  | Regular water spraying being carried out at nearby mineral dispatch roads (NH) to avoid generation of dust during movement of vehicles.  Mineral carrying trucks are not allowed to go out of the lease area without tarpaulin   |

mitigated. All costs resulting from widening and cover and is being monitored by security strengthening of existing public road network shall personnel at the exit gate. be borne by the PP in consultation with nodal State Vehicular emissions will be regularly Govt. Department. Transportation of minerals monitored. Also, Security personnel are through road movement in case of existing village/ also do not allow the vehicles to enter into rural roads shall be allowed in consultation with the mines without having valid PUC. nodal State Govt. Department only after required strengthening such that the carrying capacity of Regular Monitoring of ambient air quality roads is increased to handle the traffic load. The parameters being carried out. Monitoring pollution due to transportation load on the reports are attached as **Annexure 1a.** environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centres. 41 The Main haulage road within the mine lease Existing Fixed water sprinkling being should be provided with a permanent water maintained and operated. For, additional sprinkling arrangement for dust suppression. Other Fixed auto sprinklers on both sides of major haul road and approach roads of the roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling mine is in commissioning phase. However, system. The other areas of dust generation like as an interim arrangement frequency of the Mobile water tankers sprinkling has been crushing zone, material transfer points, material yards etc. should invariably be provided with dust increased to suppress the dust emission suppression arrangements. The air pollution generated due to transportation of vehicles. control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be Mobile water sprinkling arrangement has installed at Crushers, belt- conveyors and other been provided for the haul roads, areas prone to air pollution. The belt conveyor processing area and loading / unloading points to minimize dispersion of air borne should be fully covered to avoid generation of dust while transportation. PP shall take necessary dust particles. measures to avoid generation of fugitive dust emissions. Dust Suppression System (Dry fog system) being provided at all appropriate places of mineral handling plants (crusher & screening plant) and other areas. Same are being maintained for proper dust control. Wet drilling arrangement with acoustic enclosure is in practice to control dust right at the source. VIII. Green Belt More than 2500 Saplings have been 42 The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease planted in FY 2021-22 as per the approved boundary as per the guidelines of CPCB in order to mine plan in the safety zone area and in the arrest pollution emanating from mining operations old dump area. within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the

stipulation made in approved mine plan.

| 43 | The Project Proponent shall carryout plantation/   | Backfilling and reclamation will be carry   |
|----|--|---|
| 15 | afforestation in backfilled and reclaimed area of  | out as per approved mine plan. More than  |
|    | mining lease, around water body, along the   | 2500 Saplings have been planted in FY   |
|    | roadsides, in community areas etc. by planting the   | 2021-22 as per the approved mine plan in  |
|    | native species in consultation with the State Forest   | the safety zone area and in the old dump  |
|    | Department/ Agriculture Department/ Rural  | area.   |
|    | development department/ Tribal Welfare   |   |
|    | Department/ Gram Panchayat such that only those  |   |
|    | species be selected which are of use to the local  |   |
|    | people. The CPCB guidelines in this respect shall  |   |
|    | also be adhered. The density of the trees should be  |   |
|    | around 2500 saplings per Hectare. Adequate   |   |
|    | budgetary provision shall be made for protection and care of trees.  |   |
| 44 | The Project Proponent shall make necessary   | Noted and will be complied  |
|    | alternative arrangements for livestock feed by   |   |
|    | developing grazing land with a view to compensate  |   |
|    | those areas which are coming within the mine   |   |
|    | lease. The development of such grazing land shall  |   |
|    | be done in consultation with the State Government.<br>In this regard, Project Proponent should essentially |   |
|    | implement the directions of the Hon'ble Supreme  |   |
|    | Court with regard to acquisition of grazing land.  |   |
|    | The sparse trees on such grazing ground, which   |   |
|    | provide mid-day shelter from the scorching sun,  |   |
|    | should be scrupulously guarded/ protected against  |   |
|    | felling and plantation of such trees should be   |   |
|    | promoted.  |   |
| 45 | The Project Proponent shall undertake all  | No Wild Life Sanctuary/Tiger  |
|    | precautionary measures for conservation and  | Reserve/National Park/ Elephant corridor  |
|    | protection of endangered flora and fauna and   | within the core as well as within the buffer  |
|    | Schedule-I species during mining operation. A  | 1 0   |
|    | Wildlife Conservation Plan shall be prepared for   | As regards to Site specific conservation  |
|    | the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be     | plan, we would like to submit that we have submitted new Site Specific Conservation |
|    | approved by Chief Wild Life Warden of the State  | plan for approval from PCCF (WL) cum  |
|    | Govt.  | Chief Wildlife Warden and same will be  |
|    |  | submitted.  |
| 46 | And implemented in consultation with the State   | No Wild Life Sanctuary/Tiger  |
|    | Forest and Wild Life Department. A copy of   | Reserve/National Park/ Elephant corridor  |
|    | Wildlife Conservation Plan and its implementation  | within the core as well as within the buffer  |
|    | status (annual) shall be submitted to the Regional   | zone of the project.  |
|    | Office of the Ministry.  | As regards to Site specific conservation  |
|    |  | plan, we would like to submit that we have  |
|    |  | submitted new Site Specific Conservation  |
|    |  | plan for approval from PCCF (WL) cum  |
|    |  | Chief Wildlife Warden and same will be submitted.                                   |
|    |  |   |
|    | IX. Public hearing and human   |   |
| 47 | The Project Proponent shall appoint an   | Workers engaged in Operations are   |
| 47 | The Project Proponent shall appoint an Occupational Health Specialist for Regular as well                  | Workers engaged in Operations are provided with PPE's. Besides this, acoustic       |
| 47 | The Project Proponent shall appoint an   | Workers engaged in Operations are   |

guidelines. The records shall be maintained level is being monitored by Noise Level properly. PP shall also carryout Occupational Meter; the results reveal that the parameter health check-ups in respect of Workers which are is well within the prescribed norms. having ailments like BP, diabetes, habitual Initial Medical Examination & Periodical smoking, etc. The check-ups shall be undertaken Medical Examination of the workers once in six months and necessary remedial/ engaged in the project are being carried preventive measures be taken. A status report on periodically and records are maintained. the same may be sent to MoEFCC Regional Office A medical dispensary with full time Doctor and DGMS on half-yearly basis. has been appointed at mine area for the health check-up of employees and also the locals. Medical health camps will be organized in the nearby villages after the ongoing Covid-19 pandemic over and as per the Guidelines of State Government. Being complied. 48 The demonstrate Project Proponent must commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighbourhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years The Proponent shall carry out Occupational health 49 Workers engaged in **Operations** provided with PPE's. Besides this, acoustic surveillance which be a part of HRA and include Biological Monitoring where practical enclosures are provided for all machines feasible, and the tests and investigations relevant to operating within the mines. The noise the exposure (e.g. for Dust a X-Ray chest; For level is being monitored by Noise Level Noise Audiometric; for Lead Exposure Blood Meter; the results reveal that the parameter Lead. For Welders Full Ophthalmologic is well within the prescribed norms. Initial Medical Examination & Periodical Assessment; for Manganese Miners a complete Medical Examination of the workers Neurological Assessment by Certified a Neurologist, and Manganese (Pin) Estimation in engaged in the project are being carried periodically and records are maintained. Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible A medical dispensary with full time Doctor person. Except routine tests all tests would be has been appointed at mine area for the

carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years,

including the results of and the records of Physical

examination and tests. The record of exposure due

health check-up of employees and also the

Medical health camps will be organized in

the nearby villages after the ongoing

locals.

|    | to materials like Asbestos, Hard Rock f4ining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X- Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).  | Covid-19 pandemic over and as per the Guidelines of State Government.  |
|----|--|--|
| 50 | The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities, (c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEVI), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications. | Workers engaged in Operations are provided with PPE's. Besides this, acoustic enclosures are provided for all machines operating within the mines. The noise level is being monitored by Noise Level Meter; the results reveal that the parameter is well within the prescribed norms. Initial Medical Examination & Periodical Medical Examination of the workers engaged in the project are being carried periodically and records are maintained. A medical dispensary with full time Doctor has been appointed at mine area for the health check-up of employees and also the locals.  Medical health camps will be organized in the nearby villages after the ongoing Covid-19 pandemic over and as per the Guidelines of State Government. |
| 51 | The Projects Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.   | Personnel working in dusty areas are provided with nose mask, safety glass and ear plug with proper safety training.  Dust Suppression System (Dry fog system) being provided at all appropriate places of mineral handling plants (crusher & screening plant) and other areas. Same are being maintained for proper dust control.  Pre-placement medical examination and periodical examination of the workers engaged are being conducted & record maintained.   |
| 52 | Project Proponent shall make provision for the housing for workers/labours or shall construct labour camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form   | No colony provided in the working lease area. STP will be provided during colony construction.   |

|    |  | 1   |
|----|--|---|
|    | of temporary structures which can be removed after<br>the completion of the project related infrastructure.<br>The domestic waste water should be treated with<br>STP in order to avoid contamination of<br>underground water.   |   |
| 53 | The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.  | Noted. TOR has been approved same will be complied after obtaining the new EC   |
|    | X. Corporate Environment Respo   | onsibility (CER)  |
| 54 | The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's 0. M No 22-65/20 17-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement. | This instant mining lease was executed on 27.06.2020 and the working has been continuing with the strength of vesting order.  We are in a process to obtain all the statutory clearances afresh. It would be pertinent to mention that TOR had been approved on 31.12.2020 & EIA/EMP report is under preparation and same will be complied after public hearing and as per new EC for proposed project. |
| 55 | Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office.  | We are in process for implementation of various measures undertaken for environment management plan since the operation started in July 2020.  Details of environmental management measures expenditure (head wise breakup) has already been submitted along with last half yearly EC compliance report vide letter dated 21.05.2021.   |
|    | XI. Miscellaneous  |   |
| 56 | The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five Years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.  | DGPS Surveyed Mining lease boundary superimposed on High Resolution Satellite image of Narayanposhi Iron & Mn Ore Mine duly vetted by M/s ORSAC has already been submitted along with last half yearly EC compliance report vide letter dated 21.05.2021.   |
| 57 | The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.   | Noted and being complied.   |
| 58 | The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC &its concerned  | Being complied. Last six monthly compliance report along with monitoring data vide letter no JSW/S/O/2021/122 dated 21.05.2021 was submitted to   |

|    | Regional Office, Central Pollution Control Board    | Regional Office, MOEF&CC,                    |
|----|---|--|
|    | and State Pollution Control Board.                  | Bhubaneswar, Zonal Office, CPCB,             |
|    |   | Kolkata, MS and RO Offices SPCB,             |
|    |   | Odisha.                                      |
| 59 | A separate Environmental Management Cell' with      | A dedicated Environment Management           |
|    | suitable qualified manpower should be set-up        | Cell under the leadership of AGM             |
|    | under the control of a Senior Executive. The Senior | Environment has been formed and              |
|    | Executive shall directly report to Head of the      | reporting to Mine Senior Management i.e.     |
|    | Organization. Adequate number of qualified          | Head of Operations (AVP).                    |
|    | Environmental Scientists and Mining Engineers       |  |
|    | shall be appointed and submit a report to RO,       |  |
|    | MoEF&CC.  |  |
| 60 | The concerned Regional Office of the MoEF&CC        | We will extend full co-operation to the      |
|    | shall randomly monitor compliance of the            | officers of the Regional Office during their |
|    | stipulated conditions. The project authorities      | visit and furnish the required data,         |
|    | should extend full cooperation to the MoEF & CC     | information and monitoring reports.          |
|    | officer(s) by furnishing the requisite data /       |  |
|    | information /monitoring reports.                    |  |

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

AAQ REPORT

APRIL-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

REPORT NO: JSW/NPIMO/ENV/2021/AAQ/2021-04 Issued to: Reporting Analysis 03.05.2021 01.05.2021Date Starting on Narayanposhi Iron & Sample Analysis 01.05.202103.05.2021 Manganese Ore Mines Completed on Received on of Sample Description: Ambient Air Quality M/a JSW Steel Ltd. Location : Mines Office Area Month : April-2021 Sample Collected by: B.S. Envi-Tech (P) Ltd.,

| S.NO | DATE                             | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>(μg/m³) | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m³]               |
|------|----------------------------------|--|---|----------------------------|---|-----------------------------|
|      | Protocol                         | IS:5182<br>Part 23                       | IS:5182<br>Part 24                        | IS:5182<br>Part 2          | 18:5182<br>Part 6                       | BSET SOP<br>AA-09           |
| L    | 01/04/2021                       | 63                                       | 22  | 9.3                        | 10.9                                    | 0.41                        |
| 2    | 02/04/2021                       | 57                                       | 19  | 10.1                       | 11.7                                    | 0.56                        |
| 3    | 03/04/2021                       | 66                                       | 23  | 9.9                        | 11.4                                    | 0.49                        |
| 4    | 04/04/2021                       | 59                                       | 2.0                                       | 10.4                       | 11.9                                    | 0.53                        |
| S    | 05/04/2021                       | 68                                       | 24  | 9.5                        | 10.8                                    | 0.42                        |
| 6    | 06/04/2021                       | 61                                       | 21  | 11.1                       | 12.7                                    | 0.56                        |
| 7    | 07/04/2021                       | 72                                       | 27  | 11.5                       | 13.1                                    | 0.61                        |
| 8    | 08/04/2021                       | 56                                       | 19  | 10.8                       | 12.3                                    | 0.48                        |
| 9    | 09/04/2021                       | 59                                       | 21  | 11.1                       | 12.7                                    | 0.85                        |
| 10   | 10/04/2021                       | (4                                       | 23  | 10.4                       | 11.8                                    | 0.43                        |
| 11   | 11/04/2021                       | 67                                       | 25  | 11.7                       | 13.2                                    | 0.59                        |
| 12   | 12/04/2021                       | 59                                       | 20  | 10.2                       | 11.9                                    | 0.52                        |
| 13   | 13/04/2021                       | 62                                       | 21  | 11.3                       | 12.9                                    | 0.45                        |
| 14   | 14/04/2021                       | 69                                       | 25  | 11.8                       | 13.5                                    | 0.58                        |
| 15   | 15/04/2021                       | 58                                       | 20  | 11.1                       | 12.7                                    | 0.41                        |
| (24  | Standards<br>4 hourly<br>andard) | 100<br>[µg/zn³]                          | 60<br>[μg/m³]                             | 80<br>[μg/m³]              | 80<br>[µg/m²]                           | 02<br>[mg/m³]<br>(6 hourly) |

Legend:PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO2-Sulphur Dioxide

NO2- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory

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Te angana, India

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CIN No. : LI74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### **TEST REPORT**

REPORT NO: JSW/NPIMO/ENV/2021/AAQ/2021-04 Issued to: Analysis Reporting 03.05.2021 01.05.2021Date Starting on Narayanposhi Iron & Sample: Analysis 01.05.202103.05.2021Manganese Ore Mines Received on Completed on of Sample Description: Ambient Air Quality M/s JSW Steel Ltd. Location : Mines Office Area Month : April-2021 Sample Collected by: B.S. Envi-Tech (P) Ltd.,

| S.NO    | DATE                             | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[µg/m³] | SO <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>(μg/m³) | CO<br>[mg/m³]               |
|---------|----------------------------------|-----------------------------|------------------------------|----------------------------|----------------------------|-----------------------------|
|         | Protocol                         | IS:5182<br>Part 23          | IS:5182<br>Part 24           | 18:5182<br>Part 2          | 18:5182<br>Part 6          | BSET SOP                    |
| 16      | 16/04/2021                       | 71                          | 27                           | 10.6                       | 11.8                       | 0.64                        |
| 17      | 17/04/2021                       | 56                          | 18                           | 11.4                       | 13                         | 0.44                        |
| 18      | 18/04/2021                       | 66                          | 23                           | 10.3                       | 11.7                       | 0.52                        |
| 19      | 19/04/2021                       | .59                         | 21                           | 9.7                        | 11 4                       | 0.49                        |
| 20      | 20/04/2021                       | 68                          | 24                           | 10.9                       | 12.5                       | 0.65                        |
| 21      | 21/04/2021                       | 61                          | 22                           | 11.5                       | 13.2                       | 0.51                        |
| 22      | 22/04/2021                       | 74                          | 27                           | 10.2                       | 11.9                       | 0.43                        |
| 23      | 23/04/2021                       | ы                           | 22                           | 12.1                       | 13.7                       | 0.61                        |
| 24      | 24/04/2021                       | 68                          | 25                           | 11.6                       | 12.8                       | 0.56                        |
| 25      | 25/04/2021                       | 59                          | 20                           | 112                        | 12.9                       | 0.42                        |
| 26      | 26/04/2021                       | 56                          | 18                           | 10.7                       | 12.2                       | 0.67                        |
| 27      | 27/04/2021                       | 63                          | 23                           | 11.3                       | 12.7                       | 0.46                        |
| 28      | 28/04/2021                       | 67                          | 24                           | 10. L                      | 11.6                       | 0.38                        |
| 29      | 29/04/2021                       | 55                          | 18                           | 9.4                        | 10.9                       | 0.42                        |
| 30      | 30/04/2021                       | 61                          | 21                           | 10.8                       | 12.2                       | 0.51                        |
| Average |                                  | 63                          | 22                           | 10.7                       | 12.2                       | 0.51                        |
| (24     | Standards<br>4 hourly<br>andard) | 100<br>[µg/m³]              | 60<br>[µg/m³]                | 80<br>[µg/m³]              | 80<br>[µg/m³]              | 02<br>[mg/m³]<br>(8 hourly) |

Legend:PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

802-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:            | JSW/NPIMO,          | /ENV/2021/AAC            | /2021-04   | Issued to:                                 |
|-----------------------|---------------------|--------------------------|------------|--|
| Reporting<br>Date     | 03.05.2021          | Analysis<br>Starting on  | 01.05.2021 |  |
| Sample<br>Received on | 01.05.2021          | Analysis<br>Completed on | 03.05.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>iption:</b> Ambi | ent Air Quality          |            | M/s JSW Steel Ltd.                         |
| Location              | m/s dow alcei bid.  |                          |            |  |
| Month                 |                     |                          |            |  |
| Sample Collec         | eted by: B.S.       | Envi-Tech (P) Ltd        | .,         |  |

| S.NO | DATE                             | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | РМ <sub>2.5</sub><br>[дg/m³] | 8O₂<br>[μg/m³]    | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|------|----------------------------------|--|------------------------------|-------------------|----------------------------|-----------------------------|
|      | Protocol                         | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:5182<br>Part 2 | IS:5182<br>Part 6          | BSET SOP                    |
| 1    | 01/04/2021                       | 69                                       | 25                           | 10.6              | 12.1                       | 0.44                        |
| 2    | 02/04/2021                       | 75                                       | 27                           | 11.+              | 12.9                       | 0.57                        |
| 3    | 03/04/2021                       | 61                                       | 22                           | 10.9              | 12.3                       | 0.49                        |
| 4    | 04/04/2021                       | 58                                       | 20                           | 111               | 12.7                       | 0.61                        |
| 5    | 05/04/2021                       | 63                                       | 22                           | 11.7              | 13.1                       | 0,43                        |
| 6    | 06/04/2021                       | 60                                       | 21                           | 10.2              | 11.8                       | 0.37                        |
| 7    | 07/04/2021                       | 68                                       | 24                           | 9.9               | 11.4                       | 0.48                        |
| 8    | 08/04/2021                       | 64                                       | 22                           | 10.3              | 11.9                       | 0.52                        |
| g    | 09/04/2021                       | 70                                       | 26                           | 10.8              | 12.3                       | 0.66                        |
| 10   | 10/04/2021                       | 62                                       | 21                           | 11.2              | 12.7                       | 0.46                        |
| ll   | 11/04/2021                       | 59                                       | 20                           | 9.1               | 10.8                       | 0.61                        |
| 12   | 12/04/2021                       | 73                                       | 28                           | 8.9               | 10.4                       | 0.53                        |
| 13   | 13/04/2021                       | 61                                       | 21                           | 9.5               | 10.9                       | 0.58                        |
| 14   | 14/04/2021                       | 77                                       | 29                           | 10.1              | 11.6                       | 0.69                        |
| 15   | 15/04/2021                       | 65                                       | 23                           | 9.2               | 10.9                       | 0.55                        |
| (24  | Standards<br>4 hourly<br>andard) | 100<br>[µg/m³]                           | 60<br>[µg/тո³]               | [hā\æ3 <br>80     | 80<br>[µg/m³]              | 02<br>[mg/m²]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM2.5-Particulate Matter(Size Less than 2.5µm)

80<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory.

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CIN No. U74210TG:999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,           | /ENV/2021/AAC            | /2021-04   | Issued to:                                 |
|-----------------------|----------------------|--------------------------|------------|--|
| Reporting<br>Date     | 03.05.2021           | Analysis<br>Starting on  | 01.05.2021 |  |
| Sample<br>Received on | 01.05.2021           | Analysis<br>Completed on | 03.05.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>iption:</b> Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | M/2 OBW Bicel Bid.   |                          |            |  |
| Month                 |                      |                          |            |  |
| Sample Collec         | cted by: B.S.        | Envi-Tech (P) Ltd        | -,         |  |

| S.NO        | S.NO                           | DATE               | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | 8O <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m <sup>2</sup> ] | CO<br>[mg/m <sup>3</sup> ] |
|-------------|--------------------------------|--------------------|--|---|---|---|----------------------------|
|             | Protocol                       | IS:5182<br>Part 23 | IS:5182<br>Part 24                       | 18:5182<br>Part 2                         | IS:5182<br>Part 6                       | BSET SOP                                |                            |
| 16          | 16/04/2021                     | 62                 | 22                                       | 11.1                                      | 12.5                                    | 0.51                                    |                            |
| 17          | 17/04/2021                     | 57                 | 20                                       | 11.7                                      | 13 3                                    | 0.44                                    |                            |
| 18          | 18/04/2021                     | 68                 | 23                                       | 8.9                                       | 10.6                                    | 0.63                                    |                            |
| 19          | 19/04/2021                     | 75                 | 28                                       | 12.2                                      | 13.7                                    | 0.49                                    |                            |
| 20          | 20/04/2021                     | 64                 | 22                                       | 9.6                                       | 11.1                                    | 0.65                                    |                            |
| 21          | 21/04/2021                     | 67                 | 25                                       | 10.1                                      | 116                                     | 0.46                                    |                            |
| 22          | 22/04/2021                     | 70                 | 26                                       | 10.7                                      | 12.2                                    | 0.53                                    |                            |
| 23          | 23/04/2021                     | 66                 | 24                                       | 9.8                                       | 11 +                                    | 0.69                                    |                            |
| 24          | 24/04/2021                     | 62                 | 22                                       | 10.2                                      | 11.8                                    | 0.54                                    |                            |
| 25          | 25/04/2021                     | 73                 | 26                                       | 9.4                                       | 10.9                                    | 0.61                                    |                            |
| 26          | 26/04/2021                     | 65                 | 24                                       | 9.1                                       | 10.6                                    | 0.56                                    |                            |
| 27          | 27/04/2021                     | 78                 | 30                                       | 10.4                                      | 11.8                                    | 0.43                                    |                            |
| 28          | 28/04/2021                     | 68                 | 24                                       | 10.6                                      | 12.2                                    | 0.58                                    |                            |
| 29          | 29/04/2021                     | 61                 | 21                                       | 9.7                                       | 11.2                                    | 0.63                                    |                            |
| 30          | 30/04/2021                     | 58                 | 20                                       | 9   | 10.5                                    | 0.54                                    |                            |
| Average     |                                | 66                 | 24                                       | 10.2                                      | 11.7                                    | 0.54                                    |                            |
| NAAQ<br>(24 | Standards<br>hourly<br>andard) | 100<br>[µg/m³]     | 60<br>[μg/m³]                            | 80<br>[µg/m³]                             | 80<br>[μg/m³]                           | 02<br>[mg/m³]<br>(8 hourly)             |                            |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory

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CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,          | /ENV/2021/AAC            | 2/2021-04  | Issued to:                                 |
|-----------------------|---------------------|--------------------------|------------|--|
| Reporting<br>Date     | 03.05.2021          | Analysis<br>Starting on  | 01.05.2021 |  |
| Sample<br>Received on | 01.05.2021          | Analysis<br>Completed on | 03.05.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>dption:</b> Ambi | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | MI TOOM Steel Bid.  |                          |            |  |
| Month                 |                     |                          |            |  |
| Sample Collect        | cted by: B.S.       | Envi-Tech (P) Ltd        | 0          |  |

| S.NO | DATE                             | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[µg/m³] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m³] | CO [mg/m³]                               |
|------|----------------------------------|--|------------------------------|---|----------------------------|--|
|      | Protocol                         | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                                 |
|      | 01/04/2021                       | 66                                       | 25                           | 10.7                                    | 12. I                      | 0.57                                     |
| 2    | 02/04/2021                       | 73                                       | 28                           | 11.5                                    | 13.2                       | 0.62                                     |
| 3    | 03/04/2021                       | 62                                       | 22                           | 12.1                                    | 13.6                       | 0.51                                     |
| 4    | 04/04/2021                       | 58                                       | 21                           | 11,8                                    | 13.1                       | 0.48                                     |
| 5    | 05/04/2021                       | 67                                       | 25                           | 11.3                                    | 12.6                       | 0.67                                     |
| 6    | 06/04/2021                       | 74                                       | 28                           | 10.9                                    | 12.3                       | 0.53                                     |
| 7    | 07/04/2021                       | 65                                       | 23                           | 11.6                                    | 12.9                       | 0.44                                     |
| 8    | 08/04/2021                       | 69                                       | 25                           | 11.2                                    | 12.5                       | 0.72                                     |
| 9    | 09/04/2021                       | 77                                       | 30                           | 12.1                                    | 13.6                       | 0.49                                     |
| 10   | 10/04/2021                       | 63                                       | 23                           | 10.5                                    | 11.8                       | 0.58                                     |
| 11   | 11/04/2021                       | 69                                       | 25                           | 10.8                                    | 12.3                       | 0.65                                     |
| 12   | 12/04/2021                       | 57                                       | 20                           | 11.4                                    | 12.7                       | 0.53                                     |
| 13   | 13/04/2021                       | 68                                       | 26                           | t1.1                                    | 12.5                       | 0.46                                     |
| 14   | 14/04/2021                       | 72                                       | 28                           | 12.2                                    | 13.9                       | 0.56                                     |
| 15   | 15/04/2021                       | 80                                       | 31                           | 11.5                                    | 12.8                       | 0.61                                     |
| (24  | Standards<br>4 hourly<br>andard) | 100<br>[µg/m³]                           | 60<br>[μg/m³]                | 80<br>[μg/m2 <sup>3</sup> ]             | 80<br>[µg/ɪn³]             | 02<br>[mg/m <sup>3</sup> ]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM2.5-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO2- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

"Complaints Register & avaitable at Laboratory,

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Wabsite : www.bsenvitech.com CIN No. ± J74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:            | JSW/NP(MO.         | /ENV/2021/AAC                    | 2/2021-04  | Issued to:                                 |  |  |
|-----------------------|--------------------|----------------------------------|------------|--|--|--|
| Reporting<br>Date     | 03.05.2021         | Analysis<br>Starting on          | 01.05.2021 |  |  |  |
| Sample<br>Received on | 01.05.2021         | Analysis Completed on 03.05.2021 |            | Narayanposhi Iron &<br>Manganese Ore Mines |  |  |
| Sample Descr          | iption: Ambie      | ent Air Quality                  |            | of<br>M/s JSW Steel Ltd.                   |  |  |
| Location              | M/# JSW Steel Ltd. |                                  |            |  |  |  |
| Month                 |                    |                                  |            |  |  |  |
| Sample Collec         | cted by: B.S.      | Envi-Tech (P) Ltd                |            |  |  |  |

| S.NO                                      | DATE<br>Protocol | PM <sub>10</sub><br>[μg/m³]<br>IS:5182<br>Part 23 | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ]<br>IS:5182<br>Part 24 | SO <sub>2</sub><br>[µg/m <sup>3</sup> ]<br>IS:5182<br>Part 2 | NO <sub>2</sub><br>(µg/m³)<br>IS:5182<br>Part 6 | CO<br>[mg/m <sup>2</sup> ]<br>BSET SOP<br>AA-09 |
|---|------------------|---|---|--|---|---|
|   |                  |   |   |  |   |   |
| 17  | 17/04/2021       | 66  | 23  | 11.9   | 13.3  | 0.59  |
| 18  | 18/04/2021       | 58  | 20  | 11.2   | 12.7  | 0.71  |
| 19  | 19/04/2021       | 74  | 29  | 10.7   | 12.2  | 0.64  |
| 20  | 20/04/2021       | 66  | 24  | 11.9   | 13.6  | 0.73  |
| 21  | 21/04/2021       | 59  | 21  | 12.2   | 13.8  | 0.69  |
| 22  | 22/04/2021       | 79  | 30  | 11.4   | 12.9  | 0.55  |
| 23  | 23/04/2021       | 7]  | 28  | 11.7   | 13  | 0.51  |
| 24  | 24/04/2021       | 63  | 23  | 11.1   | 12.5  | 0.67  |
| 25  | 25/04/2021       | 66  | 25  | 10.5   | 11.8  | 0.54  |
| 26  | 26/04/2021       | 70  | 27  | 11.8   | 13.3  | 0.63  |
| 27  | 27/04/2021       | 63  | 24  | 12.5   | 13.9  | 0.46  |
| 28  | 28/04/2021       | 77  | 29  | 12.1   | 13.7  | 0.71  |
| 29  | 29/04/2021       | 65  | 23  | 11.3   | 12.8  | 0.68  |
| 30  | 30/04/2021       | 60  | 21  | 12.4   | 13.9  | 0.6   |
| Average                                   |                  | 68  | 25  | 11.4   | 12.9  | 0.59  |
| NAAQ Standards<br>(24 hourly<br>standard) |                  | 100<br>[µg/m³]                                    | 60<br>[µg/та³]  | 80<br>[µg/m³]  | 80<br>[µg/m³]                                   | 02<br>[mg/m³]<br>(8 hourly)                     |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory,

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CIN No : U74210TG1999PTCC32358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:            | J&W/NPIMO           | /ENV/2021/AAC                  | 2/2021-04  | Issued to:                                 |  |  |
|-----------------------|---------------------|--------------------------------|------------|--|--|--|
| Reporting<br>Date     | 03.05.2021          | Analysis<br>Starting on        | 01.05.2021 |  |  |  |
| Sample<br>Received on | 01.05.2021          | Analysis Completed on 03.05.20 |            | Narayanposhi Iron &<br>Manganese Ore Mines |  |  |
| Sample Descr          | iption: Ambi        | ent Air Quality                |            | of<br>M/s JSW Steel Ltd.                   |  |  |
| Location              | BIJS JOH Steel Did. |                                |            |  |  |  |
| Month                 |                     |                                |            |  |  |  |
| Sample Collec         | eted by: B.S.       | Envi-Tech (P) Ltd              |            |  |  |  |

| S.NO | DATE                           | PM <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]  |
|------|--------------------------------|--|---|----------------------------|---|-----------------------------|
|      | Protocol                       | IS:5182<br>Part 23                       | f8:5182<br>Part 24                        | IS:5182<br>Part 2          | IS:5182<br>Part 6                       | BSET SOP                    |
| 1    | 01/04/2021                     | 61                                       | 22  | 11.4                       | 13.1                                    | 0.77                        |
| 2    | 02/04/2021                     | 77                                       | 29  | 11.9                       | 13.6                                    | 0.63                        |
| 3    | 03/04/2021                     | 68                                       | 25  | 10.6                       | 11.9                                    | 0.59                        |
| 4    | 04/04/2021                     | 62                                       | 23  | 11.3                       | 12.7                                    | 82.0                        |
| 5    | 05/04/2021                     | 71                                       | 26  | 12.1                       | 13.6                                    | 0.44                        |
| ō    | 06/04/2021                     | 80                                       | 31  | 11.7                       | 13.1                                    | 0.52                        |
| 7    | 07/04/2021                     | 67                                       | 24  | 11.1                       | 12.7                                    | 0.75                        |
| 8    | 08/04/2021                     | 76                                       | 28  | 12.4                       | 13.8                                    | 0.49                        |
| 9    | 09/04/2021                     | 69                                       | 26  | 11.5                       | 12.9                                    | 0.56                        |
| 10   | 10/04/2021                     | 60                                       | 21  | 12.2                       | 13.6                                    | 0.63                        |
| 11   | 11/04/2021                     | 75                                       | 27  | 13.6                       | [4.]                                    | 0.57                        |
| 12   | 12/04/2021                     | 61                                       | 22  | 11.8                       | 13.3                                    | 0.62                        |
| 13   | 13/04/2021                     | 73                                       | 25  | 12.3                       | 13.8                                    | 0.69                        |
| 14   | 14/04/2021                     | 68                                       | 24  | 11.5                       | 12.9                                    | 0.75                        |
| 15   | 15/04/2021                     | 62                                       | 23  | 11.9                       | 13.3                                    | 0.61                        |
| 24   | Standards<br>hourly<br>andard) | 100<br>[µg/m³]                           | 60<br>[µg/ m³]                            | 80<br>[µg/m³]              | 80<br>[μg/m³]                           | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory.

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CIN No.: U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO     | /ENV/2021/AAQ            | 2/2021-04  | Issued to:                                 |
|-----------------------|---------------|--------------------------|------------|--|
| Reporting<br>Date     | 03.05.2021    | Analysis<br>Starting on  | 01.05.2021 |  |
| Sample<br>Received on | 01.05.2021    | Analysis<br>Completed on | 03.05.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambi  | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | : Gate f      | No-01                    |            | M/B ODW OCCCI LCU.                         |
| Month                 | : April-2     | 2021                     |            |  |
| Sample Collect        | cted by: B.S. | Envi-Tech (P) Ltd        | .,         |  |

| S.NO        | DATE                             | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | SO₂<br>[µg/tn³]   | NO <sub>2</sub><br>[µg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]  |
|-------------|----------------------------------|--|---|-------------------|---|-----------------------------|
|             | Protocol                         | IS:5182<br>Part 23                       | IS:5182<br>Part 24                        | IS:5182<br>Part 2 | IS:5182<br>Part 6                       | BSET SOP                    |
| 16          | 16/04/2021                       | 77                                       | 29  | 12.4              | 13.8                                    | 0.55                        |
| 17          | 17/04/2021                       | 69                                       | 27  | 11.6              | 13.2                                    | 0.48                        |
| 18          | 18/04/2021                       | 66                                       | 25  | 11.3              | 12.7                                    | 0.58                        |
| 19          | 19/04/2021                       | 71                                       | 27  | 12.1              | 13.6                                    | 0.41                        |
| 20          | 20/04/2021                       | 62                                       | 22  | 11.4              | 12.9                                    | 0.72                        |
| 21          | 21/04/2021                       | 65                                       | 24  | 10.9              | 12.3                                    | 0.66                        |
| 22          | 22/04/2021                       | 76                                       | 30  | 11.8              | 13.4                                    | 0.59                        |
| 23          | 23/04/2021                       | 70                                       | 26  | 12.2              | 13.7                                    | 0.5                         |
| 24          | 24/04/2021                       | 77                                       | 31  | 11.4              | 12.9                                    | 0.63                        |
| 25          | 25/04/2021                       | 64                                       | 23  | 10.7              | 12.2                                    | 0.71                        |
| 26          | 26/04/2021                       | 61                                       | 21  | 11.6              | 12.9                                    | 0.65                        |
| 27          | 27/04/2021                       | 71                                       | 26  | 11.3              | 12.7                                    | 0.58                        |
| 28          | 28/04/2021                       | 77                                       | 31  | 12                | 13.4                                    | 0.67                        |
| 29          | 29/04/2021                       | 63                                       | 23  | 12.4              | 13.8                                    | 0.74                        |
| 30          | 30/04/2021                       | 70                                       | 26  | 11.7              | 13.3                                    | 0.53                        |
| A           | verage                           | 69                                       | 26  | 11.7              | 13.1                                    | 0.61                        |
| NAAQ<br> 24 | Standards<br>4 hourly<br>andard) | 100<br>(μg/m³]                           | 60<br>[μ <b>g/m</b> ³]                    | 80<br>[µg/m³]     | 80<br>[µg/m³]                           | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

802-Sulphur Dioxide NO2- Nitrogen Dioxide CO-Carbon Monoxide

orized Signatory

\*Complaints Register is available at Laboratory.

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CIN No. ± U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO.    | /ENV/2021/AAQ            | /2021-04   | Issued to:                                 |
|-----------------------|---------------|--------------------------|------------|--|
| Reporting<br>Date     | 03.05.2021    | Analysis<br>Starting on  | 01.05.2021 |  |
| Sample<br>Received on | 01.05.2021    | Analysis<br>Completed on | 03.05.2021 | Narsyanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | : Kasira      | Basti                    |            | m/s obw steer Eta.                         |
| Month : April-2021    |               |                          |            |  |
| Sample Collec         | eted by: B.S. | Envi-Tech (P) Ltd        | .,         |  |

| S.NO | DATE                        | PM <sub>10</sub><br>(μg/m <sup>3</sup> ) | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m³]               |
|------|-----------------------------|--|---|---|----------------------------|-----------------------------|
|      | Protocol                    | IS:5182<br>Part 23                       | IS:5182<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                    |
| 1    | 07/04/2021                  | 59                                       | 21  | 10.6                                    | 12.1                       | 0.66                        |
| 2    | 08/04/2021                  | 66                                       | 24  | 11.2                                    | 12.8                       | 0.51                        |
| 3    | 14/04/2021                  | 55                                       | 20  | 11,7                                    | 13.1                       | 0.48                        |
| 4    | 15/04/2021                  | 69                                       | 27  | 9.9                                     | 11.4                       | 0.57                        |
| 5    | 21/04/2021                  | 61                                       | 2.3                                       | 11.3                                    | 12.7                       | 0.43                        |
| 6    | 22/04/2021                  | 57                                       | 20  | 10.8                                    | 12.2                       | 0.62                        |
| 7    | 28/04/2021                  | 63                                       | 22  | 10.1                                    | 11.5                       | 0.46                        |
| 8    | 29/04/2021                  | 61                                       | 21  | 11                                      | 12.4                       | 0.41                        |
| - /  | verage                      | 62                                       | 22  | 10.8                                    | 12.2                       | 0.51                        |
|      | Standards<br>orly standard) | 100<br>[µg/m3]                           | 60<br>[µg/m3]                             | 80<br>[µg/m3]                           | 80<br>[µg/m3]              | 02<br>[mg/m3]<br>(8 hourly) |

Legend; PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

80<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Bignatory

\*Complaints Register is available at Laboratory.

Email : lab@bsenvitech.com Website : www.bsenvitech.com

CIN No.: U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO     | /ENV/2021/AAQ            | /2021-04   | Issued to:                                 |
|-----------------------|---------------|--------------------------|------------|--|
| Reporting<br>Date     | 03.05.2021    | Analysis<br>Starting on  | 01.05.2021 |  |
| Sample<br>Received on | 01.05.2021    | Analysis<br>Completed on | 03.05.2021 | Marayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | : Koira       | Besti                    |            | m/s osw steel btd.                         |
| Month                 | : April-2     | 2021                     |            |  |
| Sample Collec         | cted by: B.S. | Envi-Tech (P) Ltd        | .,         |  |

| S.NO | DATE                        | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/m³] | 8O <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]  |
|------|-----------------------------|--|------------------------------|----------------------------|---|-----------------------------|
|      | Protocol                    | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:51B2<br>Part 2          | IS:5182<br>Part 6                       | BSET SOP                    |
| L    | 07/04/2021                  | 62                                       | 21                           | 11.7                       | 13.3                                    | 0.73                        |
| 2    | 08/04/2021                  | 69                                       | 25                           | 11.3                       | 12.8                                    | 0.62                        |
| 3    | 14/04/2021                  | 58                                       | 21                           | 10.9                       | 12.3                                    | 0.55                        |
| 4    | 15/04/2021                  | 72                                       | 28                           | 11.2                       | 12.7                                    | 0.69                        |
| 5    | 21/04/2021                  | 66                                       | 24                           | 10.4                       | 118                                     | 0.48                        |
| 6    | 22/04/2021                  | 61                                       | 21                           | 11.5                       | 12.9                                    | 0.53                        |
| 7    | 28/04/2021                  | 67                                       | 26                           | 11.1                       | 12.4                                    | 0.57                        |
| 8    | 29/04/2021                  | 70                                       | 27                           | 10.6                       | 11.8                                    | 0.65                        |
|      | Average                     | 66                                       | 24                           | 11.0                       | 12.5                                    | 0.60                        |
|      | Stendards<br>urly standerd) | 100<br>[µg/m3]                           | 60<br>[µg/m3]                | 80<br>[μg/m3]              | 80<br>[µg/m3]                           | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is available at Laboratory.

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CIN No. 1J74210TG1999PTC03235R



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO.            | /ENV/2021/AAQ            | /2021-04   | Issued to:                                 |
|-----------------------|-----------------------|--------------------------|------------|--|
| Reporting<br>Date     | 03.05.2021            | Analysis<br>Starting on  | 01.05.2021 |  |
| Sample<br>Received on | 01.05.2021            | Analysis<br>Completed on | 03.05.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>iption</b> : Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | : Segas               | ahi Village              |            | MI S USW STEEL LCG.                        |
| Month                 | : April-2             | 2021                     |            |  |
| Sample Collec         | cted by: B.S.         | Envi-Tech (P) Ltd        | ,          |  |

| S.NO | DATE                        | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>(μg/m³) | 8Ο <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|------|-----------------------------|--|------------------------------|---|----------------------------|-----------------------------|
|      | Protocol                    | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | 18:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                    |
| 1    | 07/04/2021                  | 58                                       | 20                           | 8.8                                     | 10.4                       | 0.47                        |
| 2    | 08/04/2021                  | 55                                       | 19                           | 9.7                                     | 11.3                       | 0.41                        |
| 3    | 14/04/2021                  | 63                                       | 23                           | 10.2                                    | 11.6                       | 0.56                        |
| 4    | 15/04/2021                  | 59                                       | 21                           | 9.9                                     | 11.4                       | 0.43                        |
| 5    | 21/04/2021                  | 67                                       | 24                           | 10.4                                    | 11.8                       | 0.58                        |
| 6    | 22/04/2021                  | 57                                       | 19                           | 8.7                                     | 10.3                       | 0.52                        |
| 7    | 28/04/2021                  | 62                                       | 22                           | 9.5                                     | 10.9                       | 0.49                        |
| 8    | 29/04/2021                  | 59                                       | 20                           | 9.1                                     | 10.6                       | 0.39                        |
| - 1  | lverage                     | 60                                       | 21                           | 9.5                                     | 11.0                       | 0.48                        |
|      | Standards<br>(rly standard) | 100<br>(µg/m3)                           | 60<br>[µg/m.3]               | 80<br>[µg/m3]                           | [h&\w3                     | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM2.5-Particulate Matter(Size Less than 2.5µm)

802-Sulphur Dioxide

NO2- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory

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CIN No. 1074210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,           | /ENV/2021/AAQ            | 2/2021-04  | Issued to:                                 |
|-----------------------|----------------------|--------------------------|------------|--|
| Reporting<br>Date     | 03.05.2021           | Analysis<br>Starting on  | 01.05.2021 |  |
| Sample<br>Received on | 01.05.2021           | Analysis<br>Completed on | 03.05.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>iption:</b> Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | ; Bhanj              | apali Village            |            | BI/S JOW Steel Ltt.                        |
| Month                 | : April-2            | 2021                     |            |  |
| Sample Collec         | eted by: B.S.        | Envi-Tech (P) Ltd        | -,         |  |

| S.NO | DATE                        | PM <sub>10</sub><br>[μg/m <sup>2</sup> ] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|------|-----------------------------|--|---|---|----------------------------|-----------------------------|
|      | Protocol                    | IS:5182<br>Part 23                       | IS:5182<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                    |
| l    | 07/04/2021                  | 69                                       | 26  | 9.9                                     | 11.5                       | 0.53                        |
| 2    | 08/04/2021                  | 57                                       | 21  | 11.2                                    | 12.8                       | 0.49                        |
| 3    | 14/04/2021                  | 64                                       | 23  | 10.1                                    | 11.5                       | 0.56                        |
| 4    | 15/04/2021                  | 59                                       | 22  | 10.8                                    | 12.2                       | 0.44                        |
| 5    | 21/04/2021                  | 1515                                     | 24  | 9.7                                     | 11.1                       | 0.51                        |
| 6    | 22/04/2021                  | 58                                       | 20  | 10.4                                    | 11.9                       | 0.68                        |
| 7    | 28/04/2021                  | 61                                       | 22  | 11.5                                    | 12.8                       | 0.42                        |
| 8    | 29/04/2021                  | 59                                       | 21  | 11.1                                    | 12.6                       | 0.59                        |
| - 1  | verage                      | 62                                       | 23  | 10.5                                    | 12.0                       | 0.52                        |
|      | Standards<br>orly standard) | 100<br>[µg/m3]                           | 60<br>[µg/m3]                             | 80<br>[μg/m3]                           | 80<br>[µg/m3]              | 02<br>(mg/m3 <br>(6 bourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

80<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

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CIN No.: U74210TG1999PT0032356

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

FUGITIVE DUST MONITORING REPORT

APRIL-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:            | JSW/NPIMO,                 | /ENV/2021/FDN            | 1/2021-04  | Issued to:               |
|-----------------------|----------------------------|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 03.05.2021                 | Analysis<br>Starting on  | 01.05.2021 | Narayanposhi Iron        |
| Sample<br>Received on | 01.05.2021                 | Analysis<br>Completed on | 03.05.2021 | & Manganese Ore<br>Mines |
| Sample Descr          | iption: Fugiti             | ve Dust Monitori         | ng         | of<br>M/s JSW Steel Ltd. |
| Location<br>Month     | M/s JSW Steel Ltg          |                          |            |                          |
|                       | : April-2<br>cted by: B.S. | Envi-Tech (P) Ltd        | '1         |                          |

| S.NO | DATE       | SPM (µg/m <sup>3</sup> ) | Standards as per CTO |
|------|------------|--------------------------|----------------------|
| L    | 01/04/2021 | 744                      |                      |
| 2    | 02/04/2021 | 715                      |                      |
| 3    | 03/04/2021 | 723                      |                      |
| 4    | D4/04/2021 | 643                      |                      |
| 5    | 05/04/2021 | 628                      | 1                    |
| 6    | 06/04/2021 | 520                      | 1                    |
| 7    | 07/04/2021 | 732                      | 1                    |
| 8    | 08/04/2021 | 551                      | 1                    |
| 9    | 09/04/2021 | 750                      | 1                    |
| 10   | 10/04/2021 | 739                      | 1                    |
| ll   | 11/04/2021 | 546                      | 1                    |
| 12   | 12/04/2021 | 688                      | 1                    |
| 13   | 13/04/2021 | 638                      | 1200                 |
| 14   | 14/04/2021 | 585                      |                      |
| 15   | 15/04/2021 | 628                      | [µg/m³]              |
| 16   | 16/04/2021 | 597                      |                      |
| 17   | 17/04/2021 | 763                      |                      |
| 18   | 18/04/2021 | 651                      |                      |
| 19   | 19/04/2021 | 550                      | 1                    |
| 20   | 20/04/2021 | 715                      |                      |
| 21   | 21/04/2021 | 745                      | 1                    |
| 22   | 22/04/2021 | 682                      |                      |
| 23   | 23/04/2021 | 864                      |                      |
| 24   | 24/04/2021 | 827                      |                      |
| 25   | 25/04/2021 | 767                      |                      |
| 26   | 26/04/2021 | 815                      |                      |
| 27   | 27/04/2021 | 764                      |                      |
| 28   | 28/04/2021 | 819                      |                      |
| 29   | 29/04/2021 | 673                      |                      |
| 30   | 30/04/2021 | 715                      | 1                    |
| A    | Verage     | 693                      | 1                    |

Legend: SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register is available at Laboratory

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Website: www.bsenvitech.com CIN No.:: U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:            | JSW/NPIMO.                 | /ENV/2021/FDN            | 1/2021-04  | Issued to:                 |
|-----------------------|----------------------------|--------------------------|------------|----------------------------|
| Reporting<br>Date     | 03.05.2021                 | Analysis<br>Starting on  | 01.05.2021 | Narayanposhi Iron          |
| Sample<br>Received on | 01.05.2021                 | Analysis<br>Completed on | 03.05.2021 | & Manganese Ore<br>Mines   |
| Sample Descr          | iption: Fugiti             | ve Dust Monitori         | ng         | of<br>M/= IPIX St==1 [ t-d |
| Location<br>Month     | M/s JSW Steel Ltd.         |                          |            |                            |
| Sample Collec         | : April-2<br>cted by: B.S. | Envi-Tech (P) Ltd        | .,         |                            |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/04/2021 | 825         | d all                |
| 2    | 02/04/2021 | 764         |                      |
| 3    | 03/04/2021 | 815         | 1                    |
| 4    | 04/04/2021 | <b>B2</b> 2 |                      |
| 5    | 05/04/2021 | 643         | 7                    |
| 6    | 06/04/2021 | 685         |                      |
| 7    | 07/04/2021 | 693         | 7                    |
| 8    | 08/04/2021 | 873         |                      |
| 9    | 09/04/2021 | 836         |                      |
| 10   | 10/04/2021 | 747         |                      |
| 11   | 11/04/2021 | 724         |                      |
| 12   | 12/04/2021 | 630         |                      |
| 13   | 13/04/2021 | 831         | 1200                 |
| 14   | 14/04/2021 | 722         |                      |
| 15   | 15/04/2021 | 654         | [µg/m³]              |
| 16   | 16/04/2021 | 817         |                      |
| 17   | 17/04/2021 | 743         | 1                    |
| 18   | 18/04/2021 | 649         | 1                    |
| 19   | 19/04/2021 | 702         | 1                    |
| 20   | 20/04/2021 | 715         |                      |
| 21   | 21/04/2021 | 648         | 1                    |
| 22   | 22/04/2021 | 826         | 1                    |
| 23   | 23/04/2021 | 699         | 1                    |
| 24   | 24/04/2021 | 741         | 1                    |
| 25   | 25/04/2021 | 820         | 1                    |
| 26   | 26/04/2021 | 846         |                      |
| 27   | 27/04/2021 | 823         |                      |
| 28   | 28/04/2021 | 765         |                      |
| 29   | 29/04/2021 | 748         |                      |
| 30   | 30/04/2021 | 728         | 1                    |
| -    | Average    | 751         |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register is available at Laboratory

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:               | JSW/NPIMO,            | /ENV/2021/FDN            | f/2021-04  | Issued to:               |
|--------------------------|-----------------------|--------------------------|------------|--------------------------|
| Reporting<br>Date        | 03.05.2021            | Analysis<br>Starting on  | 01.05.2021 | Narayanposhi Iron        |
| Sample<br>Received on    | 01.05.2021            | Analysis<br>Completed on | 03.05.2021 | & Manganese Ore<br>Mines |
| Sample Descr             | <b>iption:</b> Fugiti | ve Dust Monitori:        | ng         | of                       |
| Location : Crusher Plant |                       |                          |            | M/s JSW Steel Ltd.       |
| Month                    | : April-2             | 2021                     |            |                          |
| Sample Collec            | cted by: B.S.         | Envi-Tech (P) Ltd        | .,         |                          |

| Standards as per CTC | SPM [µg/m³] | DATE       | S.NO |
|----------------------|-------------|------------|------|
| -                    | 813         | 01/04/2021 | ]    |
|                      | 764         | 02/64/2021 | 2    |
|                      | 902         | 03/04/2021 | 3    |
|                      | 926         | 04/04/2021 | 4    |
|                      | 877         | 05/04/2021 | 5    |
|                      | 650         | 06/04/2021 | 6    |
|                      | 903         | 07/04/2021 | 7    |
|                      | 764         | 08/04/2021 | 8    |
|                      | 645         | 09/04/2021 | 9    |
|                      | 783         | 10/04/2021 | 10   |
|                      | 755         | 11/04/2021 | 11   |
|                      | 909         | 12/04/2021 | 12   |
|                      | 695         | 13/04/2021 | 13   |
|                      | 826         | 14/04/2021 | 14   |
|                      | 764         | 15/04/2021 | 15   |
| 1200                 | 830         | 16/04/2021 | 16   |
| [µg/m³]              | 848         | 17/04/202: | 17   |
|                      | 832         | 18/04/2021 | 18   |
|                      | 769         | 19/04/2021 | 19   |
|                      | 815         | 20/04/2021 | 20   |
|                      | 945         | 21/04/2021 | 21   |
|                      | 897         | 22/04/2021 | 22   |
|                      | 872         | 23/04/2021 | 23   |
|                      | 793         | 24/04/2021 | 24   |
|                      | 911         | 25/04/2021 | 25   |
|                      | 882         | 26/04/2021 | 26   |
|                      | 896         | 27/04/2021 | 27   |
|                      | 907         | 28/04/2021 | 28   |
|                      | 924         | 29/04/2021 | 29   |
|                      | 873         | 30/04/2021 | 30   |
|                      | 839         | verage     | A    |

Legend: SPM-Suspended Particulate Matter

uthorized Signatory

'Europlaints Register is available at Laboratory.

Website www.bsenvitech.com

CIN No. U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,             | /ENV/2021/FDB            | 1/2021-04  | Issued to:               |
|-----------------------|------------------------|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 03.05.2021             | Analysis Starting on     | 01.05.2021 | Narayanposhi Iron        |
| Sample<br>Received on | 01.05.2021             | Analysis<br>Completed on | 03.05.2021 | & Manganese Ore<br>Minca |
| Sample Descr          | <b>iption</b> : Fugiti | ve Dust Monitori         | ng         | of                       |
| Location              | M/s JSW Steel Ltd.     |                          |            |                          |
| Month                 | : April-2              | 2021                     |            |                          |
| Sample Collec         | cted by: B.S.          | Envi-Tech (P) Ltd        | .,         |                          |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO         |
|------|------------|-------------|------------------------------|
| 1    | 01/04/2021 | 760         | ĬĞ.                          |
| 2    | 02/04/2021 | 876         | 1                            |
| 3    | 03/04/2021 | 819         | 1                            |
| 4    | 04/04/2021 | 760         | 1                            |
| 5    | 05/04/2021 | 547         | 1                            |
| 6    | 06/04/2021 | 874         | 1                            |
| 7    | 07/04/2021 | 752         |                              |
| 8    | 08/04/2021 | 918         | 1                            |
| 9    | 09/04/2021 | 901         |                              |
| 10   | 10/04/2021 | 675         | 10                           |
| 11   | 11/04/2021 | 876         |                              |
| 12   | 12/04/2021 | 863         | 1                            |
| 13   | 13/04/2021 | 735         |                              |
| 14   | 14/04/2021 | 722         |                              |
| 15   | 15/04/2021 | 925         |                              |
| 16   | 16/04/2021 | 649         | 1200                         |
| 17   | 17/04/2021 | 852         | [μ <b>g/m</b> <sup>3</sup> ] |
| 18   | 18/04/2021 | 815         | 1                            |
| 19   | 19/04/2021 | 765         |                              |
| 20   | 20/04/2021 | 795         | i i                          |
| 21   | 21/04/2021 | 907         |                              |
| 22   | 22/04/2021 | 897         |                              |
| 23   | 23/04/2021 | 872         |                              |
| 24   | 24/04/2021 | 854         |                              |
| 25   | 25/04/2021 | 917         |                              |
| 26   | 26/04/2021 | 910         |                              |
| 27   | 27/04/2021 | 747         |                              |
| 28   | 28/04/2021 | 793         |                              |
| 29   | 29/04/2021 | 840         |                              |
| 30   | 30/04/2021 | 877         |                              |
| - 1  | verage     | 816         |                              |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register is available at Laboratory

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CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,        | /ENV/2021/FDM            | 1/2021-04  | Issued to:               |
|-----------------------|-------------------|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 03.05.2021        | Analysis<br>Starting on  | 01.05.2021 | Narayanposhi Iron        |
| Sample<br>Received on | 01.05.2021        | Analysis<br>Completed on | 03.05.2021 | & Manganese Ore<br>Mines |
| Sample Descr          | iption: Fugiti    | ve Dust Monitori         | ng         | of                       |
| Location              | M/e JSW Steel Ltd |                          |            |                          |
| Month                 | : April-2         | 2021                     |            |                          |
| Sample Collec         | cted by: B.S.     | Envi-Tech (P) Ltd        |            |                          |

| Standards as per CT | 8PM [µg/m³] | DATE       | S.NO |
|---------------------|-------------|------------|------|
|                     | 744         | 01/04/2021 | 1    |
|                     | 684         | 02/04/2021 | 2    |
|                     | 597         | 03/04/2021 | 3    |
|                     | 723         | 04/04/2021 | 4    |
|                     | 802         | 05/04/2021 | 5    |
|                     | 642         | 06/04/2021 | 6    |
|                     | 728         | 07/04/2021 | 7    |
|                     | 649         | 08/04/2021 | 8    |
|                     | 539         | 09/04/2021 | 9    |
|                     | 762         | 10/04/2021 | 10   |
|                     | 821         | 11/04/2021 | 1]   |
|                     | 598         | 12/04/2021 | 12   |
|                     | 750         | 13/04/2021 | 13   |
|                     | 750         | 14/04/2021 | 14   |
|                     | 679         | 15/04/2021 | 15   |
| 1200                | 828         | 16/04/2021 | 16   |
| [µg/m³]             | 813         | 17/04/2021 | 17   |
|                     | 764         | 18/04/2021 | 18   |
|                     | 597         | 19/04/2021 | 19   |
|                     | 597         | 20/04/2021 | 20   |
|                     | 583         | 21/04/2021 | 21   |
|                     | 681         | 22/04/2021 | 22   |
|                     | 692         | 23/04/2021 | 23   |
|                     | 715         | 24/04/2021 | 24   |
|                     | 593         | 25/04/2021 | 25   |
|                     | 679         | 26/04/2021 | 26   |
|                     | 661         | 27/04/2021 | 27   |
|                     | 586         | 28/04/2021 | 28   |
|                     | 718         | 29/04/2021 | 29   |
|                     | 729         | 30/04/2021 | 30   |
|                     | 690         | Lverage    | - 7  |

Legend: SPM-Suspended Particulate Matter

Authorized Signatory

\*Completivis Register is available at Laboratory

Website: www.bservitech.com CIN No.: U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,                               | ENV/2021/FD8             | 1/2021-04  | Issued to:               |
|-----------------------|--|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 03.05.2021                               | Analysis<br>Starting on  | 01.05.2021 | Narayanposhi iron        |
| Sample<br>Received on | 01.05.2021                               | Analysis<br>Completed on | 03.05.2021 | & Manganese Ore<br>Mines |
| Sample Descr          | <b>lption:</b> Fugiti                    | ve Dust Monitori.        | ng         | of                       |
| Location              | M/s JSW Steel Ltd.                       |                          |            |                          |
| Month                 | cation : Waste Dump<br>onth : April-2021 |                          |            |                          |
| Sample Collec         | cted by: B.S.                            | Envi-Tech (P) Ltd        | -+         |                          |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/04/2021 | 733         | (i-                  |
| 2    | 02/04/2021 | 824         |                      |
| 3    | 03/04/2021 | 672         | Īā.                  |
| 4    | 04/04/2021 | 755         |                      |
| 5    | 05/04/2021 | 803         | 16                   |
| fi   | 06/04/2021 | 725         | 1                    |
| 7    | 07/04/2021 | 671         | 1                    |
| 8    | 08/04/2021 | 579         |                      |
| 9    | 09/04/2021 | 864         | 1                    |
| 10   | 10/04/2021 | 834         | 1                    |
| 11   | 11/04/2021 | 597         | 1                    |
| 12   | 12/04/2021 | 780         |                      |
| 13   | 13/04/2021 | 644         |                      |
| 14   | 14/04/2021 | 579         | i e                  |
| 15   | 15/04/2021 | 572         |                      |
| 16   | 16/04/2021 | 794         | 1200                 |
| 17   | 17/04/2021 | 711         | [µg/m³]              |
| 18   | 18/04/2021 | 584         | 1                    |
| 19   | 19/04/2021 | 674         |                      |
| 20   | 20/04/2021 | 592         |                      |
| 21   | 21/04/2021 | 578         |                      |
| 22   | 22/04/2021 | 681         |                      |
| 23   | 23/04/2021 | 628         | 1                    |
| 24   | 24/04/2021 | 606         |                      |
| 25   | 25/04/2021 | 715         |                      |
| 26   | 26/04/2021 | 734         |                      |
| 27   | 27/04/2021 | 587         |                      |
| 28   | 28/04/2021 | 682         |                      |
| 29   | 29/04/2021 | 670         |                      |
| 30   | 30/04/2021 | 743         |                      |
| A    | verage     | 687         |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register is available at Laboratory

Email : lab@bsenvilech.com, info@bsenvitech. Websile : www.bsenvilech.com

Wobsile :: www.bsenvitech.com CIN No. :: U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

AAQ REPORT

**MAY-2021** 



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO            | /ENV/2021/AAC            | 2/2021-05  | Issued to:                                 |
|-----------------------|----------------------|--------------------------|------------|--|
| Reporting<br>Date     | 02.06.2021           | Analysis<br>Starting on  | 01.06.2021 |  |
| Sample<br>Received on | 01.06.2021           | Analysis<br>Completed on | 02.06.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>Iption:</b> Ambi  | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | itt/# 05# Steel Ett. |                          |            |  |
| Month                 |                      |                          |            |  |
| Sample Collect        | cted by: B.S.        | Envi-Tech (P) Ltd        | ân.        |  |

| s.no | DATE                             | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[μg/m³] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|------|----------------------------------|-----------------------------|------------------------------|---|----------------------------|-----------------------------|
|      | Protocol                         | 15:5182<br>Part 23          | IS:5182<br>Part 24           | IS:5182<br>Part 2                       | 18:5182<br>Part 6          | BSET SOP                    |
| _1   | 01/05/2021                       | 56                          | 19                           | 10.6                                    | 12.1                       | 0.58                        |
| 2    | 02/05/2021                       | 60                          | 21                           | 9.9                                     | 11.5                       | 0.51                        |
| 3    | 03/05/2021                       | 58                          | 20                           | 10.1                                    | 11.8                       | 0.44                        |
| 4    | 04/05/2021                       | 66                          | 24                           | 9.5                                     | 10.9                       | 0.56                        |
| 5    | 05/05/2021                       | 61                          | 22                           | 10.3                                    | 11.7                       | 0.53                        |
| 6    | 06/05/2021                       | 57                          | 20                           | 9.8                                     | 11.4                       | 0.49                        |
| 7    | 07/05/2021                       | 64                          | 23                           | 10.4                                    | 11.9                       | 0.62                        |
| 8    | 08/05/2021                       | 66                          | 25                           | 8.9                                     | 10.4                       | 0.57                        |
| 9    | 09/05/2021                       | 59                          | 21                           | 9.4                                     | 10.8                       | 0.5                         |
| 10   | 10/05/2021                       | 67                          | 26                           | 10                                      | 11.3                       | 0.66                        |
| ]    | 11/05/2021                       | 59                          | 20                           | 11.2                                    | 12.6                       | 0.46                        |
| 12   | 12/05/2021                       | 66                          | 24                           | 10.6                                    | 12.1                       | 0.52                        |
| 13   | 13/05/2021                       | 61                          | 22                           | 9.7                                     | 11.4                       | 0.59                        |
| 14   | 14/05/2021                       | 70                          | 27                           | 10.3                                    | 11.9                       | 0.43                        |
| 15   | 15/05/2021                       | 63                          | 23                           | 9.5                                     | 10.9                       | 0.47                        |
| [24  | Standards<br>4 hourly<br>andard) | 100<br>[µg/m³]              | 60<br>[µg/m³]                | 80<br>[µg/m³]                           | 80<br>[µg/m³]              | 02<br>[mg/m³]<br>[8 hourly] |

Legend:PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- NitrogenDioxide

CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory

Websile: www.bsenvitech.com CIN No.: U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valld upto August, 2022

#### TEST REPORT

| REPORT NO:            | Issued to:          |                         |            |  |  |
|-----------------------|---------------------|-------------------------|------------|--|--|
| Reporting<br>Date     | 02.06.2021          | Analysis<br>Starting on | 01.06.2021 |  |  |
| Sample<br>Received on | Ol 06 2021 Analysis |                         | 02.06.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Descr          | iption: Ambie       | ent Air Quality         |            | of<br>M/s JSW Steel Ltd.                   |  |
| Location              | : Mines             | Office Area             |            | MI/B DOW OCCCI ECG.                        |  |
| Month                 |                     |                         |            |  |  |
| Sample Collec         |                     |                         |            |  |  |

| S.NO                                      | DATE       | РМ <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m <sup>2</sup> ] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|-----------------------------|---|---|---|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23          |   | IS:5182<br>Part 2                       | 18:5182<br>Part 6                       | BSET SOP                    |
| 16  | 16/05/2021 | 69                          | 26  | 9.1                                     | 10.6                                    | 0.53                        |
| 17  | 17/05/2021 | 58                          | 20  | 10.4                                    | 11.7                                    | 0.62                        |
| 18  | 18/05/2021 | 64                          | 23  | 10.8                                    | 12.3                                    | 0.38                        |
| 19  | 19/05/2021 | 66                          | 24  | 9.9                                     | 11.5                                    | 0.45                        |
| 20  | 20/05/2021 | 56                          | 20  | 11.2                                    | 12.7                                    | 0.66                        |
| 21  | 21/05/2021 | 71                          | 27  | 9.3                                     | 109                                     | 0.59                        |
| 22  | 22/05/2021 | 65                          | 25  | 9.6                                     | 11.1                                    | 0.51                        |
| 23  | 23/05/2021 | 59                          | 21  | 10.1                                    | 11 5                                    | 0.48                        |
| 24  | 24/05/2021 | 63                          | 22  | 9.8                                     | 11.3                                    | 0.55                        |
| 25  | 25/05/2021 | 57                          | 20  | 10,7                                    | 12.2                                    | 0.63                        |
| 26  | 26/05/2021 | 40                          | 14  | 11.1                                    | 12.6                                    | 0.54                        |
| 27  | 27/05/2021 | 4:2                         | 15  | 9.5                                     | 10.9                                    | 0.47                        |
| 28  | 28/05/2021 | 47                          | 16  | 10.6                                    | 12                                      | 0.44                        |
| 29  | 29/05/2021 | 50                          | 17  | 9.1                                     | 10.7                                    | 0.5                         |
| 30  | 30/05/2021 | 55                          | 19  | 9.7                                     | 11.4                                    | 0.41                        |
| 31  | 31/05/2021 | 61                          | 22  | 10.3                                    | 11 9                                    | 0.37                        |
| Average                                   |            | 60                          | 22  | 10.0                                    | 11.5                                    | 0.51                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]              | 60<br>[μg/ m²]                            | 80<br>[µg/m³]                           | [h&\w <sub>3</sub> ]                    | 02<br>[mg/m³]<br>(8 hourly) |

Legend:PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

802-Sulphur Dioxide

NO2- NitrogenDioxide

CO-Carbon Monoxide

utherized Signatory

\*Complaints Register is available at Laboratory.

Website | www.bsenvitech.com

CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | Issued to:            |                          |            |  |  |
|-----------------------|-----------------------|--------------------------|------------|--|--|
| Reporting<br>Date     | 02.06.2021            | Analysis<br>Starting on  | 01.06.2021 | _  |  |
| Sample<br>Received on | 01.06.2021            | Analysis<br>Completed on | 02.06.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Descr          | <b>lption</b> : Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |  |
| Location              | : Rest S              | Shelter                  |            | M/ 4 DOW SCOOL DCC.                        |  |
| Month                 |                       |                          |            |  |  |
| Sample Collec         |                       |                          |            |  |  |

|   | DATE       | РМ <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[μg/m³] | 5O <sub>2</sub><br>[μg/m³] | NO <sub>2</sub><br>[µg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]               |
|---|------------|-----------------------------|------------------------------|----------------------------|---|--|
|   | Protocol   | IS:5182<br>Part 23          | IS:5182<br>Part 24           | IS:5182<br>Part 2          | IS:5182<br>Part 6                       | BSET SOP                                 |
|   | 01/05/2021 | 61                          | 21                           | 10.3                       | 11.9                                    | 0.62                                     |
| 2   | 02/05/2021 | 67                          | 24                           | 10.8                       | 12.4                                    | 0.56                                     |
| 3   | 03/05/2021 | 70                          | 26                           | 11 +                       | 129                                     | 0.69                                     |
| 4   | 04/05/2021 | 65                          | 23                           | 10.6                       | 12                                      | 0.51                                     |
| 5   | 05/05/2021 | 59                          | 21                           | 11 9                       | 13.4                                    | 0.64                                     |
| 6   | 06/05/2021 | 62                          | 22                           | 12.3                       | 13.7                                    | 0.48                                     |
| 7   | 07/05/2021 | 68                          | 25                           | 10.5                       | 119                                     | 0.53                                     |
| 8   | 08/05/2021 | 71                          | 27                           | 11.2                       | 12.6                                    | 0.66                                     |
| 9   | 09/05/2021 | 64                          | 23                           | 12. t                      | 13.4                                    | 0.57                                     |
| 10  | 10/05/2021 | 60                          | 20                           | 11.6                       | 13                                      | 0.71                                     |
| 11  | 11/05/2021 | 65                          | 23                           | 9.9                        | 11.3                                    | 0.55                                     |
| 12  | 12/05/2021 | 72                          | 28                           | 10.7                       | 12.1                                    | 0.63                                     |
| 13  | 13/05/2021 | 61                          | 22                           | 9.5                        | 10.8                                    | 0.59                                     |
| 14  | 14/05/2021 | 66                          | 25                           | 10.4                       | 11.6                                    | 0.67                                     |
| 15  | 15/05/2021 | 58                          | 20                           | 10.1                       | 11 5                                    | 0.56                                     |
| NAAQ Standards<br> 24 bourly<br>standard) |            | 100<br>[µg/m³]              | 60<br>[µg/ <b>m</b> ³]       | 80<br>[µg/m³]              | 80<br>[µg/m³]                           | 02<br>[mg/m <sup>3</sup> ]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2,5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Anthorized Signatory

"Complaints Register is available at Laboratory.

Phone 1+91 40 49783062 / 27016806 Fax : +91 40 49783063 Email : lab@bsenvitech.com, info@bsenvitech.com

Website (www.bscnvitech.com CIN No. ; U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

REPORT NO: JSW/NPIMO/ENV/2021/AAQ/2021-05 Issued to: Reporting Analysis 02.06.2021 01.06.2021Date Starting on Narayanposhi Iron & Sample Analysis 01.06.202102.06.2021Manganese Ore Mines Received on Completed on οf Sample Description: Ambient Air Quality M/s JSW Steel Ltd. Location : Rest Shelter Month : May-2021 Sample Collected by: B.S. Envi-Tech (P) Ltd.,

| S.NO   | DATE       | PM <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO₂<br>[µg/m³]    | NO <sub>2</sub><br>[μg/xn <sup>3</sup> ] | CO<br>[mg/m³]               |
|--|------------|--|---|-------------------|--|-----------------------------|
|  | Protocol   | IS:5182<br>Part 23                       | IS:5182<br>Part 24                        | IS:5182<br>Part 2 | IS:5182<br>Part 6                        | BSET SOP<br>AA-09           |
| 16   | 16/05/2021 | 65                                       | 24  | 11.5              | 12.7                                     | 0.49                        |
| 17   | 17/05/2021 | 61                                       | 22  | 12.1              | 13.6                                     | 0.58                        |
| 18   | 18/05/2021 | 56                                       | 19  | 11. l             | 12.1                                     | 0.61                        |
| 19   | 19/05/2021 | 63                                       | 23  | 11.7              | 13.4                                     | 0.69                        |
| 20   | 20/05/2021 | 59                                       | 21  | 10.8              | 12.2                                     | 0.54                        |
| 21   | 21/05/2021 | 68                                       | 25  | 11.3              | 12.8                                     | 0.62                        |
| 22   | 22/05/2021 | 73                                       | 27  | 10.4              | 11.8                                     | 0.39                        |
| 23   | 23/05/2021 | 62                                       | 22  | 11.6              | 13.3                                     | 0.46                        |
| 24   | 24/05/2021 | 59                                       | 21  | 10.9              | 12.5                                     | 0.51                        |
| 25   | 25/05/2021 | 65                                       | 24  | 11.2              | 12.6                                     | 0.49                        |
| 26   | 26/05/2021 | 41                                       | 14  | 9.9               | 11.4                                     | 0.53                        |
| 27   | 27/05/2021 | 44                                       | 25  | 9.4               | 10.8                                     | 0.62                        |
| 28   | 28/05/2021 | 49                                       | 17  | 10.3              | 11.7                                     | 0,44                        |
| 29   | 29/05/2021 | 52                                       | 18  | 10.9              | 12.3                                     | 0.68                        |
| 30   | 30/05/2021 | 55                                       | 19  | 11.3              | 12.8                                     | 0.42                        |
| 31   | 31/05/2021 | 60                                       | 21  | 10                | 11.5                                     | 0.48                        |
| Average<br>NAAQ Standards<br>(24 hourly<br>standard) |            | 61                                       | 22  | 10.8              | 12.3                                     | 0.56                        |
|  |            | 100<br>[µg/m³]                           | 60<br>[μ <b>g/m³]</b>                     | 80<br>[µg/m³]     | 80<br>[µg/m²]                            | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM2.8-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory.

Email : lab@bsenvitech.com, info@bsenvitech.com Website : www.bsenvitech.com

CIN No. : 4J74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,           | /ENV/2021/AAC            | /2021-05   | Issued to:                              |  |
|-----------------------|----------------------|--------------------------|------------|---|--|
| Reporting<br>Date     | 02.06.2021           | Analysis<br>Starting on  | 01.06.2021 |   |  |
| Sample<br>Received on | 01.06.2021           | Analysis<br>Completed on | 02.06.2021 | Narayanposhi Iron & Manganese Ore Mines |  |
| Sample Descr          | <b>iption:</b> Ambie | ent Air Quality          |            | of<br>M/s J\$W Steel Ltd.               |  |
| Location              | : Gate 1             | No-02                    |            | MI/A DOW OCCUR DEG.                     |  |
| Month                 |                      |                          |            |   |  |
| Sample Collec         |                      |                          |            |   |  |

| S.NO                                      | DATE       | PM <sub>to</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | 5O <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|-----------------------------|---|---|----------------------------|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23          | IS:5182<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP<br>AA-09           |
| - 1                                       | 01/05/2021 | 75                          | 28  | 11.8                                    | 13.3                       | 0.66                        |
| 2   | 02/05/2021 | 69                          | 25  | 11.1                                    | 12.6                       | 0.59                        |
| 3   | 03/05/2021 | GL                          | 22  | 10.6                                    | 11.9                       | 0.53                        |
| 4   | 04/05/2021 | 67                          | 24  | 11.4                                    | 12.8                       | 0.68                        |
| 5   | 05/05/2021 | 65                          | 23  | 10.9                                    | 12.3                       | 0.49                        |
| 6   | 06/05/2021 | 62                          | 22  | 11                                      | 12.6                       | D.57                        |
| 7   | 07/05/2021 | 59                          | 20  | 10.4                                    | 11.9                       | 0.72                        |
| 8   | 08/05/2021 | 64                          | 24  | 11.2                                    | 12.7                       | 0.54                        |
| 9   | 09/05/2021 | 66                          | 24  | 10.4                                    | 12.3                       | 0.61                        |
| 10  | 10/05/2021 | 57                          | 20  | 11.3                                    | 13                         | 0.58                        |
| 11  | 11/05/2021 | 60                          | 21  | 11 1                                    | 12.7                       | 0.65                        |
| 12  | 12/05/2021 | 69                          | 26  | 11.8                                    | 13.4                       | 0.49                        |
| 13  | 13/05/2021 | 62                          | 23  | 12.2                                    | 13.9                       | 0.63                        |
| 14  | 14/05/2021 | 56                          | 19  | 11.5                                    | 12.8                       | 0.55                        |
| 15  | 15/05/2021 | 63                          | 22  | 10.8                                    | 12.4                       | 0.71                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]              | 60<br>[µg/m³]                             | 80<br>[µg/m³]                           | 80<br>[µg/m³)              | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Lese than 10μm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory.

Telangana, India

Website Ewww.bsenvitech.com CIN No. 1 U74210TG 1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### TEST REPORT

| REPORT NO:            | REPORT NO: JSW/NPIMO/ENV/2021/AAQ/2021-05 |                         |  |                          |  |  |  |
|-----------------------|---|-------------------------|--|--------------------------|--|--|--|
| Reporting<br>Date     | 02.06.2021                                | Analysis<br>Starting on | 01.06.2021                                 |                          |  |  |  |
| Sample<br>Received on | 01.06.2021                                | 02.06.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |                          |  |  |  |
| Sample Descr          | lption: Ambie                             | ent Air Quality         |  | of<br>M/s JSW Steel Ltd. |  |  |  |
| Location              | : Gate I                                  | No-02                   |  | mis dom other mtd.       |  |  |  |
| Month                 |   |                         |  |                          |  |  |  |
| Sample Collec         |   |                         |  |                          |  |  |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/zn³] | CO<br>[mg/m³]                            |
|---|------------|--|---|---|-----------------------------|--|
|   | Protocol   | [S:5182<br>Part 23                       | f8:5182<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6           | BSET SOP                                 |
| 16  | 16/05/2021 | 61                                       | 21  | 11.6                                    | 13.1                        | 0.64                                     |
| 17  | 17/05/2021 | 66                                       | 25  | 10.9                                    | 12.5                        | 0.57                                     |
| 18  | 18/05/2021 | 69                                       | 27  | 10.3                                    | 11.9                        | 0.48                                     |
| 19  | 19/05/2021 | 62                                       | 23  | 11.8                                    | 13.4                        | 0.54                                     |
| 20  | 20/05/2021 | 73                                       | 29  | 10.7                                    | 12.2                        | 0.63                                     |
| 21  | 21/05/2021 | 60                                       | 21  | 12.5                                    | 13.9                        | 0.45                                     |
| 22  | 22/05/2021 | 66                                       | 20  | 11.9                                    | 13.3                        | 0.41                                     |
| 23  | 23/05/2021 | 58                                       | 19  | 12.1                                    | 13.7                        | 0.5                                      |
| 24  | 24/05/2021 | 62                                       | 21  | 10.6                                    | 11.9                        | 0.62                                     |
| 25  | 25/05/2021 | 65                                       | 23  | 11.5                                    | 12.8                        | 0.69                                     |
| 26  | 26/05/2021 | 46                                       | 16  | 10.3                                    | 11.7                        | 0.77                                     |
| 27  | 27/05/2021 | 48                                       | 17  | 10.9                                    | 12.5                        | 0.56                                     |
| 28  | 28/05/2021 | 51                                       | 18  | 11.6                                    | 13.3                        | 0.46                                     |
| 29  | 29/05/2021 | 54                                       | 19  | 10.4                                    | 12                          | 0.53                                     |
| 30  | 30/05/2021 | 59                                       | 21  | 12                                      | 13.6                        | 0.65                                     |
| 31  | 31/05/2021 | 63                                       | 22  | 10.8                                    | 12.4                        | 0.55                                     |
| Average                                   |            | 62                                       | 22  | 11.2                                    | 12.7                        | 0.58                                     |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]                           | 60<br>[µg/m³]                             | 80<br>[µg/m³]                           | 80<br>[µg/m³]               | 02<br>[mg/m <sup>3</sup> ]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO2-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

orized Signatory

"Complaints Register le available al Laboratory.

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Website::www.bservitech.com CIN No.:: U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | Issued to:           |                         |            |  |
|-----------------------|----------------------|-------------------------|------------|--|
| Reporting<br>Date     | 02.06.2021           | Analysis<br>Starting on | 01.06.2021 |  |
| Sample<br>Received on | 01.06.2021           | Analysis                |            | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>iption</b> : Ambi | ent Air Quality         |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | : Gate i             | No-01                   |            | Mys obw occer ind.                         |
| Month                 |                      |                         |            |  |
| Sample Collec         | cted by: B.S.        | Envi-Tech (P) Ltd       | -,         |  |

|   | DATE       | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.6</sub><br>[μg/m <sup>3</sup> ] | 8O <sub>2</sub><br>[µg/m²] | NO <sub>2</sub><br>[μg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|-----------------------------|---|----------------------------|----------------------------|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23          | 18:5182<br>Part 24                        | 18:5182<br>Part 2          | IS:5182<br>Part 6          | BSET SOP                    |
| L   | 01/05/2021 | 54                          | 23  | 11.3                       | 13                         | 0.58                        |
| 2   | 02/05/2021 | 69                          | 25  | 10.9                       | 126                        | 0.64                        |
| 3   | 03/05/2021 | 58                          | 21  | 11.5                       | 12.9                       | 0.73                        |
| 4   | 04/05/2021 | 65                          | 24  | 12.1                       | 13.6                       | 06:                         |
| 5   | 05/05/2021 | 73                          | 27  | 11.2                       | 12.8                       | 0.77                        |
| 6   | 06/05/2021 | 67                          | 26  | 10.6                       | 11.9                       | 0.56                        |
| 7   | 07/05/2021 | 59                          | 21  | 9.9                        | 11.5                       | 0.62                        |
| 8   | 08/05/2021 | 65                          | 25  | 11.4                       | 12.8                       | 0.69                        |
| 9   | 09/05/2021 | 71                          | 26  | 11.8                       | 13.3                       | 0.57                        |
| 10  | 10/05/2021 | 66                          | 23  | 10.7                       | 12.2                       | 061                         |
| 11  | 11/05/2021 | 70                          | 28  | 11.6                       | 12.9                       | 0.54                        |
| 12  | 12/05/2021 | 57                          | 20  | 10.2                       | 11.8                       | 0.71                        |
| 13  | 13/05/2021 | 64                          | 24  | 11.1                       | 12.8                       | 0.63                        |
| 14  | 14/05/2021 | 69                          | 25  | 10 5                       | 12.1                       | 0.55                        |
| 15  | 15/05/2021 | 57                          | 20  | 12                         | 13.4                       | 0.65                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]              | 60<br>[µg/m³]                             | 80<br>[μg/m³]              | 80<br>[µg/m³]              | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM2.5-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

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\*Complaints Register is available at Laboratory

Email



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

| REPORT NO:            | JSW/NPIMO,    | /ENV/2021/AAC            | 2/2021-05  | Issued to:                              |
|-----------------------|---------------|--------------------------|------------|---|
| Reporting<br>Date     | 02.06.2021    | Analysis<br>Starting on  | 01.06.2021 |   |
| Sample<br>Received on | 01.06.2021    | Analysis<br>Completed on | 02.06.2021 | Narayanposhi Iron & Manganese Ore Mines |
| Sample Descr          | iption: Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                |
| Location              | : Gate f      | 10-07                    |            | May book bicci bid.                     |
| Month                 |               |                          |            |   |
| Sample Collec         | cted by: B.S. | Envi-Tech (P) Ltd        | 2          |   |

| s.no        | DATE                             | РМ <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>(μg/m <sup>3</sup> ) | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m³] | CO<br>[mg/m³]               |
|-------------|----------------------------------|-----------------------------|---|---|----------------------------|-----------------------------|
|             | Protocol                         | IS:5182<br>Part 23          | 18:5182<br>Part 24                        | IS:5182<br>Part 2                       | I8:5182<br>Part 6          | BSET SOP                    |
| 16          | 16/05/2021                       | 74                          | 29  | 11.3                                    | 12.7                       | 0.56                        |
| 17          | 17/05/2021                       | 69                          | 26  | 10.7                                    | 12.2                       | 0.67                        |
| 18          | 18/05/2021                       | 66                          | 23  | 11.9                                    | 13.3                       | 0.71                        |
| 19          | 19/05/2021                       | 63                          | 22  | 10.1                                    | 11.6                       | 0.54                        |
| 20          | 20/05/2021                       | 70                          | 26  | 11.2                                    | 12.9                       | 0.49                        |
| 21          | 21/05/2021                       | 72                          | 28  | 12.3                                    | 13.7                       | 0.66                        |
| 22          | 22/05/2021                       | 67                          | 25  | 11.5                                    | 12.6                       | 0.72                        |
| 23          | 23/05/2021                       | 63                          | 21  | 10.4                                    | 11.9                       | 0.59                        |
| 24          | 24/05/2021                       | 76                          | 30  | 11                                      | 12 +                       | 0.54                        |
| 25          | 25/05/2021                       | 65                          | 24  | 9.9                                     | 11.5                       | 0.61                        |
| 26          | 26/05/2021                       | 43                          | 15  | 10.8                                    | 12.3                       | 0.7                         |
| 27          | 27/05/2021                       | 46                          | 16  | 10.5                                    | 11.9                       | 0.58                        |
| 28          | 28/05/2021                       | 50                          | 17  | 12.1                                    | 13.7                       | 0.64                        |
| 29          | 29/05/2021                       | 54                          | 10  | 11.7                                    | 13.4                       | 0.67                        |
| 30          | 30/05/2021                       | 57                          | 20  | 11                                      | 12.6                       | 0.73                        |
| 31          | 31/05/2021                       | 59                          | 21  | 10.7                                    | 12.2                       | 0.6                         |
| A           | verage                           | 64                          | 23  | 11.0                                    | 12.5                       | 0.62                        |
| NAAQ<br>(24 | Standards<br>4 bourly<br>andard) | 100<br>[µg/m³]              | 60<br>[μg/ m³]                            | 80<br>[µg/m³]                           | 80<br>[µg/m³]              | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

thorized Signatory

\*Complaints Register is available at Laboratory.

Telangana, India

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Website : www.bsenvitech.com CIN No. 1 U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,     | /ENV/2021/AAQ            | /2021-05   | Issued to:                                 |
|-----------------------|----------------|--------------------------|------------|--|
| Reporting<br>Date     | 02.06.2021     | Analysis<br>Starting on  | 01,06,2021 |  |
| Sample<br>Received on | 01.06.2021     | Analysis<br>Completed on | 02.06.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | ription: Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | : Kasira       | Basti                    |            | inty of the beat beat                      |
| Month                 | : May-2        | 021                      |            |  |
| Sample Collection     | cted by: B.S.  | Envi-Tech (P) Ltd        | .,         |  |

| S.NO                                   | DATE       | РМ <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | 5O <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|--|------------|--|---|---|----------------------------|-----------------------------|
|  | Protocol   | IS:5182<br>Part 23                       | IS:5182<br>Part 24                        | 15:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                    |
| 1                                      | 06/05/2021 | 62                                       | 22  | 10.5                                    | 12.1                       | 0.57                        |
| 2                                      | 07/05/2021 | 57                                       | 20  | 9.7                                     | 11.3                       | 0.44                        |
| 3                                      | 13/05/2021 | 66                                       | 24  | 10 1                                    | 11.6                       | 0.51                        |
| 4                                      | 14/05/2021 | 54                                       | 8.1                                       | 9.4                                     | 10.8                       | 0.63                        |
| 5                                      | 20/05/2021 | 60                                       | 20  | 10.8                                    | 12.2                       | 0.46                        |
| 6                                      | 21/05/2021 | 65                                       | 23  | 9.9                                     | 11.5                       | 0.5                         |
| 7                                      | 27/05/2021 | 41                                       | l+  | 10.2                                    | 11.8                       | 0.55                        |
| 8                                      | 28/05/2021 | 43                                       | 15  | 10.9                                    | 12.2                       | 0.49                        |
|  |            |  | 10.1                                      | 11.6                                    | 0.51                       |                             |
| NAAQ Standards<br>[24 hourly standard] |            | 100<br>[μg/m3]                           | 60<br>[µg/m3]                             | 80<br>[µg/m3]                           | 80<br>[µg/m3]              | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

80<sub>2</sub>-Sulphur Dioxide

NO2- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is available at Laboratory.

Website: www.bsenvitech.com CIN No. : U74210TG1999PTC03235R

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO.    | /ENV/2021/AAQ            | /2021-05   | Issued to:                              |
|-----------------------|---------------|--------------------------|------------|---|
| Reporting<br>Date     | 02.06.2021    | Analysis<br>Starting on  | 01.06.2021 |   |
| Sample<br>Received on | 01.06.2021    | Analysis<br>Completed on | 02.06.2021 | Narayanposhi Iron & Manganese Ore Mines |
| Sample Descr          | iption: Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                |
| Location              | : Koira       | Başti                    |            | My a dow Steel atd.                     |
| Month                 | : May-2       | 021                      |            |   |
| Sample Collec         | cted by: B.S. | Envi-Tech (P) Ltd        | .,         |   |

| S.NO | DATE                          | PM <sub>10</sub><br>[μg/m³] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>(mg/m³)     |
|------|-------------------------------|-----------------------------|---|---|---|-------------------|
|      | Protocol                      | I8:5182<br>Part 23          | IS:5182<br>Part 24                        | IS:5182<br>Part 2                       | 19:5182<br>Part 6                       | BSET SOP<br>AA-09 |
| l    | 06/05/2021                    | 70                          | 27  | 11 2                                    | 12.7                                    | 0.58              |
| 2    | 07/05/2021                    | 63                          | 23  | 10.6                                    | 11.9                                    | 0.67              |
| 3    | 13/05/2021                    | 56                          | 19  | 11.5                                    | 13. i                                   | 0.51              |
| 4    | 14/05/2021                    | 65                          | 23  | 10.9                                    | 12.4                                    | 0.65              |
| 5    | 20/05/2021                    | 60                          | 21  | 11.1                                    | 12.5                                    | 0.73              |
| 6    | 21/05/2021                    | 67                          | 24  | 10.7                                    | 12.2                                    | 0.49              |
| 7    | 27/05/2021                    | 48                          | 16  | 10.2                                    | 11.8                                    | 0.54              |
| 8    | 28/05/2021                    | 50                          | 17  | 11                                      | 12.1                                    | 0.56              |
|      | verage                        | 60                          | 21  | 10.9                                    | 12.3                                    | 0.59              |
|      | ) Standards<br>irly standard) |                             |   |   | 02<br>[mg/m3]<br>[8 hourly]             |                   |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

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"Complaints Register is available at Leocratory

Website | www.bsenvitech.com

CIN No. : U74210TG1999PTCC32358

Email



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,           | /BNV/2021/AAC            | 2/2021-05  | Issued to:                                 |
|-----------------------|----------------------|--------------------------|------------|--|
| Reporting<br>Date     | 02 06.2021           | Analysis<br>Starting on  | 01.06.2021 |  |
| Sample<br>Received on | 01.06.2021           | Analysis<br>Completed on | 02.06.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>iption:</b> Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | : Segas              | ahi Village              |            | BI) B GOW DICCI DIG.                       |
| Month                 | : May-2              | 021                      |            |  |
| Sample Collec         | eted by: B.S.        | Envi-Tech (P) Ltd        | -,         |  |

| S.NO | DATE   | РМ <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | 8O <sub>2</sub><br>[μg/m³] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |  |
|------|--|--|---|----------------------------|----------------------------|-----------------------------|--|
|      | Protocol   | 19:5182<br>Part 23                       | 18:5182<br>Part 24                        | 18:5182<br>Part 2          | 18:5182<br>Part 6          | BSET SOP                    |  |
| 1    | 06/05/2021                                       | 56                                       | 19  | 9.3                        | 10.9                       | 0.38                        |  |
| 2    | 07/05/2021                                       | 60                                       | 22  | 9,1                        | 10.5                       | 0.44                        |  |
| 3    | 13/05/2021                                       | 65                                       | 23  | 8.9                        | 10.2                       | 0.51                        |  |
| 4    | 14/05/2021                                       | 58                                       | 20  | 9.5                        | 10.8                       | 0.4                         |  |
| 5    | 20/05/2021                                       | 61                                       | 21  | 9                          | 10.3                       | 0.54                        |  |
| 6    | 21/05/2021                                       | 64                                       | 24  | 10.1                       | 11.6                       | 0.47                        |  |
| 7    | 27/05/2021                                       | 40                                       | 13  | 8.5                        | 9.9                        | 0.42                        |  |
| 8    | 28/05/2021                                       | 44                                       | 15  | 8.8                        | 10.3                       | 0.5                         |  |
| -    | lverage  | 56                                       | 20  | 9.1                        | 10.5                       | 0.45                        |  |
|      | NAAQ Standards<br>(24 hourly standard) 1<br>(µg. |  | 60<br>(µg/m31                             | 80<br>[µg/m3]              | 80<br>[µg/m3]              | 02<br>[mg/m3]<br>(8 hourly) |  |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

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\*Complaints Register is evaluable at Laboratory.

Website #www.bsenvitech.com

CIN No #U74210TG1999PTC03235B



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,    | /ENV/2021/AAQ            | /2021-05   | Issued to:                                 |
|-----------------------|---------------|--------------------------|------------|--|
| Reporting<br>Date     | 02.06.2021    | Analysis<br>Starting on  | 01.06.2021 |  |
| Sample<br>Received on | 01.06.2021    | Analysis<br>Completed on | 02.06.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambi  | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | : Bhanj       | apali Village            |            | m, a cow bicci bid.                        |
| Month                 | : May-2       | 021                      |            |  |
| Sample Collection     | cted by: B.S. | Envi-Tech (P) Ltd        | -,         |  |

| S.NO | DATE                          | PM <sub>10</sub><br>[μg/m <sup>2</sup> ] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>(μg/m <sup>2</sup> ) | NO <sub>2</sub><br>(µg/m³) | CO<br>[mg/m <sup>3</sup> ]  |
|------|-------------------------------|--|---|---|----------------------------|-----------------------------|
|      | Protocol                      | IS:5182<br>Part 23                       | IS:5182<br>Part 24                        | 18:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP<br>AA-09           |
| 1    | 06/05/2021                    | 65                                       | 23  | 10.9                                    | 12.3                       | 0.64                        |
| 2    | 07/05/2021                    | 60                                       | 21  | 11.4                                    | 12.9                       | 0.52                        |
| 3    | 13/05/2021                    | 69                                       | 25  | 11.8                                    | 13.4                       | 0.69                        |
| 4    | 14/05/2021                    | 58                                       | 20  | 12.1                                    | 13.7                       | 0.57                        |
| 5    | 20/05/2021                    | 62                                       | 22  | 11.2                                    | 12.8                       | 0.49                        |
| 6    | 21/05/2021                    | 64                                       | 24  | 10,7                                    | 12.2                       | 0.63                        |
| 7    | 27/05/2021                    | 45                                       | 16  | 11                                      | 12.5                       | 0.55                        |
| 8    | 28/05/2021                    | 49                                       | 17  | 11.6                                    | 13.1                       | 0.46                        |
| - /  | lverage                       | 59                                       | 21  | 11.3                                    | 12.8                       | 0.56                        |
| 7    | ) Standards<br>urly standard) | 100<br>(µg/m3)                           |   |   | 80<br>(µg/m3)              | 02<br>(mg/m3]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

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CIN No. U74210TG 1999PTC032358

"Complaints Register is available at Enhoratory."

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

MINERALOGICAL COMPOSITION REPORT

MAY-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron Ore Mines

Month

: May

Date

: 21.05.2021

Location

: Mines Office Area

#### Mineralogical composition of PM<sub>10</sub>

| Constituent                               | Unit           | Concentration (%) |
|---|----------------|-------------------|
| Silica as SiO <sub>2</sub>                |                | 18.15             |
| Calcium as CaO                            |                | 0.62              |
| Magnesium as MgO                          | 110 has an a s | 1.13              |
| Alumina as Al <sub>2</sub> O <sub>3</sub> | % by mass      | 15.59             |
| Iron as Fe <sub>2</sub> O <sub>3</sub>    |                | 38.85             |
| Loss of Ignition                          |                | 7.3               |

For B.S Envi-Tech (P) Ltd.,

thorised Signatory

Email | lab@bsenvilech.com, info@bsenvitech.com Website : www.bsenvitech.com

CIN No. : U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

FUGITIVE DUST MONITORING REPORT

**MAY-2021** 



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO/ENV/2021/FDM/2021-05 Issued to: |                          | Issued to: |                          |
|-----------------------|---|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 02.06.2021                                | Analysis<br>Starting on  | 01.06.2021 | Narayanposhi Iron        |
| Sample<br>Received on | 01.06.2021                                | Analysis<br>Completed on | 02.06.2021 | & Manganese Ore<br>Mines |
| Sample Descr          | <b>iption:</b> Fugiti                     | ve Dust Monitori         | ng         | of<br>M/s JSW Steel Ltd. |
| Location              | : Mines                                   | Face/Bench               |            | m/a Jow Sicci Liu.       |
| Month                 | : May-2                                   | 021                      |            |                          |
| Sample Collec         | cted by: B.S.                             | Envi-Tech (P) Ltd        | -,         |                          |

| Standards as per CTC | SPM (µg/m³) | DATE       | S.NO |
|----------------------|-------------|------------|------|
|                      | 685         | 01/05/2021 | 1    |
|                      | 827         | 02/05/2021 | 2    |
|                      | 805         | 03/05/2021 | 3    |
|                      | 794         | 04/05/2021 | 4    |
|                      | 668         | 05/05/2021 | 5    |
|                      | 584         | 06/05/2021 | 6    |
|                      | 974         | 07/05/2021 | 7    |
|                      | 905         | 08/05/2021 | 8    |
|                      | 848         | 09/05/2021 | 9    |
|                      | 583         | 10/05/2021 | 10   |
|                      | 580         | 11/05/2021 | 11   |
|                      | 673         | 12/05/2021 | 12   |
|                      | 817         | 13/05/2021 | 13   |
|                      | 585         | 14/05/2021 | 14   |
|                      | 872         | 15/05/2021 | 15   |
| 1200                 | 595         | 16/05/2021 | 16   |
| [µg/m³]              | 712         | 17/05/2021 | 17   |
|                      | <b>7</b> 20 | 18/05/2021 | 18   |
|                      | 749         | 19/05/2021 | 19   |
|                      | 624         | 20/05/2021 | 20   |
|                      | 795         | 21/05/2021 | 21   |
|                      | 833         | 22/05/2021 | 22   |
|                      | 719         | 23/05/2021 | 23   |
|                      | 695         | 24/05/2021 | 24   |
|                      | 819         | 25/05/2021 | 25   |
|                      | 511         | 26/05/2021 | 26   |
|                      | 480         | 27/05/2021 | 27   |
|                      | 540         | 28/05/2021 | 28   |
|                      | 571         | 29/05/2021 | 29   |
|                      | 602         | 30/05/2021 | 30   |
|                      | 661         | 31/05/2021 | 31   |
|                      | 704         | verage     | A    |

Legend:SPM-Suspended Particulate Matter

C'BAuthorized Signatory

\*Complaints Register slavailable at Lahorathiy,

Telangana, India

Website : www.bsenvitech.com CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valld upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,     | ENV/2021/FDN             | 1/2021-05  | Issued to:               |
|-----------------------|----------------|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 02.06.2021     | Analysis<br>Starting on  | 01.06.2021 | Narayanposhi Iron        |
| Sample<br>Received on | 01.06.2021     | Analysis<br>Completed on | 02.06.2021 | & Manganese Ore<br>Mines |
| Sample Descr          | iption: Fugiti | ve Dust Monitoria        | ng         | of<br>M/s JSW Steel Ltd. |
| Location              | : Mines        | Haulage Road             |            | m/s Jaw ather Ltd.       |
| Month                 | : May-2        | 021                      |            |                          |
| Sample Collec         | cted by: B.S.  | Envi-Tech (P) Ltd        | .,         |                          |

| Standards as per CT | SPM [µg/m <sup>3</sup> ] | DATE       | S.NO |
|---------------------|--------------------------|------------|------|
|                     | 844                      | 01/05/2021 | 1    |
|                     | 715                      | 02/05/2021 | 2    |
| 3                   | 827                      | 03/05/2021 | 3    |
|                     | 956                      | 04/05/2021 | 4    |
|                     | 754                      | 05/05/2021 | 5    |
|                     | 963                      | 06/05/2021 | 6    |
|                     | 827                      | 07/05/2021 | 7    |
|                     | 802                      | 08/05/2021 | 8    |
|                     | 709                      | 09/05/2021 | 9    |
|                     | 813                      | 10/05/2021 | 10   |
|                     | 779                      | 11/05/2021 | 11   |
|                     | 821                      | 12/05/2021 | 12   |
| 1200                | 794                      | 13/05/2021 | 13   |
| 1                   | 659                      | 14/05/2021 | 14   |
| [µg/m³]             | 793                      | 15/05/2021 | 15   |
|                     | 827                      | 16/05/2021 | 16   |
|                     | 846                      | 17/05/2021 | 17   |
|                     | 686                      | 18/05/2021 | 18   |
|                     | 750                      | 19/05/2021 | 19   |
|                     | 827                      | 20/05/2021 | 20   |
|                     | 74B                      | 21/05/2021 | 21   |
|                     | 596                      | 22/05/2021 | 22   |
|                     | 550                      | 23/05/2021 | 23   |
|                     | 793                      | 24/05/2021 | 24   |
| Ť.                  | 847                      | 25/05/2021 | 25   |
|                     | 5/17                     | 26/05/2021 | 26   |
| Ĵ                   | 505                      | 27/05/2021 | 27   |
|                     | 566                      | 28/05/2021 | 28   |
|                     | 612                      | 29/05/2021 | 29   |
|                     | 643                      | 30/05/2021 | 30   |
|                     | 678                      | 31/05/2021 | 31   |
|                     | 744                      | verage     | A    |

Legend:SPM-Suspended Particulate Matter

"Complaints Register s avadable 🔊

4<sup>h</sup> Floor, 'AMITY VILLE', 12-13-1270/71/73 St. Ann's Road, Tarnaka,

Secunderabad - 500017, Telangana, India

Phone : +91 40 49783062 / 27016806 Fax : +91 40 49783063 : lab@bsenvitach.com, info@bsenvitech.com

thorized Signatory

Websile: www.bscrwitech.com

CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,     | ENV/2021/FDM             | 1/2021-05  | Issued to:               |
|-----------------------|----------------|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 02.06.2021     | Analysis<br>Starting on  | 01.06.2021 | Narayanposhi Iron        |
| Sample<br>Received on | 01.06.2021     | Analysis<br>Completed on | 02.06.2021 | & Manganese Ore<br>Mines |
| Sample Descr          | iption: Fugiti | ve Dust Monitori         | ng         | of<br>M/s JSW Steel Ltd. |
| Location              | : Crush        | er Plant                 |            | M/B JSW Steet Ltd.       |
| Month                 | : May-2        |                          |            |                          |
| Sample Collection     | cted by: B.S.  | Envi-Tech (P) Ltd        |            |                          |

| S.NO | DATE       | SPM [µg/m³]  | Standards as per CTO |
|------|------------|--------------|----------------------|
| 1    | 01/05/2021 | 746          |                      |
| 2    | 02/05/2021 | B13          |                      |
| 3    | 03/05/2021 | 713          |                      |
| 4    | 04/05/2021 | 749          | ]                    |
| 5    | 05/05/2021 | 856          |                      |
| 6    | 06/05/2021 | 660          |                      |
| 7    | 07/05/2021 | 810          |                      |
| 8    | 08/05/2021 | 587          |                      |
| 9    | 09/05/2021 | 764          | 1                    |
| 10   | 10/05/2021 | 681          |                      |
| : 1  | 11/05/2021 | 590          |                      |
| 12   | 12/05/2021 | 814          | 1                    |
| 13   | 13/05/2021 | 731          | 1                    |
| 14   | 14/05/2021 | 751          | 1                    |
| 15   | 15/05/2021 | 690          |                      |
| 16   | 16/05/2021 | 825          | 1200                 |
| 17   | 17/05/2021 | 750          | (μg/m³)              |
| 18   | 18/05/2021 | 835          |                      |
| 19   | 19/05/2021 | 395          |                      |
| 20   | 20/05/2021 | 817          | 1                    |
| 21   | 21/05/2021 | 793          |                      |
| 22   | 22/05/2021 | 893          | 1                    |
| 23   | 23/05/2021 | 876          | 1                    |
| 24   | 24/05/2021 | 764          | 1                    |
| 25   | 25/05/2021 | 749          | 1                    |
| 26   | 26/05/2021 | S <b>2</b> S | 1                    |
| 27   | 27/05/2021 | 496          |                      |
| 28   | 28/05/2021 | 525          | 1                    |
| 29   | 29/05/2021 | 616          | 1                    |
| 30   | 30/05/2021 | 670          | 1                    |
| 31   | 31/05/2021 | 702          | 1.                   |
|      | verage     | 722          |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register is available at Laborators

4" Floor, 'AMITY VILLE', 12-13-1270/71/73,

St. Ann's Road, Tarnaka. Secunderabad - 500017,

Telangana, India

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Email lab@bsenviledv.com, info@bsenvitech.com Website : www.bsenvitech.com

CIN No @U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valld upto August, 2022

### TEST REPORT

| REPORT NO:            | JSW/NPIMO,     | /ENV/2021/FDN            | 1/2021-05  | Issued to:               |
|-----------------------|----------------|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 02.06.2021     | Analysis<br>Starting on  | 01.06.2021 | Narayanposhi Iron        |
| Sample<br>Received on | 01.06.2021     | Analysis<br>Completed on | 02.06.2021 | & Manganese Ore<br>Mines |
| Sample Desci          | iption: Fugiti | ve Dust Monitori         | ng         | of<br>M/s JSW Steel Ltd. |
| Location              | : Screen       | n Pla <b>n</b> t         |            | M/# JOW Steet Did.       |
| Month                 | : May-2        | 021                      |            |                          |
| Sample Collec         | cted by: B.S.  | Envi-Tech (P) Ltd        |            |                          |

| Standards as per CT | SPM [µg/m³] | DATE       | S.NO |
|---------------------|-------------|------------|------|
|                     | 847         | 01/05/2021 | 1    |
|                     | 585         | 02/05/2021 | 2    |
|                     | 968         | 03/05/2021 | 3    |
|                     | 815         | 04/05/2021 | 4    |
|                     | 726         | 05/05/2021 | 5    |
|                     | 750         | 06/05/2021 | 6    |
|                     | 782         | 07/05/2021 | 7    |
|                     | 869         | 08/05/2021 | 8    |
|                     | 813         | 09/05/2021 | 9    |
|                     | 795         | 10/05/2021 | 10   |
|                     | 883         | 11/05/2021 | LI   |
|                     | 942         | 12/05/2021 | 12   |
|                     | 747         | 13/05/2021 | 1.3  |
|                     | 847         | 14/05/2021 | 14   |
|                     | 791         | 15/05/2021 | 15   |
| 1200                | 847         | 16/05/2021 | 16   |
| [µg/m³]             | 709         | 17/05/2021 | 17   |
|                     | 847         | 18/05/2021 | 18   |
|                     | 707         | 19/05/2021 | 19   |
|                     | 649         | 20/05/2021 | 20   |
|                     | 679         | 21/05/2021 | 21   |
|                     | 831         | 22/05/2021 | 22   |
|                     | 685         | 23/05/2021 | 23   |
|                     | 843         | 24/05/2021 | 24   |
|                     | 795         | 25/05/2021 | 25   |
|                     | 493         | 26/05/2021 | 26   |
|                     | 471         | 27/05/2021 | 27   |
|                     | 499         | 28/05/2021 | 28   |
|                     | 506         | 29/05/2021 | 29   |
|                     | 544         | 30/05/2021 | 30   |
|                     | 618         | 31/05/2021 | 31   |
|                     | 738         | verage     |      |

Legend:SPM-Suspended Particulate Matter

"Complaints Register 3 available at Associate

4" Floor, 'AMITY VILLE', 12-13-1270/71/73,

Secunderabad - 500017.

Terangana, India

St. Ann's Road, Tamaka,

Email

Phone ±+91 40 49783062 / 27016806 Fax +91 40 49783063

uthorized Signatory

· lab@bsenvilech.com, info@bsenvitech.com

CIN No. #U74210TG1999PTC032358

Website : www.bsanvitech.com



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,         | /ENV/2021/FDM            | 1/2021-05  | Issued to:               |
|-----------------------|--------------------|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 02.06.2021         | Analysis<br>Starting on  | 01.06.2021 | Narayanposhi Iron        |
| Sample<br>Received on | 01.06.2021         | Analysis<br>Completed on | 02.06.2021 | & Manganese Ore<br>Mines |
| Sample Descr          | iption: Fugiti     | ve Dust Monitori         | ng         | of                       |
| Location              | M/a JSW Steel Ltd. |                          |            |                          |
| Month                 | : May-2            | torage & Loading<br>021  |            |                          |
| Sample Collec         | cted by: B.S.      | Envi-Tech (P) Ltd        | .,         |                          |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
|      | 01/05/2021 | 549         |                      |
| 2    | 02/05/2021 | 924         |                      |
| 3    | 03/05/2021 | 844         |                      |
| 4    | 04/05/2021 | 589         | 1                    |
| 5    | 05/05/2021 | 750         |                      |
| 6    | 06/05/2021 | 793         |                      |
| 7    | 07/05/2021 | 585         | 1                    |
| 8    | 08/05/2021 | 815         | 1                    |
| 9    | 09/05/2021 | 980         | 1                    |
| 10   | 10/05/2021 | 846         | 1                    |
| t t  | 11/05/2021 | 649         | 1                    |
| 12   | 12/05/2021 | 713         | 1                    |
| 13   | 13/05/2021 | 627         | 1                    |
| 14   | 14/05/2021 | 936         | 1                    |
| 15   | 15/05/2021 | 750         | 1                    |
| 16   | 16/05/2021 | 948         | 1200                 |
| 17   | 17/05/2021 | 657         | [µg/m³]              |
| 18   | 18/05/2021 | 692         |                      |
| 19   | 19/05/2021 | 587         |                      |
| 20   | 20/05/2021 | 795         |                      |
| 21   | 21/05/2021 | 682         |                      |
| 22   | 22/05/2021 | 749         |                      |
| 23   | 23/05/2021 | 713         |                      |
| 24   | 24/05/2021 | 623         |                      |
| 25   | 25/05/2021 | 643         |                      |
| 26   | 26/05/2021 | 477         |                      |
| 27   | 27/05/2021 | 483         |                      |
| 28   | 28/05/2021 | 495         |                      |
| 29   | 29/05/2021 | 517         | 1                    |
| 30   | 30/05/2021 | 544         |                      |
| 3 t  | 31/05/2021 | 612         | 1                    |
|      | Average    | 693         |                      |

Legend: SPM-Suspended Particulate Matter

**Authorized Signatory** 

"Complainte Register s avaitable at the

4" Floor, 'AMITY VILLE', 12-13-1270/71/73, St. Ann's Road Tamaka, Secunderabad - 500017.

Telangane, India

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Empil : lab@bserwlech.com. info@bserwitech.com.

Website www.bsenvilech.com CIN No. : U7421DTG1999PTCtt32358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,     | ENV/2021/FDN             | 1/2021-05  | Issued to:               |
|-----------------------|----------------|--------------------------|------------|--------------------------|
| Reporting<br>Date     | 02.06.2021     | Analysis<br>Starting on  | 01.06.2021 | Narayanposhi Iron        |
| Sample<br>Received on | 01.06.2021     | Analysis<br>Completed on | 02.06.2021 | h Manganese Ore<br>Mines |
| Sample Descr          | iption: Fugiti | ve Dust Monitori         | ng         | of<br>M/s JSW Stee) Ltd. |
| Location              | ; Wasto        | Dump                     |            | M/s Jow Steel Ltd.       |
| Month                 | : May-2        | 021                      |            |                          |
| Sample Cotte          | cted by: B.S.  | Envi-Tech (P) Ltd        | .,         |                          |

| S.NO | DATE       | <b>SPM</b> [μg/m <sup>3</sup> ] | Standards as per CTO |
|------|------------|---------------------------------|----------------------|
| 1    | 01/05/2021 | 585                             |                      |
| 2    | 02/05/2021 | 593                             | 1                    |
| 3    | 03/05/2021 | 546                             | 1                    |
| 4    | 04/05/2021 | 826                             | 1                    |
| 5    | 05/05/2021 | 741                             | 1                    |
| ľs   | 06/05/2021 | 750                             |                      |
| 7    | 07/05/2021 | 771                             | 1                    |
| В    | 08/05/2021 | 624                             | 1                    |
| 9    | 09/05/2021 | 683                             | 1                    |
| 10   | 10/05/2021 | 826                             | 1                    |
| 11   | 11/05/2021 | 750                             | 1                    |
| :2   | 12/05/2021 | 791                             | 1                    |
| 13   | 13/05/2021 | 613                             | 1                    |
| [4   | 14/05/2021 | 585                             | 1                    |
| 15   | 15/05/2021 | 592                             | 1                    |
| 16   | 16/05/2021 | 814                             | 1200                 |
| 17   | 17/05/2021 | 749                             | [µg/m³]              |
| 18   | 18/05/2021 | 643                             |                      |
| 19   | 19/05/2021 | 549                             |                      |
| 20   | 20/05/2021 | 674                             | ]                    |
| 21   | 21/05/2021 | 463                             |                      |
| 22   | 22/05/2021 | 473                             |                      |
| 23   | 23/05/2021 | 493                             |                      |
| 24   | 24/05/2021 | 578                             | ]                    |
| 25   | 25/05/2021 | 696                             |                      |
| 26   | 26/05/2021 | 461                             |                      |
| 27   | 27/05/2021 | 450                             |                      |
| 28   | 28/05/2021 | 493                             |                      |
| 29   | 29/05/2021 | 514                             |                      |
| 30   | 30/05/2021 | 550                             |                      |
| 31   | 31/05/2021 | 571                             |                      |
| 1    | lverage    | 627                             |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register is available at No.

4° Floor, 'AMITY VILLE', †2-13-1270/71/73, St. Ann's Road, Tamaka,

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Email : lab@bsenvitech.com. info@bsonvitech.com Website : www.bsenvitech.com

CIN No. 1 LI74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

AAQ REPORT

JUNE-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,                  | /ENV/2021/AAQ           | 2/2021-06  | Issued to:                                 |
|-----------------------|-----------------------------|-------------------------|------------|--|
| Reporting<br>Date     | 02.07.2021                  | Analysis<br>Starting on | 01.07.2021 |  |
| Sample<br>Received on | 01.07.2021                  | Amplysia                |            | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>iption:</b> Ambi         | ent Air Quality         |            | of<br>M/s JSW Steel Ltd.                   |
| Location              | ocation : Mines Office Area |                         |            |  |
| Month                 | ; June-1                    | 2021                    |            |  |
| Sample Collec         | eted by: B.S.               | Envi-Tech (P) Ltd       | ,          |  |
| Instruments 1         |                             | irable Dust Samp        |            | st Sampler                                 |
| Model                 |                             | то RDS/EI 142 &         |            |  |
| Serial no             |                             |                         |            |  |
| Calibration va        | didity 27/1                 | 0/2021 & 03/10          | /2021      |  |

| S.NO | DATE                           | PM <sub>10</sub><br>[µg/m³]  | РМ <sub>2.5</sub><br>[µg/m³] | 8O <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m³] | CO<br>[mg/m <sup>3</sup> ]               |
|------|--------------------------------|------------------------------|------------------------------|---|----------------------------|--|
|      | Protocol                       | IS:5182<br>Part 23           | IS:5182<br>Part 24           | I8:5182<br>Part 2                       | 18:5182<br>Part 6          | BSET SOP                                 |
| 1    | 01/06/2021                     | 55                           | 20                           | 9.5                                     | 10.9                       | 0.47                                     |
| 2    | 02/06/2021                     | 51                           | 18                           | 9.8                                     | 11.3                       | 0.53                                     |
| 3    | 03/06/2021                     | 60                           | 23                           | 9.2                                     | 10.6                       | 0.61                                     |
| 4    | 04/06/2021                     | 57                           | 20                           | 10.4                                    | 11.8                       | 0.44                                     |
| 5    | 05/06/2021                     | 49                           | 17                           | 9.6                                     | 11                         | 0.39                                     |
| 6    | 06/06/2021                     | 56                           | 19                           | 10.1                                    | 11.5                       | 0.48                                     |
| 7    | 07/06/2021                     | 61                           | 21                           | 9.9                                     | 11.3                       | 0.57                                     |
| 8    | 08/06/2021                     | 53                           | 19                           | 11.2                                    | 12.8                       | 0.41                                     |
| 9    | 09/06/2021                     | 56                           | 20                           | 10.7                                    | 12                         | 0.63                                     |
| 10   | 10/06/2021                     | 62                           | 22                           | 11.5                                    | 12.9                       | 0.49                                     |
| 11   | 11/06/2021                     | 54                           | 19                           | 10.9                                    | 12.3                       | 0.55                                     |
| 12   | 12/06/2021                     | 49                           | 17                           | 11.3                                    | 12.6                       | 0.43                                     |
| 13   | 13/06/2021                     | 44                           | 16                           | 9.4                                     | 10.9                       | 0.59                                     |
| 14   | 14/06/2021                     | 10                           | 15                           | 10                                      | 11.4                       | 0.56                                     |
| 15   | 15/06/2021                     | 45                           | 16                           | 9.6                                     | 10.8                       | 0.51                                     |
| (24  | Standards<br>hourly<br>andard) | 100<br>[µg/æւ <sup>3</sup> ] | 60<br>[μg/m³]                | 80<br>[µg/m³]                           | 80<br>[µg/m³]              | 02<br>[mg/m <sup>3</sup> ]<br>(8 hourly) |

Legend:PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- NitrogenDioxide

CO-Carbon Monoxide

orized Signatory

"Complaints Register is available at Live toying b

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Secunderaliari - 500017. Telangana, India

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Website Twww.bsenvitech.com CIN No #U74Z10TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO.          | /ENV/2021/AAQ                     | /2021-06   | Issued to:                                 |  |  |
|-----------------------|---------------------|-----------------------------------|------------|--|--|--|
| Reporting<br>Date     | 02.07.2021          | 2021 Analysis 01                  |            |  |  |  |
| Sample<br>Received on | 01.07.2021          | Analysis<br>Completed on          | 02.07.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |  |  |
| Sample Descr          | <b>iption:</b> Ambi | ent Air Quality                   |            | of<br>M/s JSW Steel Ltd.                   |  |  |
| Location              | : Mines             | Office Area                       |            | M/# JSW Steel Ltd.                         |  |  |
| Month                 | : June-             | 2021                              |            |  |  |  |
| Sample Collec         | cted by: B.S.       | Envi-Tech (P) Ltd                 | .,         |  |  |  |
| Instruments :         |                     | irable Dust Sam                   |            | st Sampler                                 |  |  |
| Model                 |                     | Enviro RDS/EI 142 & Enviro El 133 |            |  |  |  |
| Serial no             | 136-                | G-20 & 91-G-19                    |            |  |  |  |
| Calibration va        | didity 27/1         | 0/2021 & 03/10                    | /2021      |  |  |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>[pg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | 8O <sub>2</sub><br>[μg/m²] | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|--|---|----------------------------|---|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23                       | IS:5182<br>Part 24                        | IS:5182<br>Part 2          | IS:5182<br>Part 6                       | BSET SOP                    |
| 16  | 16/06/2021 | 49                                       | 18  | 10.5                       | 11.9                                    | 0.46                        |
| 17  | 17/06/2021 | 43                                       | 14  | 9.8                        | 11.3                                    | 0.54                        |
| 18  | 18/06/2021 | 46                                       | 16  | 10.3                       | 11.7                                    | 0.67                        |
| 19  | 19/06/2021 | 51                                       | 18  | 10.7                       | 12. l                                   | 0.53                        |
| 20  | 20/06/2021 | 54                                       | 19  | 11                         | 12.5                                    | 0.62                        |
| 21  | 21/06/2021 | 47                                       | 17  | 10.5                       | 11.7                                    | 0.58                        |
| 22  | 22/06/2021 | 50                                       | 19  | 9.2                        | 10.8                                    | 0.67                        |
| 23  | 23/06/2021 | 43                                       | 16  | 10.8                       | 12.3                                    | 0.43                        |
| 24  | 24/06/2021 | 45                                       | 16  | 9.9                        | 11.4                                    | 0.71                        |
| 25  | 25/06/2021 | 52                                       | 19  | 10.3                       | 11.7                                    | 0.49                        |
| 26  | 26/06/2021 | 55                                       | 20  | 9.4                        | 10.9                                    | 0.51                        |
| 27  | 27/06/2021 | 50                                       | 18  | 8.9                        | 10.3                                    | 0.65                        |
| 28  | 28/06/2021 | -17                                      | 17  | 9.1                        | 10.6                                    | 0.46                        |
| 29  | 29/06/2021 | 51                                       | 19  | 8.7                        | 10.4                                    | 0.4                         |
| 30  | 30/06/2021 | 44                                       | 16  | 9.3                        | 10.B                                    | 0.52                        |
|   | lverage    | 51                                       | 18  | 10.0                       | 11.4                                    | 0.53                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]                           | 60<br>[μg/m³]                             | 80<br>[µg/m³]              | 80<br>[µg/m³]                           | 02<br>[mg/m³]<br>[8 hourly] |

Legend:PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

80<sub>2</sub>-Sulphur Dioxide

NO2- NitrogenDloxide

CO-Carbon Monoxide

Authorized Signatory

Complaints Register is avaigable at Line CVBA

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Secunderapari - 500017, Talangana, India Phone : +91 40 49783062 7 270 168(16 Fax +91 40 49783063 Email : tah@bsenvitech.com, info@bsenvitech.com

Website | www.bsenvitech.com CIN No. | U74210TG1989PTC03235R



Recognized by MoEF & CC, Got: Valid upto August, 2022

#### **TEST REPORT**

| REPORT NO:            | JSW/NPIMO,    | /ENV/2021/AAC                     | /2021-06   | Issued to:                                 |  |  |
|-----------------------|---------------|-----------------------------------|------------|--|--|--|
| Reporting<br>Date     | 02.07.2021    | 2021 Analysis<br>Starting on 01.0 | 01.07.2021 |  |  |  |
| Sample<br>Received on | 01.07.2021    | Analysis<br>Completed on          | 02.07.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |  |  |
| Sample Descr          | iption: Ambie | ent Air Quality                   |            | of<br>M/s JSW Steel Ltd.                   |  |  |
| Location              | : Rest S      | helter                            |            | M/# OSW Steel Eta.                         |  |  |
| Month                 | : June-2      | 2021                              |            |  |  |  |
| Sample Collec         | cted by: B.S. | Envi-Tech (P) Ltd                 | .,         |  |  |  |
| Instruments :         |               | irable Dust Samp                  |            | st Sampler                                 |  |  |
| Model                 |               | Enviro RDS/El 142 & Enviro El 133 |            |  |  |  |
| Serial no             |               |                                   |            |  |  |  |
| Calibration va        | lidity   05/1 | 0/2021 & 19/10                    | /2021      |  |  |  |

| S.NO | DATE                           | PM <sub>10</sub><br>[μg/m³] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[μg/m³] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]               |
|------|--------------------------------|-----------------------------|---|----------------------------|----------------------------|--|
|      | Protocol                       | IS:5182<br>Part 23          | IS:5182<br>Part 24                        | IS:5182<br>Part 2          | IS:5182<br>Part 6          | ESET SOP                                 |
|      | 01/06/2021                     | 61                          | 23  | 10.7                       | 12.2                       | 0.54                                     |
| 2    | 02/06/2021                     | 66                          | 25  | LE.1                       | 12.6                       | 0.46                                     |
| 3    | 03/06/2021                     | 68                          | 26  | 11.6                       | 13                         | 0.58                                     |
| 4    | 04/06/2021                     | 61                          | 22  | 10.9                       | 12.4                       | 0.63                                     |
| 5    | 05/06/2021                     | 65                          | 25  | 11.3                       | 12.8                       | 0.55                                     |
| 6    | 06/06/2021                     | 59                          | 21  | 10.5                       | 11.9                       | 0.41                                     |
| 7    | 07/06/2023                     | 63                          | 22  | 11.4                       | 12.8                       | 0.61                                     |
| 8    | 08/06/2021                     | 57                          | 20  | 10.8                       | 12.3                       | 0.56                                     |
| 9    | 09/06/2021                     | 55                          | 19  | 11.2                       | 12.7                       | 0.68                                     |
| 10   | 10/06/2021                     | 60                          | 21  | 10.3                       | 11.6                       | 0.5                                      |
| 11   | 11/06/2021                     | 58                          | 20  | 11.5                       | 12.9                       | 0.72                                     |
| 12   | 12/06/2021                     | 53                          | 18  | 12.1                       | 13.5                       | 0.65                                     |
| 13   | 13/06/2021                     | 47                          | 16  | II                         | 12.4                       | 0.57                                     |
| 14   | 14/06/2021                     | 45                          | 15  | 10.8                       | 12.3                       | 0.61                                     |
| 15   | 15/06/2021                     | 50                          | 17  | 10.4                       | 11.9                       | 0.52                                     |
| (24  | Standards<br>hourly<br>andard) | 100<br>[µg/m³]              | 60<br>[µg/m³]                             | 80<br>[μg/m²]              | 80<br>[µg/m³]              | 02<br>[mg/m <sup>2</sup> ]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO2- Nitrogen Dioxide CO-Carbon Monoxide

**Authorized Signatory** 

\*Complaints Register is available at Laboratory

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; vab@bservitech.com, info@bservitech.com Email

Website #www.bschvilech.com CIN No. 11/4210TG1999PTC03235B



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,          | /ENV/2021/AAÇ            | 2/2021-06      | Issued to:                                 |  |
|-----------------------|---------------------|--------------------------|----------------|--|--|
| Reporting<br>Date     | 02.07.2021          | Analysis<br>Starting on  | 01.07.2021     |  |  |
| Sample<br>Received on | 01.07.2021          | Analysis<br>Completed on | 02.07.2021     | Marayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Descr          | <b>iption:</b> Ambi | ent Air Quality          |                | of<br>M/s JSW Steel Ltd.                   |  |
| Location              | : Rest S            | Shelter                  |                | M/ B OSW Steel Ltd.                        |  |
| Month                 | : June-:            | 2021                     |                |  |  |
| Sample Collec         | eted by: B.S.       | Envi-Tech (P) Ltd        | .,             |  |  |
| Instruments (         | used Rosp           | irable Dust Samp         | oler & Fine du | st Sampler                                 |  |
| Model                 | Envi                | то RDS/EI 142 &          | 3              |  |  |
| Serial no             |                     | 64 K-17 & 31-L-17        |                |  |  |
| Calibration ve        | didity 05/1         | 0/2021 & 19/10           | /2021          |  |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>(μg/m³] | PM <sub>2.5</sub><br>[μg/m <sup>2</sup> ] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|-----------------------------|---|---|----------------------------|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23          | 18:5182<br>Part 24                        | 18:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                    |
| 16  | 16/06/2021 | 53                          | 18  | 9.9                                     | 11.3                       | 0.59                        |
| 17  | 17/06/2021 | 45                          | 16  | 10.6                                    | 12                         | 0.64                        |
| LB  | 18/06/2021 | 51                          | 17  | 11.3                                    | 12.8                       | 0.7                         |
| 19  | 19/06/2021 | 54                          | 19  | 11.9                                    | 13.3                       | 0.56                        |
| 20  | 20/06/2021 | 57                          | 20  | 12.1                                    | 13.7                       | 0.69                        |
| 21  | 21/06/2021 | 50                          | 18  | 11.5                                    | 12.8                       | 0.52                        |
| 22  | 22/06/2021 | 55                          | 19  | 11.8                                    | 13.1                       | 0.75                        |
| 23  | 23/06/2021 | 48                          | 17  | 12                                      | 13.6                       | 0.62                        |
| 24  | 24/06/2021 | 51                          | 19  | 10.7                                    | 12.2                       | 0.58                        |
| 25  | 25/06/2021 | 57                          | 21  | 11.4                                    | 12.9                       | 0.44                        |
| 26  | 26/06/2021 | 61                          | 22  | 10.2                                    | 11.8                       | 0.59                        |
| 27  | 27/06/2021 | 53                          | 20  | 9.8                                     | 11.3                       | 0.41                        |
| 28  | 28/06/2021 | 51                          | 17  | 10.6                                    | 12. L                      | 0.5                         |
| 29  | 29/06/2021 | 56                          | 20  | 10.3                                    | 11.8                       | 0.66                        |
| 30  | 30/06/2021 | 48                          | 17  | 11.1                                    | 12.6                       | 0.49                        |
| A   | lverage    | 55                          | 20  | 11.0                                    | 12.4                       | 0.57                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]              | 60<br>[µg/m³]                             | 80<br>[µg/m³]                           | 80<br>[µg/m³]              | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is available at Laborator C'BAO

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Cin No. + U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO           | /ENV/2021/AAQ            | /2021-06       | Issued to:                              |
|-----------------------|---------------------|--------------------------|----------------|---|
| Reporting<br>Date     | 02.07.2021          | Analysis<br>Starting on  | 01.07.2021     |   |
| Sample<br>Received on | 01.07.2021          | Analysis<br>Completed on | 02.07.2021     | Narayanposhi Iron & Manganese Ore Mines |
| Sample Descr          | <b>iption:</b> Ambi | ent Air Quality          |                | of<br>M/s JSW Steel Ltd.                |
| Location              | : Gate l            | No-02                    |                | Idy's GOW BESS! Little.                 |
| Month                 | : June-:            | 2021                     |                |   |
| Sample Collec         | eted by: B.S.       | Envi-Tech (P) Ltd        | .,             |   |
| Instruments (         | ı <b>sed</b> Resp   | irable Dust Samp         | oler & Fine du | st Sampler                              |
| Model                 | Envi                | rtech APM 460 &          | 3              |   |
| Serial no             | 2052                | 2-DTG-2011 & 86          | -G-19          |   |
| Calibration va        | didity 19/1         | 0/2021 & 03/10           | /2021          |   |

| S.NO | DATE                             | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.6</sub><br>(µg/m³) | SO <sub>2</sub><br>[μg/m³] | ΝΟ <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m³]               |
|------|----------------------------------|-----------------------------|------------------------------|----------------------------|---|-----------------------------|
|      | Protocol                         | IS:5182<br>Part 23          | IS:5182<br>Part 24           | IS:5182<br>Part 2          | IS:5182<br>Part 6                       | BSET SOP<br>AA-09           |
| l    | 01/06/2021                       | 67                          | 26                           | 11.4                       | 12.9                                    | 0.53                        |
| 2    | 02/06/2021                       | 70                          | 27                           | 10.7                       | 12.2                                    | 0.61                        |
| 3    | 03/06/2021                       | 74                          | 29                           | 11.2                       | 12.8                                    | 0.59                        |
| 4    | 04/06/2021                       | 69                          | 26                           | 11.8                       | 13.1                                    | 0.66                        |
| 5    | 05/06/2021                       | 63                          | 22                           | 12.l                       | 13.6                                    | 0.74                        |
| -6   | 06/06/2021                       | 65                          | 24                           | 11.5                       | 12 9                                    | 0.62                        |
| 7    | 07/06/2021                       | 60                          | 22                           | 10.9                       | 12.3                                    | 0.57                        |
| 8    | 08/06/2021                       | 61                          | 2.3                          | 11.3                       | 12.6                                    | 0.69                        |
| 9    | 09/06/2021                       | 58                          | 21                           | 10.6                       | 11.9                                    | 0.71                        |
| 10   | 10/06/2021                       | 53                          | 18                           | 11.9                       | 13 4                                    | 0.77                        |
| 11   | 11/06/2021                       | 55                          | 19                           | 12. l                      | 13.8                                    | 0.58                        |
| 12   | 12/06/2021                       | 50                          | 17                           | 11.5                       | 12.8                                    | 0.45                        |
| 13   | 13/06/2021                       | 47                          | 17                           | 12.4                       | 14                                      | 0.67                        |
| 14   | 14/06/2021                       | 43                          | 16                           | 11.7                       | 13.3                                    | 0.73                        |
| 15   | 15/06/2021                       | 51                          | 18                           | 10.9                       | 12.5                                    | 0.49                        |
| {24  | Standards<br>4 hourly<br>andard) | 100<br>[µg/m²]              | 60<br>[µg/m³]                | 80<br>[µg/m³]              | 80<br>[µg/m³]                           | 02<br>(mg/m³)<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

horized Signatory

\*Complaints Register is available at Laborator

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Website | www.bsenvitech.com CIN No. 1.174210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valld upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO            | /ENV/2021/AAQ                     | /2021-06       | Issued to:                                 |  |
|-----------------------|----------------------|-----------------------------------|----------------|--|--|
| Reporting<br>Date     | 02.07.2021           | Analysis<br>Starting on           | 01.07.2021     |  |  |
| Sample<br>Received on | 01.07.2021           | Analysis<br>Completed on          | 02.07.2021     | Marayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Descr          | <b>iption</b> : Ambi | ent Air Quality                   |                | of<br>M/s JSW Steel Ltd.                   |  |
| Location              | : Gate l             | No-02                             |                | Mys osw steet Ltd.                         |  |
| Month                 | : June-              | 2021                              |                |  |  |
| Sample Collec         | eted by: B.S.        | Envi-Tech (P) Ltd                 | 9              |  |  |
| Instruments :         | used Resp            | urable Dust Sami                  | oler & Fine du | st Sampler                                 |  |
| Model                 | Envi                 | Envirtech APM 460 & Enviro El 133 |                |  |  |
| Serial no             | 2052                 | 2-DTG-2011 & 86                   | -G-19          |  |  |
| Calibration ve        | didity 19/1          | 0/2021 & 03/10                    | /2021          |  |  |

| 6.NO        | DATE                           | PM <sub>10</sub><br>[μg/m³] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|-------------|--------------------------------|-----------------------------|---|---|----------------------------|-----------------------------|
|             | Protocol                       | IS:5182<br>Part 23          | IS:5182<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                    |
| 16          | 16/06/2021                     | 55                          | 19  | 11.3                                    | 12.6                       | 0.55                        |
| 17          | 17/06/2021                     | 48                          | 16  | 12.1                                    | 13.6                       | 0.61                        |
| 18          | 18/06/2021                     | 53                          | 19  | 10.5                                    | 11.8                       | 0.52                        |
| 19          | 19/06/2021                     | 58                          | 22  | 12.4                                    | 13.9                       | 0.63                        |
| 20          | 20/06/2021                     | 61                          | 24  | 109                                     | 12.4                       | 0.56                        |
| 21          | 21/06/2021                     | 45                          | 16  | 11.1                                    | 12.7                       | 0.64                        |
| 22          | 22/06/2021                     | 59                          | 21  | 12.8                                    | 14.1                       | 0.7                         |
| 23          | 23/06/2021                     | 52                          | 19  | 11.5                                    | 12.7                       | 18.0                        |
| 24          | 24/06/2021                     | 47                          | 17  | 10.9                                    | 12.3                       | 0.73                        |
| 25          | 25/06/2021                     | 51                          | 18  | 11.8                                    | 13.2                       | 0.77                        |
| 26          | 26/06/2021                     | 56                          | 21  | 10.3                                    | 11.7                       | 0.54                        |
| 27          | 27/06/2021                     | 59                          | 22  | 99                                      | 11.4                       | 0.62                        |
| 28          | 28/06/2021                     | 61                          | 23  | 10.7                                    | 12.2                       | 0.51                        |
| 29          | 29/06/2021                     | 58                          | 21  | 11.4                                    | 12.B                       | 0.65                        |
| 30          | 30/06/2021                     | 53                          | 19  | 10.3                                    | 11.9                       | 0.6                         |
| Ā           | verage                         | 57                          | 21  | 11.3                                    | 12.7                       | 0.62                        |
| NAAQ<br>(24 | Standards<br>hourly<br>andard) | 100<br>[μg/m³]              | <del>60</del><br>[µg/m³)                  | 80<br>[µg/m³]                           | 80<br>[µg/m³]              | 02<br>(mg/m³)<br>(B hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

SO2-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

authorized Signatory

"Complaints Register is available at Laborator C"B

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Website : www.bservitech.com

CIN No. U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO     | /ENV/2021/AAC            | /2021-06   | Issued to:                                 |  |
|-----------------------|---------------|--------------------------|------------|--|--|
| Reporting<br>Date     | 02.07.2021    | Analysis<br>Starting on  | 01.07.2021 |  |  |
| Sample<br>Received on | 01.07.2021    | Analysis<br>Completed on | 02.07.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Descr          | iption: Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |  |
| Location              | : Gate f      | No-01                    |            | IN/ S DOW SLEET LCG.                       |  |
| Month                 | : June-:      | 2021                     |            |  |  |
| Sample Collec         | eted by: B.S. | Envi-Tech (P) Ltd        | -,         |  |  |
| Instruments :         |               | irable Dust Samp         |            | st Sampler                                 |  |
| Model                 |               | ro RDS/EI 142 8          |            |  |  |
| Serial no             |               | -18 & 98-G-19            |            |  |  |
| Calibration vs        | didity 05/1   | 0/2021 & 03/10           | /2021      |  |  |

| S.NO | DATE                             | PM <sub>10</sub><br>(μg/m <sup>3</sup> ) | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]               |
|------|----------------------------------|--|---|---|---|--|
|      | Protocol                         | IS:5182<br>Part 23                       |   | IS:5182<br>Part 2                       | IS:5182<br>Part 6                       | BSET SOP                                 |
|      | 01/06/2021                       | 154                                      | 23  | 12.1                                    | 13.8                                    | 0.65                                     |
| 2    | 02/06/2021                       | 69                                       | 25  | 11.8                                    | 13.4                                    | 0.51                                     |
| 3    | 03/06/2021                       | 66                                       | 24  | 10.6                                    | 11.9                                    | 0.69                                     |
| 4    | 04/06/2021                       | 61                                       | 2:  | 11.3                                    | 12.7                                    | 0.55                                     |
| 5    | 05/06/2021                       | 58                                       | 20  | 11                                      | 12.4                                    | 0.62                                     |
| 6    | 06/06/2021                       | 59                                       | 22  | 10.2                                    | 11,6                                    | 0.44                                     |
| 7    | 07/06/2021                       | 63                                       | 23  | 11.5                                    | 12.9                                    | 0.53                                     |
| 8    | 08/06/2021                       | 67                                       | 25  | 12.4                                    | 13.8                                    | 0.49                                     |
| 9    | 09/06/2021                       | 56                                       | 19  | 11.9                                    | 13.3                                    | 0.58                                     |
| 10   | 10/06/2021                       | 50                                       | 18  | 10.8                                    | 12.4                                    | 0.67                                     |
| 11   | 11/06/2021                       | 52                                       | 18  | 11.2                                    | 12.8                                    | 0.71                                     |
| 12   | 12/06/2021                       | 57                                       | 20  | 12                                      | 13.4                                    | 0.52                                     |
| 13   | 13/06/2021                       | 50                                       | 17  | 11 7                                    | 13.2                                    | 0.75                                     |
| ]4   | 14/06/2021                       | 46                                       | 16  | 11.1                                    | 12.6                                    | 0.68                                     |
| 15   | 15/06/2021                       | 41                                       | 14  | 10.8                                    | 12.4                                    | 0.61                                     |
| {24  | Standards<br>1 hourly<br>andard) | 100<br>[µg/m²)                           | 60<br>[µg/m²]                             | 80<br>[µg/m³]                           | 80<br>[µg/m²]                           | 02<br>[mg/m <sup>3</sup> ]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

**Authorized Signatory** 

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Email | Natingbeenvitech.com, info@bsenvitech.com

\*Complaints Register is available at Laboratory

Website : www.bsenvitech.com

CIN No. #U74210TG1999PTC032358



Recognized by McEF & CC, Got: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,    | /ENV/2021/AAQ            | /2021-06      | Issued to:                                 |
|-----------------------|---------------|--------------------------|---------------|--|
| Reporting<br>Date     | 02.07.2021    | Analysis<br>Starting on  | 01.07.2021    |  |
| Sample<br>Received on | 01.07.2021    | Analysis<br>Completed on | 02.07.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambie | ent Air Quality          |               | of<br>M/s JSW Steel Ltd.                   |
| Location              | : Gate I      | No-01                    |               | inty s o s w steer Ltd.                    |
| Month                 | : June-2      | 2021                     |               |  |
| Sample Collec         | eted by: B.S. | Envi-Tech (P) Ltd        | · j           |  |
| Instruments 1         | sed Resp      | irable Dust Samp         | der & Fine du | st Sampler                                 |
| Model                 | Envi          | ro RDS/El 142 8          | Enviro El 13  | 3  |
| Serial no             | 66-K          | -18 & 98-G-19            |               |  |
| Calibration va        | didity 05/1   | 0/2021 & 03/10           | /2021         |  |

| S.NO                                      | DATE       | РМ <sub>10</sub><br>[µg/m³] | РМ <sub>2.5</sub><br>[µg/m³] | 8O <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|-----------------------------|------------------------------|---|----------------------------|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23          | 19:5182<br>Part 24           | 18:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                    |
| 16  | 16/06/2021 | 48                          | 16                           | 11.5                                    | 12.9                       | 0.55                        |
| 17  | 17/06/2021 | 45                          | 15                           | 10.2                                    | 11.6                       | 0.64                        |
| 18  | 18/06/2021 | 50                          | 19                           | 11.6                                    | 13                         | 0.56                        |
| 19  | 19/06/2021 | 53                          | 20                           | 126                                     | 14.1                       | 0.63                        |
| 20  | 20/06/2021 | 55                          | 21                           | 11.9                                    | 13.5                       | 0.73                        |
| 21  | 21/06/2021 | 4.3                         | 14                           | 10.8                                    | 12.4                       | 0.5                         |
| 22  | 22/06/2021 | 57                          | 21                           | 10.1                                    | 11.6                       | 0.78                        |
| 23  | 23/06/2021 | 49                          | 18                           | 114                                     | 12.8                       | 0.59                        |
| 24  | 24/06/2021 | 43                          | 15                           | 10.5                                    | 11.9                       | 0.64                        |
| 25  | 25/06/2021 | 52                          | 19                           | 11                                      | 12.4                       | 0.71                        |
| 26  | 26/06/2021 | 47                          | 16                           | 11.6                                    | 13.3                       | 0.77                        |
| 27  | 27/06/2021 | 51                          | 19                           | 10.8                                    | 12.5                       | 0.61                        |
| 28  | 28/06/2021 | Βl                          | 22                           | 11.2                                    | 12.8                       | 0.56                        |
| 29  | 29/06/2021 | 54                          | 18                           | 11.9                                    | 13.5                       | 0.52                        |
| 30  | 30/06/2021 | 51                          | 17                           | 12.2                                    | 13.7                       | 0.47                        |
|   | lverage    | 54                          | 19                           | 11.3                                    | 12.8                       | 0.60                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]              | 60<br>[μg/m³]                | 80<br>[µg/m³]                           | 80<br>[µg/m³]              | 02<br>(mg/m²)<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

SO<sub>2</sub>-Sulphur Dioxide

NO2- Nitrogen Dioxide

CO-Carbon Monoxide

**Authorized Signatory** 

'Comptaints Register is available at Laborator C'BA

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Website [www.bsenvitech.com]

CIN No. J7421IITG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: .          | JSW/NPIMO,            | /ENV/2021/AAQ            | /2021-06       | Issued to:                                       |
|-----------------------|-----------------------|--------------------------|----------------|--|
| Reporting<br>Date     | 02.07.2021            | Analysis Starting on     | 01.07.2021     |  |
| Sample<br>Received on | 01.07.2021            | Analysis<br>Completed on | 02.07.2021     | Narayanposhi Iron &<br>Manganese Ore Mines<br>of |
| Sample Descri         | i <b>ption</b> : Ambi | ent Air Quality          |                | M/s JSW Steel Ltd.                               |
| Location              | : Kasira              | a Basti                  |                |  |
| Month                 | : June-               | 2021                     |                |  |
| Sample Collec         | ted by: B.S.          | Envi-Tech (P) Ltd        | -,             |  |
| Instruments v         | sed Resp              | irable Dust Sam          | oler & Fine du | st Sampler                                       |
| Model                 | RDS                   | 9000 & Enviro E          | 1 133          |  |
| Serial no             | 0304                  | 108 & 36-L-17            |                |  |
| Calibration va        | <b>lidity</b> 15/6    | 3/2022 & 19/10           | /2021          |  |

| s.no | DATE                        | PM <sub>10</sub><br>[μg/m³] | PM <sub>2.5</sub><br>[μg/τn <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | ΝΟ <sub>2</sub><br>(μg/m <sup>3</sup> ) | CO<br>[mg/m <sup>3</sup> ]  |
|------|-----------------------------|-----------------------------|--|---|---|-----------------------------|
|      | Protocol                    | 19:5182<br>Part 23          | IS:5182<br>Part 24                         | I8:5182<br>Part 2                       | IS:5182<br>Part 6                       | BSET SOP<br>AA-09           |
| 1    | 03/06/2021                  | 57                          | 20   | 9.9                                     | 11.2                                    | 0.49                        |
| 2    | 04/06/2021                  | 51                          | 18   | 10.3                                    | 11.8                                    | 0.58                        |
| 3    | 10/06/2021                  | 60                          | 21   | 9.6                                     | 10.9                                    | 0.61                        |
| 4    | 11/06/2021                  | 50                          | 17   | 10.8                                    | 12.4                                    | 0.53                        |
| 5    | 17/06/2021                  | 46                          | 16   | 11.2                                    | 12.7                                    | 0.66                        |
| 6    | 18/06/2021                  | 53                          | 19   | 11.5                                    | 12.9                                    | 0.6                         |
| 7    | 24/06/2021                  | 44                          | 16   | 10. l                                   | 11.6                                    | 0.54                        |
| 8    | 25/06/2021                  | 49                          | 18   | 10.4                                    | 12                                      | 0.69                        |
| -    | Lverage                     | 51                          | 18   | 10.4                                    | 11.9                                    | 0.58                        |
| HAAC | Standards<br>trly standard) | 100<br>[µg/m3]              | 60<br>[µg/m3]                              | 80<br>[µg/m3]                           | 80<br>[µg/m3]                           | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM2.5-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

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"Complaints Register is available at Lahoratory

Websile (www.bsenvilech.com CIN No. : L/74210TG1999P1C032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO     | /ENV/2021/AAQ            | 2/2021-06      | Issued to:                                 |
|-----------------------|---------------|--------------------------|----------------|--|
| Reporting<br>Date     | 02.07.2021    | Analysis<br>Starting on  | 01.07.2021     |  |
| Sample<br>Received on | 01.07.2021    | Analysis<br>Completed on | 02.07.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambi  | ent Air Quality          |                | of<br>M/a JSW Steel Ltd.                   |
| Location              | : Koira       | Basti                    |                | 22,4 22 11 21007 2101                      |
| Month                 | : June-       | 2021                     |                |  |
| Sample Collec         | cted by: B.S. | Envi-Tech (P) Ltd        | -,             |  |
| Instruments :         | used Resi     | irable Dust Samp         | oler & Fine du | st Sampler                                 |
| Model                 | RDS           | 9000 & Enviro E          | 1 133          |  |
| Serial no             | 0412          | 235 & 37-L-17            |                |  |
| Calibration va        | didity 15/0   | 03/2022 & 19/10          | /2021          |  |

| S.NO | DATE                        | PM <sub>10</sub><br>(μg/m³) | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO₂<br>[μg/m₂³]   | CO<br>[mg/m <sup>3</sup> ]  |
|------|-----------------------------|-----------------------------|---|---|-------------------|-----------------------------|
|      | Protocol                    | IS:5182<br>Part 23          | IS:5182<br>Part 24                        | IS:5182<br>Part 2                       | 18:5182<br>Part 6 | AA-09                       |
| _l   | 03/06/2021                  | 66                          | 24  | 10.8                                    | 12 4              | 0.53                        |
| 2    | 04/06/2021                  | 59                          | 2!  | 11.3                                    | 12.8              | 0.69                        |
| 3    | 10/06/2021                  | 64                          | 23  | 10.1                                    | 11.6              | 0.61                        |
| -1   | 11/06/2021                  | 57                          | 20  | 9.9                                     | 11.3              | 0.49                        |
| S    | 17/06/2021                  | 49                          | 8(  | 10.6                                    | 12.1              | 0.58                        |
| 6    | 18/06/2021                  | 55                          | 20  | 11.5                                    | 12.9              | 0.55                        |
| 7    | 24/06/2021                  | 48                          | 17  | 10                                      | 11.6              | 0.64                        |
| 8    | 25/06/2021                  | 53                          | 19  | 11.2                                    | 12.8              | 0.48                        |
| -    | verage                      | 56                          | 20  | 10.6                                    | 12.1              | 0.57                        |
| NAAC | Standards<br>irly standard) | 100<br>[µg/m3]              | 60<br>[µg/m3]                             | 80<br>(µg/m3)                           | 80<br>[µg/m3]     | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO2- Nitrogen Dioxide CO-Carbon Monoxide

uthorized Signatory

\*Complaints Register is available at Laboratury

Website : www.bsenvitech.com

CIN No. EU74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,    | /ENV/2021/AAQ            | /2021-06       | Issued to:                                 |
|-----------------------|---------------|--------------------------|----------------|--|
| Reporting<br>Date     | 02.07.2021    | Analysis<br>Starting on  | 01.07.2021     |  |
| Sample<br>Received on | 01.07.2021    | Analysis<br>Completed on | 02.07.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambi  | ent Air Quality          |                | of<br>M/a JSW Steel Ltd.                   |
| Location              | ! Segas       | ahi Village              |                | mya osa steet ste.                         |
| Month                 | : June-:      | 2021                     |                |  |
| Sample Collec         | cted by: B.S. | Envi-Tech (P) Ltd        | .,             |  |
| Instruments :         | used Resp     | irable Dust Samp         | oler & Fine du | st Sampler                                 |
| Model                 | RDS           | 9000 & Enviro E          | I 133          | 36 —                                       |
| Serial no             | 0304          | 408 & 36-L-17            |                |  |
| Calibration va        | alidity 15/0  | 03/2022 & 19/10          | /2021          |  |

| S.NO | DATE                          | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>(μg/m <sup>3</sup> ) | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>(mg/m³)               |
|------|-------------------------------|--|---|---|---|-----------------------------|
|      | Protocol                      | 18:5182<br>Part 23                       | 18:5182<br>Part 24                        | 18:5182<br>Part 2                       | IS:5182<br>Part 6                       | BSET SOP<br>AA-09           |
| 1    | 07/06/2021                    | 53                                       | 18  | 9.7                                     | 11.2                                    | 0.53                        |
| -2   | 08/06/2021                    | 49                                       | 17  | 9.1                                     | 10.7                                    | 0.4                         |
| 3    | 14/06/2021                    | 58                                       | 20  | 10.4                                    | 11.9                                    | 0.46                        |
| 4    | 15/06/2021                    | 47                                       | 16  | 9.9                                     | 11.3                                    | 0.39                        |
| 5    | 21/06/2021                    | 50                                       | 17  | 10.8                                    | 12.2                                    | 0.48                        |
| 6    | 22/06/2021                    | 51                                       | 19  | 9.3                                     | 10.8                                    | 0.37                        |
| 7    | 28/06/2021                    | 46                                       | 16  | 9.6                                     | 11.1                                    | 0.44                        |
| 8    | 29/06/2021                    | 51                                       | 17  | 8.9                                     | 10.2                                    | 0.55                        |
| - 1  | verage                        | 51                                       | 17  | 9.7                                     | 11.1                                    | 0.45                        |
|      | ) Standards<br>arly standard) | 100<br>[µg/m3]                           | 60<br>[µg/m3]                             | 80<br>[jig/m3]                          | 80<br>[µg/m3]                           | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is available at Laboratory.

Websile : www.bsenvitech.com CIN No. : U742101G1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                     | JSW/NPIMO,    | /ENV/2021/AAQ            | /2021-06       | Issued to:                                 |
|--------------------------------|---------------|--------------------------|----------------|--|
| Reporting<br>Date              | 02.07.2021    | Analysis<br>Starting on  | 01.07.2021     |  |
| Sample<br>Received on          | 01.07.2021    | Analysis<br>Completed on | 02.07.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr                   | iption: Ambie | ent Air Quality          |                | of<br>M/s JSW Steel Ltd.                   |
| Location                       | : Bhanj       | apali Village            |                | <b>11</b> , 5 55 11 515 51 11 11           |
| Month                          | :June-1       | 2021                     |                |  |
| Sample Collec                  | cted by: B.S. | Envi-Tech (P) Ltd        | .,             |  |
| Instruments :                  | used Resp     | irable Dust Sami         | oler & Fine du | st Sampler                                 |
| Model RDS 9000 & Enviro El 133 |               |                          |                |  |
| Serial no                      | 0412          | 235 & 37-L-17            |                |  |
| Calibration vi                 | ilidity 15/0  | 3/2022 & 19/10           | /2021          |  |

| S.NO |                               | O DATE PM <sub>10</sub><br>[µg/m <sup>2</sup> ] |                    | PM <sub>2.5</sub><br>(μg/m³] | 80 <sub>2</sub><br>[µg/m³] | ΝΟ <sub>2</sub><br>(μg/m <sup>2</sup> ) | CO<br>[mg/m <sup>3</sup> ] |
|------|-------------------------------|---|--------------------|------------------------------|----------------------------|---|----------------------------|
|      | Protocol                      | IS:5182<br>Part 23                              | 18:5182<br>Part 24 | IS:5182<br>Part 2            | IS:5182<br>Part 6          | BSET SOP<br>AA-09                       |                            |
| 1    | 07/06/2021                    | 61  | 22                 | 10.5                         | 11.9                       | 0.56                                    |                            |
| 2    | 08/06/2021                    | 55  | t9                 | 11.2                         | 12.6                       | 0.62                                    |                            |
| 3    | 14/06/2021                    | 54  | 23                 | 10.9                         | 12.4                       | 0.59                                    |                            |
| 4    | 15/06/2021                    | 53  | 19                 | 11.5                         | 12.9                       | 0.67                                    |                            |
| 5    | 21/06/2021                    | 49  | 17                 | 10.4                         | 11.7                       | 0.71                                    |                            |
| 6    | 22/06/2021                    | 57  | 20                 | 11.9                         | 13.3                       | 0.53                                    |                            |
| 7    | 28/06/2021                    | 48  | 17                 | 10.1                         | 11.6                       | 0.47                                    |                            |
| 8    | 29/06/2021                    | 52  | 18                 | 10.8                         | 12.2                       | 0.5                                     |                            |
| - 1  | lverage                       | 56  | 19                 | 10.9                         | 12.3                       | 0.58                                    |                            |
| MAAC | ) Standards<br>urly standard) | 100<br>[μg/m3]                                  | 60<br>[µg/m3]      | 80<br>[µg/m3]                | 80<br>[µg/m3]              | 02<br>[mg/m3]<br>(8 hourly)             |                            |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory.

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Wabsite : www.bsenviech.com CIN No. : U74210TG1999PTC032358

## NARAYANPOSHI IRON AND MANGENESE ORE MINES

FUGITIVE DUST MONITORING REPORT

JUNE-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                    | Issued to: |                          |                         |   |  |
|---|------------|--------------------------|-------------------------|---|--|
| Reporting<br>Date                             | 02.07 2021 | Analysis<br>Starting on  | 01.07.2021              | Narayanposhi Iron &<br>Manganese Ore Mine |  |
| Sample<br>Received on                         | 01.07 2021 | Analysia<br>Completed on | 02.07.2021              | of<br>M/s JSW Steel Ltd.                  |  |
| Sample Descr<br>Fugitive Dust I               |            |                          | Instrument<br>Used      | Respirable Dust<br>Sampler                |  |
| Location                                      | : Mines I  | Pace/Bench               | Model                   | Enviro RDS / El 142                       |  |
| Month : dune-2021                             |            |                          | Serial no               | 135-G-20                                  |  |
| Sample Collected by: H.S. Envi-Tech (P) Ltd., |            |                          | Calibration<br>Validity | 27/10/2021                                |  |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
|      | 01/06/2021 | 615         |                      |
| 2    | 02/06/2021 | 697         |                      |
| 3    | 03/06/2021 | 588         |                      |
| 4    | 04/06/2021 | 827         |                      |
| 5    | 05/06/2021 | 796         | 1                    |
| 6    | 06/06/2021 | 664         |                      |
| 7    | 07/06/202: | 758         |                      |
| 8    | 08/06/2021 | 750         |                      |
| 9    | 09/06/2021 | 593         |                      |
| 10   | 10/06/2021 | 515         |                      |
| 11   | 11/06/2021 | 437         |                      |
| 12   | 12/06/2021 | 402         |                      |
| 13   | 13/06/2021 | 439         |                      |
| 14   | 14/06/2021 | 506         | 1                    |
| 15   | 15/06/2021 | 502         | 1                    |
| 16   | 16/06/2021 | 477         | 1200                 |
| 17   | 17/06/2021 | 428         | [µg/m³]              |
| 18   | 18/06/2021 | 791         |                      |
| 19   | 19/06/2021 | 750         |                      |
| 20   | 20/06/2021 | 667         |                      |
| 21   | 21/06/2021 | 590         |                      |
| 22   | 22/06/2021 | 749         | 1                    |
| 23   | 23/06/2021 | 526         |                      |
| 24   | 24/06/2021 | 514         |                      |
| 25   | 25/06/2021 | 827         | -                    |
| 26   | 26/06/2021 | 613         |                      |
| 27   | 27/06/2021 | 584         |                      |
| 28   | 28/06/2021 | 843         |                      |
| 29   | 29/06/2021 | 61+         |                      |
| 30   | 30/06/2021 | 750         |                      |
| A    | Verage     | 635         |                      |

Legend:SPM-Suspended Particulate Matter

thorized Signatory

\*Community Register is available at Laborate BP

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CIN No. # J74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                    | JSW/NPIMO/ | ENV/2021/FDM/           | 2021-06                  | Issued to:                                 |
|---|------------|-------------------------|--------------------------|--|
| Reporting<br>Date                             | 02.07.2021 | Analysis<br>Starting on | 01.07.2021               | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample 01.07.2021 Analysis Completed on       |            | 02.07.2021              | of<br>M/s JSW Steel Ltd. |  |
| Sample Description:                           |            |                         | Instrument               | Respirable Dust                            |
| <b>Fugitive Dust I</b>                        |            |                         | Used                     | Sampler                                    |
| Location                                      | : Mines I  | Haulage Road            | Model                    | Envirotech APM 460                         |
| Month : June-2021                             |            |                         | Serial no                | 2838-DTA-2015                              |
| Sample Collected by: B.S. Envi-Tech (P) Ltd., |            |                         | Calibration<br>Validity  | 19/10/2021                                 |

| S.NO | DATE       | SPM (μg/m <sup>3</sup> ) | Standards as per CTO |
|------|------------|--------------------------|----------------------|
| 1    | 01/06/2021 | 815                      | 147-1                |
| 2    | 02/06/2021 | 842                      |                      |
| 3    | 03/06/2021 | 793                      |                      |
| 4    | 04/06/2021 | 830                      |                      |
| S    | 05/06/2021 | 845                      |                      |
| 6    | 06/06/2021 | 785                      |                      |
| 7    | 07/06/2021 | 593                      |                      |
| 8    | 08/06/2021 | 680                      |                      |
| 9    | 09/06/2021 | 871                      |                      |
| 10   | 10/06/2021 | 826                      |                      |
| 11   | 11/06/2021 | 476                      |                      |
| 12   | 12/06/2021 | 418                      |                      |
| 13   | 13/06/2021 | 439                      | 1200                 |
| 14   | 14/06/2021 | 450                      | [µg/m³]              |
| 15   | 15/06/2021 | 481                      | [hg/m-]              |
| 16   | 16/06/2021 | 506                      |                      |
| 17   | 17/06/2021 | 510                      |                      |
| 18   | 18/06/2021 | 682                      |                      |
| 19   | 19/06/2021 | 585                      |                      |
| 20   | 20/06/2021 | 817                      |                      |
| 21   | 21/06/2021 | 749                      |                      |
| 22   | 22/06/2021 | 660                      |                      |
| 23   | 23/06/2021 | 503                      |                      |
| 24   | 24/06/2021 | 825                      |                      |
| 25   | 25/06/2021 | 750                      |                      |
| 26   | 26/06/2021 | 810                      |                      |
| 27   | 27/06/2021 | 683                      |                      |
| 28   | 28/06/2021 | 747                      |                      |
| 29   | 29/06/2021 | 817                      |                      |
| 30   | 30/06/2021 | 823                      |                      |
| - 1  | Average    | 687                      |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register is evaluable at Laboratory BA"

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CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                    | JSW/NPIMO/ | ENV/2021/FDM/:           | 2021-06                 | Issued to:                                 |  |
|---|------------|--------------------------|-------------------------|--|--|
| Reporting<br>Date                             | 02.07.2021 | Analysis<br>Starting on  | 01.07.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample 01.07.2021 Analysis Completed on       |            | Analysis<br>Completed on | 02.07.2021              | of<br>M/s JSW Steel Ltd.                   |  |
| Sample Description:                           |            |                          | Instrument              | Respirable Dust                            |  |
| Pugitive Dust I                               | Monitoring |                          | Used                    | Sampler                                    |  |
| Location                                      | : Crusho   | r Plant                  | Model                   | Envirotech APM 460                         |  |
| Month : June-2021                             |            |                          | Serial no               | 138-G-20                                   |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd., |            |                          | Calibration<br>Validity | 27/10/2021                                 |  |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| L    | 01/06/2021 | 873         |                      |
| 2    | 02/06/2021 | 957         |                      |
| 3    | 03/06/2021 | 913         | 1                    |
| 4    | 04/06/2021 | 968         | 1                    |
| 5    | 05/06/2021 | 785         | 1                    |
| 6    | 06/06/2021 | 840         |                      |
| 7    | 07/06/2021 | 819         |                      |
| 8    | 08/06/2021 | 913         | 1                    |
| 9    | 09/06/2021 | 750         |                      |
| 10   | 10/06/2021 | 878         |                      |
| 11   | 11/06/2021 | 497         |                      |
| 12   | 12/06/2021 | 403         |                      |
| 13   | 13/06/2021 | 449         |                      |
| 14   | 14/06/2021 | 469         | 1                    |
| 15   | 15/06/2021 | 481         |                      |
| 16   | 16/06/2021 | 403         | 1200                 |
| 17   | 17/06/2021 | 441         | [µg/m³]              |
| 18   | 18/06/2021 | 587         |                      |
| 19   | 19/06/2021 | 593         | 1                    |
| 20   | 20/06/2021 | 834         |                      |
| 21   | 21/06/2021 | 747         | 1                    |
| 22   | 22/06/2021 | 852         |                      |
| 23   | 23/06/2021 | 504         |                      |
| 24   | 24/06/2021 | 499         |                      |
| 25   | 25/06/2021 | 840         |                      |
| 26   | 26/06/2021 | 728         |                      |
| 27   | 27/06/2021 | 729         |                      |
| 28   | 28/06/2021 | 952         |                      |
| 29   | 29/06/2021 | 735         |                      |
| 30   | 30/06/2021 | 639         |                      |
| - 1  | Average    | 703         |                      |

Legend: SPM-Suspended Particulate Matter

\*Complaints Register is available at Line

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Authorized Signatory

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Telangana, India CIN No. : 1174210TG1999PTG032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                      | JSW/NPIMO/ | ENV/2021/FDM/            | 2021-06                 | Issued to:                                |  |
|---|------------|--------------------------|-------------------------|---|--|
| Reporting Date 02.07.2021 Analysis Starting on  |            |                          | 01.07.2021              | Narayanposhi Iron 8<br>Manganese Ore Mine |  |
|   |            | Analysis<br>Completed on |                         | of<br>M/s JSW Steel Ltd.                  |  |
| Sample Description:<br>Fugitive Dust Monitoring |            |                          | Instrument<br>Used      | Respirable Dust<br>Sampler                |  |
| Location  | : Screen   | Plant                    | Model                   | Envirotech APM 460                        |  |
| Month : June-2021                               |            |                          | Serial no               | 62-K-18                                   |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd.,   |            |                          | Calibration<br>Validity | 19/10/2021                                |  |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/06/2021 | 830         |                      |
| 2    | 02/06/2021 | 746         |                      |
| 3    | 03/06/2021 | 833         |                      |
| 4    | 04/06/2021 | 957         | 1                    |
| 5    | 05/06/2021 | 750         |                      |
| 6    | 06/06/2021 | 699         |                      |
| 7    | 07/06/2021 | 582         |                      |
| В    | 08/06/2021 | 769         |                      |
| 9    | 09/06/2021 | 823         | ]                    |
| 10   | 10/06/2021 | 592         |                      |
| 11   | 11/06/2021 | 453         |                      |
| 12   | 12/06/2021 | 471         |                      |
| 13   | 13/06/2021 | 404         | 1                    |
| 14   | 14/06/2021 | 400         |                      |
| 15   | 15/06/2021 | 507         |                      |
| 16   | 16/06/2021 | 513         | 1200                 |
| 17   | 17/06/2021 | 488         | [µg/m³[              |
| 18   | 18/06/2021 | 796         |                      |
| 19   | 19/06/2021 | 858         |                      |
| 20   | 20/06/2021 | 671         |                      |
| 21   | 21/06/2021 | 938         |                      |
| 22   | 22/06/2021 | 855         |                      |
| 23   | 23/06/2021 | 501         |                      |
| 24   | 24/06/2021 | 860         |                      |
| 25   | 25/06/2021 | 823         |                      |
| 26   | 26/96/2021 | 750         |                      |
| 27   | 27/06/2021 | 819         |                      |
| 28   | 28/06/2021 | 923         |                      |
| 29   | 29/06/2021 | 585         |                      |
| 30   | 30/06/2021 | 816         |                      |
|      | lverage    | 700         |                      |

Legend: SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register's available at Laborated

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CIN No.: U7421tiTG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                      | JSW/NPIMO/    | ENV/2021/FDM/            | 2021-06                 | Issued to:                                |  |
|---|---------------|--------------------------|-------------------------|---|--|
| Reporting Date 02.07.2021 Analysis Starting on  |               |                          | 01.07.2021              | Narayanposhi Iron 5<br>Manganese Ore Mine |  |
| Sample<br>Received on 01.07.2021                |               | Analysis<br>Completed on | 02.07.2021              | of<br>M/s JSW Steel Ltd.                  |  |
| Sample Description:<br>Fugitive Dust Monitoring |               |                          | Instrument<br>Used      | Respirable Dust<br>Sampler                |  |
| Location : Ore                                  | c Storage & L | oading Point             | Model                   | Envirotech APM 460                        |  |
| Month : June-2021                               |               |                          | Serial no               | 101-G-19                                  |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd.,   |               |                          | Calibration<br>Validity | 19/10/2021                                |  |

| S.NO | DATE       | SPM $[\mu g/m^3]$ | Standards as per CTO |
|------|------------|-------------------|----------------------|
| 1    | 01/06/2021 | 584               |                      |
| 2    | 02/06/2021 | 750               |                      |
| 3    | 03/06/2021 | 652               | ]                    |
| 4    | 04/06/2021 | 664               |                      |
| 5    | 05/06/2021 | 750               |                      |
| 6    | 06/06/2021 | 800               | 1                    |
| 7    | 07/06/2021 | 840               |                      |
| 8    | 08/06/2021 | S69               | 1                    |
| 9    | 09/06/2021 | 629               |                      |
| LO   | 10/06/2021 | 545               |                      |
| 11   | 11/06/2021 | 461               | 1                    |
| 12   | 12/06/2021 | 418               | 1                    |
| 13   | 13/06/2021 | 423               | 1                    |
| 14   | 14/06/2021 | 437               | 1                    |
| 15   | 15/06/2021 | 516               | 1                    |
| lfi  | 16/06/2021 | 511               | 1200                 |
| 17   | 17/06/2021 | 447               | [µg/m³]              |
| 18   | 18/06/2021 | 790               |                      |
| 19   | 19/06/2021 | 738               | 1                    |
| 20   | 20/06/2021 | 538               |                      |
| 21   | 21/06/2021 | 550               |                      |
| 22   | 22/06/2021 | 673               |                      |
| 23   | 23/06/2021 | 524               |                      |
| 24   | 24/06/2021 | 750               | 1                    |
| 25   | 25/06/2021 | 819               | 1                    |
| 26   | 26/06/2021 | 747               |                      |
| 27   | 27/06/2021 | 773               |                      |
| 28   | 28/06/2021 | 600               |                      |
| 29   | 29/06/2021 | 583               |                      |
| 30   | 30/06/2021 | 595               | 1                    |
| A    | verage     | 623               |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register 3 available at Laborat C'BA

4° Floor, 'AMITY VILLE', 12 13-1270/71/73, St. Ann's Road, Tarnaka,

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Website: www.bsenvitech.com CIN No.:: U74210TQ1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                    | JSW/NPIMO/ | ENV/2021/FDM/:           | 2021-06                 | Issued to:                                 |  |
|---|------------|--------------------------|-------------------------|--|--|
| Reporting 02.07.2021 Analysis Starting on     |            |                          | 01.07.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |  |
|   |            | Analysis<br>Completed on |                         | of<br>M/s JSW Steel Ltd.                   |  |
| Sample Description:                           |            |                          | Instrument              | Respirable Dust                            |  |
| Fugitive Dust I                               | Monitoring |                          | Used                    | Sampler                                    |  |
| Location                                      | : Waste    | Dump                     | Model                   | RDS 9000                                   |  |
| Month : June-2021                             |            |                          | Serial no               | 0602101                                    |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd., |            |                          | Calibration<br>Validity | 19/10/2021                                 |  |

| s.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/06/2021 | 684         | 199                  |
| 2    | 02/06/2021 | 720         |                      |
| 3    | 03/06/2021 | 529         |                      |
| 4    | 04/06/2021 | 560         |                      |
| 5    | 05/06/2021 | 750         |                      |
| 6    | 06/06/2021 | 681         |                      |
| 7    | 07/06/2021 | 779         |                      |
| 8    | 08/06/2021 | 843         |                      |
| 9    | 09/06/2021 | 467         |                      |
| 10   | 10/06/2021 | 499         |                      |
| 11   | 11/06/2021 | 418         |                      |
| 12   | 12/06/2021 | 404         |                      |
| 13   | 13/06/2021 | 403         |                      |
| 14   | 14/06/2021 | 454         |                      |
| 15   | 15/06/2021 | 515         |                      |
| 16   | 16/06/2021 | \$16        | 1200                 |
| 17   | 17/06/2021 | 439         | [µg/m²]              |
| 18   | 18/06/2021 | 794         |                      |
| 19   | 19/06/2021 | 693         |                      |
| 20   | 20/06/2021 | 826         |                      |
| 21   | 21/06/2021 | 576         |                      |
| 22   | 22/06/2021 | 639         |                      |
| 23   | 23/06/2021 | 483         |                      |
| 24   | 24/06/2021 | 720         |                      |
| 25   | 25/06/2021 | 667         |                      |
| 26   | 26/06/2021 | 582         |                      |
| 27   | 27/06/2021 | 710         |                      |
| 28   | 28/06/2021 | 490         |                      |
| 29   | 29/06/2021 | 473         |                      |
| 30   | 30/06/2021 | 581         |                      |
| -    | Lverage    | 597         |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register la available of Lathing

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Website ( www.bsenvitech.com) CIN No. 1074210TG 1989PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

AAQ REPORT

JULY-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: J                            | JSW/NPIMO,   | ENV/2021/AAQ             | /2021-07      | Issued to:                                 |
|---|--------------|--------------------------|---------------|--|
| Reporting<br>Date                       | 03.08.2021   | Analysis<br>Starting on  | 02.08.2021    |  |
| Sample<br>Received on                   | 02.08.2021   | Analysis<br>Completed on | 03.08.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descri<br>Location/Code<br>Month | -            | s Office Area/AA(        | QCZ-1         | of<br>M/s JSW Steel Ltd.                   |
| Sample Collec                           | ted by: B.S. | Envi-Tech (P) Ltd        |               |  |
| Instruments u                           | sed Resp     | irable Dust Samp         | der & Fine du | st Sampler                                 |
| Model                                   |              | ro RDS/EI 142 &          |               |  |
| Serial no                               | 136-         | G-20 & 91-G-19           |               |  |
| Calibration val                         | Hdity 27/1   | 0/2021 & 03/10           | /2021         |  |

| S.NO | DATE                           | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>(mg/m³)               |
|------|--------------------------------|-----------------------------|---|---|---|-----------------------------|
|      | Protocol                       | IS:5182<br>Part 23          | IS:5182<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6                       | BSET SOP<br>AA-09           |
| 1    | 01/07/2021                     | 47                          | 16  | 8.7                                     | 10.2                                    | 0.41                        |
| 2    | 02/07/2021                     | 53                          | 18  | 8.2                                     | 9.7                                     | 0.52                        |
| 3    | 03/07/2021                     | 49                          | 17  | 10.6                                    | 11.9                                    | 0.57                        |
| 4    | 04/07/2021                     | 51                          | 18  | 8.8                                     | 10.4                                    | 0.48                        |
| 5    | 05/07/2021                     | 46                          | 15  | 10.1                                    | 11.6                                    | 0.51                        |
| 6    | 06/07/2021                     | 55                          | 20  | 9.4                                     | 10.7                                    | 0.4                         |
| 7    | 07/07/2021                     | 48                          | l6  | 8.6                                     | 9.9                                     | 0.37                        |
| 8    | 08/07/2021                     | 52                          | 17  | 8.9                                     | 10.3                                    | 0.44                        |
| 9    | 09/07/2021                     | 60                          | 21  | 9.5                                     | 10.8                                    | 0.5                         |
| 10   | 10/07/2021                     | 54                          | 18  | 9.3                                     | 10,6                                    | 0.47                        |
| 11   | 11/07/2021                     | 49                          | 17  | 10                                      | 11.4                                    | 0.42                        |
| 12   | 12/07/2021                     | 42                          | 15  | 9.7                                     | 11.2                                    | 0.58                        |
| 13   | 13/07/2021                     | 51                          | 17  | 8.1                                     | 9.6                                     | 0.61                        |
| 14   | 14/07/2021                     | 45                          | 15  | 9.9                                     | 11.3                                    | 0.45                        |
| 15   | 15/07/2021                     | 57                          | 20  | 10.5                                    | 11.9                                    | 0.49                        |
| (24  | Standards<br>hourly<br>andard) | 100<br> µg/m³               | 60<br>[µg/m³]                             | 80<br> µg/m³                            | 80<br>[µg/m³)                           | 02<br>[mg/m³]<br>(8 hourly) |

Legend:PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO2-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is evaluable at the colony, )

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Website : www.bsenvitech.com GIN No. # 074210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: o          | ISW/NPIMO,            | ENV/2021/AAG                   | /2021-07       | Issued to:                                 |
|-----------------------|-----------------------|--------------------------------|----------------|--|
| Reporting<br>Date     | 03.08.2021            | 3.2021 Analysis<br>Starting on | 02.08.2021     |  |
| Sample<br>Received on | 02.08.2021            | Amplyate                       |                | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descri         | i <b>ption:</b> Ambie | ent Air Quality                |                | of<br>M/s JSW Steel Ltd.                   |
| Location/Code         | e : Mine              | s Office Area/AA(              | ACZ-1          | MI/S JOW SCEEL IAU.                        |
| Month                 | : July-               | 2021                           |                |  |
| Sample Collec         | ted by: B.S.          | Envi-Tech (P) Ltd              | 4,             |  |
| Instruments u         | sed Resp              | trable Dust Sam                | oler & Fine du | st Sampler                                 |
| Model                 |                       |                                |                |  |
| Serial no             |                       | G-20 & 91-C-19                 |                |  |
| Calibration va        | lidity 27/1           | 0/2021 & 03/10                 | /2021          |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>[μg/m³] | PM2.6<br>[μg/m³]   | 50 <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>(μg/m³) | CO<br>[mg/m³]               |
|---|------------|-----------------------------|--------------------|---|----------------------------|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23          | IS:5182<br>Part 24 | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP<br>AA-09           |
| 16  | 16/07/2021 | 50                          | 17                 | 9.2                                     | 10.6                       | 0.39                        |
| 17  | 17/07/2021 | 42                          | 14                 | 10.1                                    | 11.5                       | 0.42                        |
| 16  | 18/07/2021 | 56                          | . 19               | 8.9                                     | 10.8                       | 0.56                        |
| 19  | 19/07/2021 | 46                          | 15                 | 9.5                                     | 11                         | 0.63                        |
| 20  | 20/07/2021 | 59                          | 21                 | 92                                      | 10.6                       | 0.46                        |
| 21  | 21/07/2021 | 51                          | 18                 | 10.7                                    | 12.4                       | 0.55                        |
| 22  | 22/07/2021 | 46                          | 16                 | 96                                      | 10.9                       | 0.41                        |
| 2.3                                       | 23/07/2021 | 49                          | 17                 | 9                                       | 10.5                       | 0.36                        |
| 24  | 24/07/2021 | 42                          | 15                 | 8.7                                     | 10.2                       | 0.48                        |
| 25  | 25/07/2021 | 44                          | 16                 | 9.4                                     | 10.9                       | 0.53                        |
| 26  | 26/07/2021 | 53                          | 19                 | 10.2                                    | 11.6                       | 0.35                        |
| 27  | 27/07/2021 | 40                          | 14                 | 9                                       | 111.5                      | 0.49                        |
| 28  | 28/07/2021 | 4fi                         | 16                 | 8.5                                     | 8.8                        | 0.31                        |
| 29  | 29/07/2021 | 42                          | 15                 | 9.9                                     | 11.3                       | 0.45                        |
| 30  | 30/07/2021 | 39                          | 13                 | 8.3                                     | 9.7                        | 0.6                         |
| 31  | 31/07/2021 | 37                          | 12                 | 9.8                                     | 11.1                       | 0.35                        |
| A   | verage     | 49                          | 17                 | 9.3                                     | 10.8                       | 0.46                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]              | 60<br>[µg/m³]      | 80<br>[µg/m³]                           | 80<br>[µg/m³]              | 02<br>(mg/m³ <br>(8 hourly) |

Legend:PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laborate

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CIN No. # U7421IITG1999PTC032358

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Recognized by MoEF & CC, Gol: Valld upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,   | /ENV/2021/AAQ                     | /2021-07      | Issued to:                                 |  |  |
|-----------------------|--------------|-----------------------------------|---------------|--|--|--|
| Reporting<br>Date     | 03.08.2021   | Analysis<br>Starting on           | 02.08.2021    |  |  |  |
| Sample<br>Received on | 02.08.2021   | Analysis<br>Completed on          | 03.08.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |  |  |
| Sample Descri         | lption: Ambi | ent Air Quality                   |               | of<br>M/s JSW Steel Ltd.                   |  |  |
| Location/Cod          | e : Rest S   | Shelter/AAQCZ-4                   |               | M/B 03W Steel Ltd.                         |  |  |
| Month                 | : July-:     | 2021                              |               |  |  |  |
| Sample Collec         | ted by: B.S. | Envi-Tech (P) Ltd                 | .,            |  |  |  |
| Instruments t         | ised Resp    | irable Dust Samp                  | der & Fine du | st Sampler                                 |  |  |
| Model                 |              | Enviro RDS/El 142 & Enviro El 133 |               |  |  |  |
| Serial no             | 64-K         | -17 & 31 L 17                     |               |  |  |  |
| Calibration ve        | didity 05/1  | 0/2021 & 19/10                    | /2021         |  |  |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>(µg/m³) | SO <sub>2</sub><br>(µg/m³) | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|--|------------------------------|----------------------------|----------------------------|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:5162<br>Part 2          | IS:5182<br>Part 6          | BSET SOP                    |
| -1  | 01/07/2021 | 51                                       | 18                           | 11.4                       | 12.7                       | 0.54                        |
| 2   | 02/07/2021 | 58                                       | 21                           | 10.9                       | 12.2                       | 0.43                        |
| 3   | 03/07/2021 | 54                                       | 18                           | 10.5                       | 11.8                       | 0.61                        |
| 4   | 04/07/2021 | 47                                       | 16                           | 11.6                       | 12.9                       | 0.59                        |
| 5   | 05/07/2021 | 52                                       | 18                           | 10.8                       | 12.4                       | 0.48                        |
| 6   | 06/07/2021 | 59                                       | 21                           | 11.2                       | 12.6                       | 0.52                        |
| 7   | 07/07/2021 | 53                                       | 19                           | 11.7                       | 13.1                       | 0.57                        |
| 8   | 08/07/2021 | 57                                       | 20                           | 9.9                        | 11.2                       | 0.69                        |
| 9   | 09/07/2021 | 64                                       | 23                           | 10.3                       | 11.8                       | 0.72                        |
| 10  | 10/07/2021 | 59                                       | 21                           | 10.7                       | 12.1                       | 0.44                        |
| 11  | 11/07/2021 | 52                                       | L8                           | 11                         | 12,5                       | 0.51                        |
| 12  | 12/07/2021 | 45                                       | 16                           | 11.5                       | 12.9                       | 0.42                        |
| 13  | 13/07/2021 | 56                                       | 19                           | 10.3                       | 11.6                       | 0.53                        |
| 14  | 14/07/2021 | 49                                       | 18                           | 13.1                       | 12.7                       | 0.46                        |
| 15  | 15/07/2021 | 62                                       | 22                           | 12                         | 13.2                       | 0.41                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]                           | 60<br>(µg/m³)                | 80<br>[µg/m³]              | 80<br>(µg/m²)              | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laborators A

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Phone #491 40 49783062 / 27046806 Fax #91 40 49783063 Email : lab@bsenvitech.com, infa@bsenvitech.com

Website : www.hschvitech.com

CIN No. EU74210TG1999PTCII32358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: J                            | SW/NPIMO           | /ENV/2021/AAG            | 2021-07        | Issued to:                                 |
|---|--------------------|--------------------------|----------------|--|
| Reporting<br>Date                       | 03.08.2021         | Analysis<br>Starting on  | 02.08.2021     |  |
| Sample<br>Received on                   | 02.08.2021         | Analysis<br>Completed on | 03.08.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descri                           | <b>ption:</b> Ambi | ent Air Quality          | 1              | of<br>M/s JSW Steel Ltd.                   |
| Location/Code                           | : Rest             | Shelter/AAQCZ-4          |                | M/FOSH Steel Ltd.                          |
| Month                                   | : July-            | 2021                     |                |  |
| Sample Collect                          | ted by: B.S.       | Envi-Tech (P) Ltd        | .,             |  |
| Instruments u                           | sed Rest           | oirable Dust Samp        | oler & Fine du | st Sampler                                 |
| Model Enviro RDS/El 142 & Enviro El 13: |                    |                          |                |  |
| Serial no                               | 64-1               | (-17 & 31-L-17           |                |  |
| Calibration val                         | idity 05/          | 10/2021 & 19/10          | /2021          |  |

| S.NO                                      | DATE                        | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[ug/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>[µg/m <sup>3</sup> ]<br>IS:5182<br>Part 6 | CO<br>[mg/m <sup>3</sup> ]  |
|---|-----------------------------|-----------------------------|---|----------------------------|--|-----------------------------|
|   | Protocol IS:5182<br>Part 23 | IS:5182<br>Part 23          |   | IS:5182<br>Part 2          |  | BSET SOP                    |
| 16  | 16/07/2021                  | 55                          | 19  | 10.6                       | 11.9   | 0.55                        |
| 17  | 17/07/2021                  | 44                          | 15  | 11.5                       | 12.7   | 0.67                        |
| 18  | 18/07/2021                  | 66                          | 24  | 10.9                       | 12.2   | 0.53                        |
| 19  | 19/07/2021                  | 50                          | 17  | 11.2                       | 12.6   | 0.61                        |
| 20  | 20/07/2021                  | 63                          | 22  | 11.5                       | 12.9   | 0.7                         |
| 21  | 21/07/2021                  | 55                          | 19  | 11.8                       | 13.3   | 0.58                        |
| 22  | 22/07/2021                  | 65                          | 23  | 10.4                       | 11.7   | 0.65                        |
| 23  | 23/07/2021                  | 51                          | 18  | II                         | 12.3   | 0.59                        |
| 24  | 24/07/2021                  | 44                          | 16  | 11.3                       | 12.6   | 0.52                        |
| 25  | 25/07/2021                  | 48                          | 17  | 10.6                       | 11.9   | 0.6                         |
| 26  | 26/07/2021                  | 51                          | เล  | 11.4                       | 12.8   | 0.45                        |
| 27  | 27/07/2021                  | 42                          | 14  | 10.7                       | 12   | 0.54                        |
| 28  | 28/07/2021                  | 47                          | 15  | 9.9                        | 112  | 0.49                        |
| 29  | 29/07/2021                  | 41                          | 14  | 10.5                       | 11.8   | 0.51                        |
| 30  | 30/07/2021                  | 38                          | 13  | 9.4                        | 10.7   | 0.62                        |
| 31  | 31/07/2021                  | 96                          | 12  | 10.1                       | 11.6   | 0.56                        |
| 2   | verage                      | 52                          | 18  | 10.8                       | 12.2   | 0.55                        |
| NAAQ Standards<br>(24 hourly<br>standard) |                             | 100<br>[µg/m³]              | 60<br>(µg/m³                              | 80<br>[µg/m³]              | 80<br>[µg/m³]  | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM<sub>2,5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO2- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is available at Laborator C'B

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CIN No. : U742101G1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,   | /ENV/2021/AAQ            | /2021-07       | Issued to:                                 |
|-----------------------|--------------|--------------------------|----------------|--|
| Reporting<br>Date     | 03.08.2021   | Analysis<br>Starting on  | 02.08.2021     |  |
| Sample<br>Received on | 02.08.2021   | Analysis<br>Completed on | 03.08.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descri         | iption: Ambi | ent Air Quality          |                | of<br>M/s JSW Steel Ltd.                   |
| Location/Cod          | e : Gate l   | No-02/AAQCZ-3            |                | M/4 JSW Steel Ltu.                         |
| Month                 | : July-2     |                          |                |  |
| Sample Collec         | ted by: B.S. | Envi-Tech (P) Ltd        |                | 1  |
| Instruments :         | ised Resp    | trable Dust Samp         | oler & Fine du | st Sampler                                 |
| Model                 |              | rtech APM 460 &          |                |  |
| Scrial no             | 2052         | 2-DTG-2011 & 86          | -G-19          |  |
| Calibration ve        | didity 19/1  | 0/2021 & 03/10           | /2021          |  |

| S.NO | DATE                             | PM <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/m³] | SO <sub>2</sub><br> µg/m <sup>3</sup> | NO <sub>2</sub><br>(µg/m <sup>3</sup> ] | CO<br>[mg/m <sup>8</sup> ]  |
|------|----------------------------------|--|------------------------------|---------------------------------------|---|-----------------------------|
|      | Protocol                         | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:5182<br>Part 2                     | IS:5182<br>Part 6                       | BSET SOP                    |
| 1    | 01/07/2021                       | 54                                       | 18                           | 10.3                                  | 11.7                                    | 0.67                        |
| 2    | 02/07/2021                       | 51                                       | [7                           | 9.9                                   | 11.3                                    | 0.53                        |
| 3    | 03/07/2021                       | 57                                       | 20                           | 10.6                                  | 12.2                                    | 0.48                        |
| 4    | 04/07/2021                       | 52                                       | 18                           | 10.1                                  | 11.5                                    | 0.56                        |
| 5    | 06/07/2021                       | 59                                       | 20                           | 11.4                                  | 12.9                                    | 0,61                        |
| 6    | 06/07/2021                       | 62                                       | 22                           | 10.8                                  | 12.3                                    | 0.54                        |
| 7    | 07/07/2021                       | 51                                       | 17                           | 10.2                                  | 11.7                                    | 0,42                        |
| 8    | 08/07/2021                       | 60                                       | 21                           | 11                                    | 12.4                                    | 0.59                        |
| 9    | 09/07/2021                       | 56                                       | 19                           | 11.7                                  | 13                                      | 0.61                        |
| 10   | 10/07/2021                       | 52                                       | 18                           | 9.8                                   | 11.2                                    | 0.55                        |
| -11  | 11/07/2021                       | 49                                       | 17                           | 11.3                                  | 12.7                                    | 0.7                         |
| 12   | 12/07/2021                       | 46                                       | 15                           | 9.5                                   | 10.9                                    | 0.46                        |
| 13   | 13/07/2021                       | 50                                       | 17                           | 10.4                                  | 11.7                                    | 0.63                        |
| 14   | 14/07/2021                       | 53                                       | 19                           | 9.6                                   | 10.8                                    | 0.58                        |
| l5   | 15/07/2021                       | 64                                       | 22                           | 10.1                                  | 11.5                                    | 0.52                        |
| (24  | Standards<br>I hourly<br>andard] | 100<br>[µg/m³]                           | 60<br>[µg/m³]                | 80<br>[µg/m³]                         | 80<br>[µg/m³]                           | 02<br> mg/m²j<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

802-Sulphur Dioxide NO2- Nitrogen Dioxide

CO-Carbon Monoxide

\*Complaints Register is available at Laboratory

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CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: .          | JSW/NPIMO,            | /ENV/2021/AAC                     | /2021-07       | Issued to:                                 |  |  |
|-----------------------|-----------------------|-----------------------------------|----------------|--|--|--|
| Reporting<br>Date     | 03.08.2021            | 2021 Analysis Starting on         |                |  |  |  |
| Sample<br>Received on | 02.08.2021            | Analysis<br>Completed on          | 03.08.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |  |  |
| Sample Descri         | l <b>ption:</b> Amble | ent Air Quality                   |                | of<br>M/s JSW Steel Ltd.                   |  |  |
| Location/Code         | <b>c</b> : Gate :     | No-02/AAQCZ-3                     |                | M/ S GON GLOCK LLLL.                       |  |  |
| Month                 | : July-2              | 021                               |                |  |  |  |
| Sample Collec         | ted by: B.S.          | Envi-Tech (P) Ltd                 | -,             |  |  |  |
| Instruments u         | sed Resp              | irable Dust Samp                  | oler & Fine du | st Sampler                                 |  |  |
| Model                 | Envi                  | Envirtech APM 460 & Enviro EI 133 |                |  |  |  |
| Serial no             | 2052                  | 2-DTG-2011 & 86                   | -G-19          |  |  |  |
| Calibration va        | lidity 19/1           | 0/2021 & 03/10                    | /2021          |  |  |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/m³] | \$0 <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|--|------------------------------|--|----------------------------|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:5162<br>Part 2                        | 18:5182<br>Part 6          | BSET SOP<br>AA-09           |
| 16  | 16/07/2021 | 52                                       | [9                           | 10.7                                     | 12.2                       | 0.47                        |
| 17  | 17/07/2021 | 47                                       | 18                           | 11.3                                     | 12.8                       | 0.6                         |
| 18  | 18/07/2021 | 65                                       | 24                           | 11.8                                     | 12.2                       | 0.41                        |
| 19  | 19/07/2021 | 53                                       | 19                           | 11.1                                     | 12.4                       | 0.66                        |
| 20  | 20/07/2021 | 58                                       | 20                           | 10.5                                     | 11.9                       | 0.49                        |
| 21  | 21/07/2021 | 50                                       | 18                           | 10.9                                     | 12.3                       | 0.51                        |
| 22  | 22/07/2021 | 61                                       | 22                           | 10.2                                     | 11.7                       | 0.65                        |
| 23  | 23/07/2021 | 46                                       | 16                           | 9.8                                      | 41.1                       | 0.73                        |
| 24  | 24/07/2021 | 48                                       | 18                           | 10.6                                     | 11.9                       | 0.57                        |
| 25  | 25/07/2021 | 45                                       | 16                           | 11.1                                     | 12.5                       | 0.68                        |
| 26  | 26/07/2021 | 52                                       | 18                           | 11.5                                     | 12.9                       | 0.44                        |
| 27  | 27/07/2021 | 44                                       | 16                           | 9.7                                      | 11.2                       | 0.59                        |
| 28  | 28/07/2021 | 40                                       | 18                           | 10.3                                     | 11.7                       | 0.66                        |
| 29  | 29/07/2021 | 37                                       | 12                           | 10.8                                     | 12.3                       | 0.4                         |
| 30  | 30/07/2021 | 35                                       | IL                           | 11.2                                     | 12.7                       | 0.6                         |
| 31  | 31/07/2021 | 39                                       | 13                           | 9.4                                      | 10.7                       | 0.54                        |
| - 1                                       | lverage .  | 51                                       | 18                           | 10.5                                     | 11.9                       | 0.56                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]                           | 60<br>[µg/m³]                | 80<br>[μg/m³]                            | 80<br>[µg/m³]              | 02<br>(mg/m³ <br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO2-Sulphur Dloxide NO2- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory

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CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                             | JSW/NPIMO,         | ENV/2021/AAG             | /2021-07       | Issued to:                                 |
|--|--------------------|--------------------------|----------------|--|
| Reporting<br>Date                      | 03.08.2021         | 2021 Analysis 02.08.2021 |                |  |
| Sample<br>Received on                  | 02.08.2021         | Analysis<br>Completed on | 03.08.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr<br>Location/Cod<br>Month  | _                  | No-01/AAQCZ-2            |                | M/s JSW Steel Ltd.                         |
| Sample Collec                          | eted by: B.S.      | Envi-Tech (P) Ltd        | 4,             |  |
| Instruments (                          | used Resp          | irable Dust Sam          | oler & Fine du | st Sampler                                 |
| Model Enviro RDS/El 142 & Enviro El 1; |                    |                          | Enviro El 13   | 3  |
| Serial no                              | 66-K               | -18 & 98-C-19            |                |  |
| Calibration va                         | <b>lidity</b> 05/1 | 0/2021 & 03/10           | /2021          |  |

| S.NO | DATE                           | PM <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[µg/m³] | 6O₂<br>[μg/m³]    | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m³]               |
|------|--------------------------------|--|------------------------------|-------------------|----------------------------|-----------------------------|
|      | Protocol                       | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:5182<br>Part 2 | IS:5182<br>Part 6          | BSET SOP<br>AA-09           |
| 1    | 01/07/2021                     | 60                                       | 22                           | 11.5              | 12.8                       | 0.53                        |
| 2    | 02/07/2021                     | 53                                       | 18                           | 10.9              | 12.3                       | 0.59                        |
| 3    | 03/07/2021                     | 63                                       | 23                           | 11.2              | 12.7                       | 0.65                        |
| 4    | 04/07/2021                     | 55                                       | 19                           | 12.1              | 13.3                       | 0.54                        |
| 5    | 05/07/2021                     | 61                                       | 21                           | 11.6              | 13.1                       | 0.71                        |
| 6    | 06/07/2021                     | 66                                       | 24                           | 11.4              | 12.7                       | 0.48                        |
| 7    | 07/07/2021                     | 54                                       | 18                           | 11.7              | 13                         | 0.57                        |
| 8    | 08/07/2021                     | 58                                       | 20                           | 12.2              | 13.8                       | 0.62                        |
| 9    | 09/07/2021                     | 60                                       | 21                           | [1.]              | 12.4                       | 0.56                        |
| LO   | 10/07/2021                     | 55                                       | 18                           | 1 t.5             | 12.9                       | 0.67                        |
| 11   | 11/07/2021                     | 18                                       | 17                           | 10.8              | 12.4                       | 0.51                        |
| 12   | 12/07/2021                     | 48                                       | 16                           | 11.2              | 12.6                       | 0.64                        |
| 13   | 13/07/2021                     | 54                                       | 18                           | 12.3              | 13.6                       | 0.52                        |
| 14   | 14/07/2021                     | 57                                       | 20                           | 11.6              | 12.9                       | 0.71                        |
| 15   | 15/07/2021                     | 6l                                       | 21                           | 12                | 13.3                       | 0.66                        |
| (24  | Standards<br>hourly<br>andard) | 100<br>[µg/m²]                           | 60<br>[µg/m³]                | 80<br>[µg/m³]     | 80<br>[µg/m³]              | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

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"Comptaints Register is available at Laboratory.

Websile : www.bsenvitech.com

CIN No. #U74210TG1909PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: J          | JSW/NPIMO          | /ENV/2021/AAC            | /2021-07       | Issued to:                              |
|-----------------------|--------------------|--------------------------|----------------|---|
| Reporting<br>Date     | 03.08.2021         | Analysis<br>Starting on  | 02.08.2021     |   |
| Sample<br>Received on | 02.08.2021         | Analysis<br>Completed on | 03.08.2021     | Narayanposhi iron & Manganese Ore Mines |
| Sample Descri         | <b>ption:</b> Ambi | ent Air Quality          |                | of<br>M/s JSW Steel Ltd.                |
| Location/Code         | e : Gate           | No 01/AAQCZ-2            |                |   |
| Month                 | : July-            | 2021                     |                |   |
| Sample Collec         | ted by: B.S.       | Envi-Tech (P) Ltd        | .,             |   |
| Instruments u         | sed Resp           | irable Dust Samp         | oler & Fine du | st Sampler                              |
| Model                 | Envi               | ro RDS/EI 142 8          | Enviro El 13   | 3                                       |
| Serial no             | 66-K               | -18 & 98-G-19            |                |   |
| Calibration va        | lidity   05/1      | 0/2021 & 03/10           | /2021          |   |

| s.no        | DATE                             | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | \$O <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|-------------|----------------------------------|-----------------------------|---|-----------------------------|----------------------------|-----------------------------|
|             | Protocol                         | 18:5182<br>Part 23          | IS:5182<br>Part 24                        | IS:5182<br>Part 2           | IS:5182<br>Part 6          | BSET SOP<br>AA-09           |
| 16          | 16/07/2021                       | 49                          | 17  | 11.7                        | 13.1                       | 0.55                        |
| 17          | 17/07/2021                       | 52                          | 18  | 10,4                        | 11.9                       | 0.49                        |
| 18          | 18/07/2021                       | 61                          | 21  | 10.9                        | 12.4                       | 0.62                        |
| 19          | 19/07/2021                       | 57                          | 19  | 11.2                        | 12.8                       | 0.59                        |
| 20          | 20/07/2021                       | 54                          | 17  | 12.6                        | 14                         | 0.67                        |
| 21          | 21/07/2021                       | 47                          | 15  | 12.9                        | 14.2                       | 0.72                        |
| 22          | 22/07/2021                       | 623                         | 22  | 11.5                        | 12.9                       | 0.54                        |
| 23          | 23/07/2021                       | 50                          | 17  | 10.3                        | 11.7                       | 0.43                        |
| 24          | 24/07/2021                       | 45                          | 15  | LI                          | 12.4                       | 0.56                        |
| 25          | 25/07/2021                       | 49                          | 17  | 10.8                        | 12.2                       | 0.65                        |
| 26          | 26/07/2021                       | 54                          | 19  | 11.7                        | 13.1                       | 0.52                        |
| 27          | 27/07/2021                       | 41                          | 14  | 12.1                        | 13.6                       | 0.69                        |
| 28          | 28/07/2021                       | 46                          | 16  | 11.9                        | 13.3                       | 0.74                        |
| 29          | 29/07/2021                       | 4.3                         | 14  | 12.5                        | 14                         | 0.67                        |
| 30          | 30/07/2021                       | 39                          | 13  | 11.3                        | 12.5                       | 0.62                        |
| 31          | 31/07/2021                       | 35                          | 12  | 11.8                        | 13.4                       | 0.47                        |
| A           | verage                           | 53                          | 18  | 11.5                        | 12.9                       | 0.59                        |
| NAAQ<br>(24 | Standards<br>4 hourly<br>andard) | 100<br>[µg/m³]              | 60<br>[µg/m³)                             | 80<br>(µg/m³                | 80<br>(µg/m³)              | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2,5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO2- Nitrogen Dioxide

CO-Carbon Monoxide

\*Complaints Register is available at Laboratory

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**Authorized Signatory** 

Website I www bservitech.com

CIN No. 3 J742107 G1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,           | /ENV/2021/AAG            | 3/2021-07      | Issued to:  |
|-----------------------|----------------------|--------------------------|----------------|---|
| Reporting<br>Date     | 03.08.2021           | Analysis<br>Starting on  | 02.08.2021     |   |
| Sample<br>Received on | 02.08.2021           | Analysis<br>Completed on | 03.08.2021     | Narayanpoabi Iron & Manganese Ore Mines of M/s JSW Steel Ltd. |
| Sample Descr          | <b>iption:</b> Ambie | ent Air Quality          |                |   |
| Location/Cod          | e : Kasira           | a Basti/AAQBZ-1          |                |   |
| Month                 | : July 3             | 2021                     |                |   |
| Sample Collec         | ted by: B.S.         | Envi-Tech (P) Ltd        |                |   |
| Instruments :         | used Resp            | irable Dust Sam          | oler & Fine du | st Sampler  |
| Model                 | RDS                  | 9000 & Enviro E          | 1 133          |   |
| Serial no             | 0304                 | 108 & 36-L-17            |                |   |
| Calibration ve        | didity 15/0          | 3/2022 & 19/10           | /2021          |   |

| S.NO | DATE                          | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[μg/m³] | 80 <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>[µg/m²] | CO<br>(mg/m³)               |
|------|-------------------------------|-----------------------------|------------------------------|----------------------------|----------------------------|-----------------------------|
|      | Protocol                      | IS:5182<br>Part 23          | IS:5152<br>Part 24           | IS:5182<br>Part 2          | IS:5182<br>Part 6          | BSET SOP                    |
| 1    | 05/07/2021                    | 5/0                         | 18                           | 10.1                       | 11.7                       | 0.44                        |
| 2    | 06/07/2021                    | 46                          | 15                           | 9.7                        | 11.2                       | 0.52                        |
| 3    | 12/07/2021                    | 54                          | 19                           | 9.2                        | 10.8                       | 0.36                        |
| 4    | 13/07/2021                    | 58                          | 20                           | 8.9                        | 10.3                       | 0.47                        |
| 5    | 19/07/2021                    | 42                          | 14                           | 9.5                        | 10.9                       | 0.41                        |
| 6    | 20/07/2021                    | 47                          | 16                           | 9.9                        | 11.4                       | 0.39                        |
| 7    | 26/07/2021                    | 49                          | 17                           | 10.5                       | 11.9                       | 0.42                        |
| 8    | 27/07/2021                    | 41                          | 14                           | 9.6                        | 10.9                       | 0.5                         |
| - 7  | lvcrage                       | 48                          | 17                           | 9.6                        | 11.1                       | 0.43                        |
|      | ) Standards<br>(rly standard) | 100<br> µg/m3               | 60<br>[µg/m3]                | 80<br>[µg/m3]              | 80<br>[µg/m3]              | 02<br>[mg/m3]<br>{8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

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\*Complaints Register is available at Laboratory

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CIN No. \$\u00e4U74210\u00e4G1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,    | /ENV/2021/AAQ/2021-07 Issued to: |               | Issued to:                                 |
|-----------------------|---------------|----------------------------------|---------------|--|
| Reporting<br>Date     | 03.08.2021    | Analysis<br>Starting on          | 02.08.2021    |  |
| Sample<br>Received on | 02.08.2021    | Analysis<br>Completed on         | 03.08.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descri         | iption: Ambie | ent Air Quality                  |               | of<br>M/s JSW Steel Ltd.                   |
| Location/Cod          | e : Koira     | Basti/AAQBZ-2                    |               |  |
| Month                 | : July-2      | 2021                             |               |  |
| Sample Collec         | ted by: B.S.  | Envi-Tech (P) Ltd                | -,            |  |
| Instruments :         | sed Resp      | irable Dust Samp                 | der & Fine du | st Sampler                                 |
| Mođel                 |               | 9000 & Enviro E                  |               |  |
| Serial no             | 0412          | 235 & 37-L-17                    |               |  |
| Calibration va        |               | 3/2022 & 19/10                   | /2021         |  |

| S.NO | DATE                          | PM <sub>10</sub><br>[µg/m³) | PM <sub>2.5</sub><br>[µg/m³] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]  |
|------|-------------------------------|-----------------------------|------------------------------|---|---|-----------------------------|
|      | Protocol                      | IS:5182<br>Part 23          | 18:5182<br>Part 24           | IS:5182<br>Part 2                       | IS:5182<br>Part 6                       | BSET SOP<br>AA-09           |
| L    | 05/07/2021                    | 55                          | 19                           | 11.4                                    | 12.9                                    | 0.67                        |
| 2    | 06/07/2021                    | 48                          | 16                           | 10,9                                    | 12.3                                    | 0.58                        |
| 3    | 12/07/2021                    | 60                          | 21                           | 11.7                                    | 13                                      | 0.52                        |
| 4    | 13/07/2021                    | 52                          | 18                           | 11.2                                    | 12.6                                    | 0.64                        |
| - 5  | 19/07/2021                    | 47                          | 15                           | 10.7                                    | 12.1                                    | 0.49                        |
| 6    | 20/07/2021                    | 51                          | 17                           | 11.1                                    | 12.4                                    | 0.55                        |
| 7    | 26/07/2021                    | 55                          | 19                           | 10.9                                    | 12.2                                    | 0.69                        |
| 6    | 27/07/2021                    | 44                          | 14                           | 11.6                                    | 13.1                                    | 0.63                        |
|      | Lverage                       | 52                          | 17                           | 11.1                                    | 12.5                                    | 0.59                        |
| _    | ) Standards<br>irly standard) | 100<br>[µg/m3]              | 60<br>[µg/m3]                | 80<br>[µg/m3]                           | 80<br>[µg/m3]                           | 02<br>[mg/m3]<br>[8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory

Website | www.bscrvitech.com

CIN No. 174210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,           | /ENV/2021/AAQ            | /2021-07           | Issued to:                              |
|-----------------------|----------------------|--------------------------|--------------------|---|
| Reporting<br>Date     | 03.08.2021           | Analysis<br>Starting on  | 02.08.2021         |   |
| Sample<br>Received on | 02.08.2021           | Analysis<br>Completed on | 03.08.2021         | Narayanposhi Iron & Manganese Ore Mines |
| Sample Descr          | <b>iption:</b> Ambie | ent Air Quality          |                    | of<br>M/s JSW Steel Ltd.                |
| Location/Cod          | e : Segas            | aht Village/AAQE         | M/s JSW Steel Ltd. |   |
| Month                 | : July-              | 2021                     |                    |   |
| Sample Collect        | ted by: B.S.         | Envi-Tech (P) Ltd        | 19                 |   |
| Instruments t         | ised Resp            | irable Dust Sam          | der & Fine du      | st Sampler                              |
| Model                 | RDS                  | 9000 & Enviro E          | I 133              |   |
| Serial no             | 0304                 | 108 & 36-L-17            |                    |   |
| Calibration va        | lidity 15/0          | 3/2022 & 19/10           | /2021              |   |

| 8.NO | DATE                          | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br> µg/m³ | CO<br>[mg/m <sup>3</sup> ]  |
|------|-------------------------------|-----------------------------|---|---|---------------------------|-----------------------------|
|      | Protocol                      | IS:5182<br>Part 23          | IS:5182<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6         | BSET SOP<br>AA-09           |
| 1    | 08/07/2021                    | 45                          | 15  | 9                                       | 10.8                      | 0.37                        |
| 2    | 09/07/2021                    | 49                          | 17  | 8.8                                     | 10.3                      | 0.44                        |
| 3    | 15/07/2021                    | 47                          | 16  | 9.4                                     | 10.7                      | 0.32                        |
| 4    | 16/07/2021                    | 51                          | 18  | 9.2                                     | 10.5                      | 0.41                        |
| 5    | 22/07/2021                    | 46                          | 15  | 9.9                                     | 11.3                      | 0.29                        |
| 6    | 23/07/2021                    | 43                          | 14  | 8.3                                     | 9.8                       | 0.33                        |
| 7    | 29/07/2021                    | 34                          | 12  | 8.1                                     | 9.5                       | 0.46                        |
| 8    | 30/07/2021                    | .399                        | 13  | 9.5                                     | 11.1                      | 0.35                        |
|      | Average                       | 44                          | 15  | 9.0                                     | 1D.5                      | 0.37                        |
|      | ) Standards<br>urly standard) | 100<br>[µg/m3}              | 60<br>[µg/m3]                             | 80<br>(µg/m3)                           | 80<br>(µg/m3)             | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

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\*Complaints Register is available at Laboratory.

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CIN No. # U74210TG1999PTC032358

Email



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: J          | SW/NPIMO,    | /ENV/2021/AAG            | /2021-07      | lesued to:                                 |
|-----------------------|--------------|--------------------------|---------------|--|
| Reporting<br>Date     | 03.08.2021   | Analysis<br>Starting on  | 02.08.2021    |  |
| Sample<br>Received on | 02.08.2021   | Analysis<br>Completed on | 03.08.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descrip        | tion: Ambie  | ent Air Quality          |               | of<br>M/s JSW Steel Ltd.                   |
| Location/Code         | : Bhant      | apalt Village/AAQ        | BZ-4          | M/a osw steel Ltd.                         |
| Month                 | : July-2     | • • • •                  |               |  |
| Sample Collect        | ed by: B.S.  | Envi-Tech (P) Ltd        |               |  |
| Instruments us        | ed Resp      | irable Dust Samp         | der & Fine du | st Sampler                                 |
| Model                 |              | 9000 & Enviro E          |               |  |
| Serial no             | 0412         | 35 & 37-L-17             |               |  |
| Calibration vali      | idity   15/0 | 3/2022 & 19/10           | /2021         |  |

| S.NO | DATE                          | PM <sub>10</sub><br> μg/m <sup>2</sup> | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO₂<br>[µg/m³]    | CO<br>[mg/m³]               |
|------|-------------------------------|--|---|---|-------------------|-----------------------------|
|      | Protocol                      | IS:5182<br>Part 23                     | IS:5182<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6 | BSET SOP<br>AA-09           |
|      | 08/07/2021                    | 53                                     | l8  | 10.1                                    | 11.7              | 0.45                        |
| 2    | 09/07/2021                    | 57                                     | 20  | 10.7                                    | 12.2              | 0.52                        |
| 3    | 15/07/2021                    | 49                                     | 17  | 9.9                                     | 11.3              | 0.61                        |
| 4    | 16/07/2021                    | 55                                     | 19  | 10.4                                    | 11.8              | 0.55                        |
| 5    | 22/07/2021                    | 48                                     | 17  | 9.5                                     | 10.7              | 0.43                        |
| 6    | 23/07/2021                    | 45                                     | 15  | 10.2                                    | 11.6              | 0.58                        |
| 7    | 29/07/2021                    | 41                                     | 14  | 9,8                                     | 11.2              | 0,54                        |
| 8    | 30/07/2021                    | 38                                     | 12  | 9.6                                     | Lt                | 0.49                        |
| - /  | lverage                       | 48                                     | 17  | 10.0                                    | 11.4              | 0.52                        |
| _    | ) Standards<br>urly standard) | 100<br>[µg/m3]                         | 60<br>[µg/m3]                             | 80<br>(µg/m3)                           | 80<br>[µg/m3]     | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

 $PM_{2.6}$ -Particulate Matter(Size Less than 2.5 $\mu m$ )

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

uthorized Signatory

"Complaints Register a available at Laboratory

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CIN No. : U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

# FUGITIVE DUST MONITORING REPORT

JULY-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: «          | Issued to:     |                          |                         |  |  |
|-----------------------|----------------|--------------------------|-------------------------|--|--|
| Reporting<br>Date     | 03.08.2021     | Analysis<br>Starting on  | 02.08.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample<br>Received on | 02.08.2021     | Analysis<br>Completed on | 03.08.2021              | of M/s JSW Steel Ltd.                      |  |
| Sample Descri         | ption:         | *                        | Instrument              | Respirable Dust                            |  |
| Fugitive Dust !       | Monitoring     |                          | Used                    | Sampler                                    |  |
| Location/Cod          | e : Mines Face | /Bench/FDM-1             | Model                   | Enviro RDS / El 142                        |  |
| Month                 | : July 2021    |                          | Serial no               | 135-G-20                                   |  |
| Sample Collec         |                | Invi-Tech (P) Ltd.,      | Calibration<br>Validity | Enviro RDS / El 142                        |  |

| Standards as per CT | SPM (µg/m³) | DATE       | S.NO |
|---------------------|-------------|------------|------|
| 9,513               | 707         | 01/07/2021 | 1    |
|                     | 742         | 02/07/2021 | 2    |
|                     | 528         | 03/07/2021 | 3    |
|                     | 560         | 04/07/2021 | 4    |
|                     | 522         | 05/07/2021 | 5    |
|                     | 684         | 06/07/2021 | 6    |
|                     | 713         | 07/07/2021 | 7    |
|                     | 463         | 08/07/2021 | 8    |
|                     | 412         | 09/07/2021 | 9    |
|                     | 569         | 10/07/2021 | 10   |
|                     | 470         | 11/07/2021 | l l  |
|                     | 632         | 12/07/2021 | 12   |
|                     | 528         | 13/07/2021 | 13   |
|                     | 473         | 14/07/2021 | 14   |
|                     | 632         | 15/07/2021 | 15   |
| 1200                | 484         | 16/07/2021 | 16   |
| (µg/m³              | 682         | 17/07/2021 | 17   |
|                     | 593         | 18/07/2021 | 18   |
|                     | 633         | 19/07/2021 | 19   |
|                     | 513         | 20/07/2021 | 20   |
|                     | 472         | 21/07/2021 | 21   |
|                     | 495         | 22/07/2021 | 22   |
|                     | 407         | 23/07/2021 | 23   |
|                     | 521         | 24/07/2021 | 24   |
|                     | 463         | 25/07/2021 | 25   |
|                     | 558         | 26/07/2021 | 26   |
|                     | 463         | 27/07/2021 | 27   |
|                     | 417         | 28/07/2021 | 28   |
|                     | 386         | 29/07/2021 | 29   |
|                     | 349         | 30/07/2021 | 30   |
|                     | 322         | 31/07/2021 | 31   |
|                     | 529         | verage     | A    |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register is available at Leboratory.

Websile (www.bservitech.com CIN No. : 1174210TG1999PTC03235B



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/FDM/2021-07   |            |                          |                         | Issued to:                                 |
|---|------------|--------------------------|-------------------------|--|
| Reporting<br>Date                           | 03.08.2021 | Analysis<br>Starting on  | 02.08.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample<br>Received on                       | 02.08.2021 | Analysis<br>Completed on | 03.08.2021              | of<br>M/s JSW Steel Ltd.                   |
| Sample Description:                         |            |                          | Instrument              | Respirable Dust                            |
| Fugitive Dust Monttoring                    |            |                          | Used                    | Sampler                                    |
| Location/Code: Mines Haulage Road/FDM-2     |            |                          | Model                   | Envirotech APM 460                         |
| Month : July-2021                           |            | Serial no                | 2838-DTA-2015           |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd |            |                          | Calibration<br>Validity | 19/10/2021                                 |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/07/2021 | 643         |                      |
| 2    | 02/07/2021 | 572         |                      |
| 3    | 03/07/2021 | 683         |                      |
| 4    | 04/07/2021 | 447         | 1                    |
| 5    | 05/07/2021 | 672         |                      |
| 6    | 06/07/2021 | 690         |                      |
| 7    | 07/07/2021 | 661         |                      |
| 8    | 08/07/2021 | 748         | 1                    |
| 9    | 09/07/2021 | 527         |                      |
| 10   | 10/07/2021 | 549         |                      |
| ш    | 11/02/2021 | 447         |                      |
| 12   | 12/07/2021 | 652         |                      |
| 13   | 13/07/2021 | 582         | 1200                 |
| 14   | 14/07/2021 | 624         | 1                    |
| 15   | 15/07/2021 | 715         | lug/m³               |
| 16   | 16/07/2021 | 683         | 1                    |
| 17   | 17/07/2021 | 592         |                      |
| 18   | 18/07/2021 | 483         |                      |
| 19   | 19/07/2021 | 484         |                      |
| 20   | 20/07/2021 | 567         |                      |
| 21   | 21/07/2021 | 513         |                      |
| 22   | 22/07/2021 | 552         |                      |
| 23   | 23/07/2021 | 471         |                      |
| 24   | 24/07/2021 | 410         |                      |
| 25   | 25/07/2021 | 434         |                      |
| 26   | 26/07/2021 | 513         |                      |
| 27   | 27/07/2021 | 567         |                      |
| 28   | 28/07/2021 | 509         |                      |
| 29   | 29/07/2021 | 482         |                      |
| 30   | 30/07/2021 | 471         |                      |
| 31   | 31/07/2021 | 415         |                      |
| - 1  | verage     | 560         |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register is available at Laboratory

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Website I www bsenvitech com

CIN No. #U74210TG1999PTCI/32358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/FDM/2021-07     |            |                          |                         | Issued to:                                 |
|---|------------|--------------------------|-------------------------|--|
| Reporting<br>Date                             | 03.08.2021 | Analysis<br>Starting on  | 02.08.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample<br>Received on                         | 02.08.2021 | Analysis<br>Completed on | 03.08.2021              | of<br>M/s JSW Steel Ltd.                   |
| Sample Description:                           |            |                          | Instrument              | Respirable Dust                            |
| Fugitive Dust Monitoring                      |            |                          | Used                    | Sampler                                    |
| Location/Code : Crusher Plant/FDM-3           |            |                          | Model                   | Envirotech APM 460                         |
| Month : July 2021                             |            | Serial no                | 138 G-20                |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd., |            |                          | Calibration<br>Validity | 27/10/2021                                 |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| ]    | 01/07/2021 | 747         |                      |
| 2    | 02/07/2021 | 693         |                      |
| 3    | 03/07/2021 | 710         |                      |
| 4    | 04/07/2021 | 663         | 1                    |
| 5    | 05/07/2021 | 649         | 1                    |
| 6    | 06/07/2021 | 715         |                      |
| 7    | 07/07/2021 | 544         |                      |
| 8    | 08/07/2021 | 528         | 1                    |
| 9    | 09/07/2021 | 410         |                      |
| 10   | 10/07/2021 | 613         | 1                    |
| H    | 11/07/2021 | 517         |                      |
| 12   | 12/07/2021 | 514         | 1                    |
| 13   | 13/07/2021 | 593         |                      |
| 14   | 14/07/2021 | 573         | ]                    |
| 15   | 15/07/2021 | 488         | 1                    |
| 16   | 16/07/2021 | 594         | 1200                 |
| 17   | 17/07/2021 | 584         | [µg/m³]              |
| 18   | 18/07/2021 | 621         | 1                    |
| 19   | 19/07/2021 | 580         | 1                    |
| 20   | 20/07/2021 | 494         | 1                    |
| 21   | 21/07/2021 | 570         | ]                    |
| 22   | 22/07/2021 | 510         |                      |
| 23   | 23/07/2021 | 580         | ]                    |
| 24   | 24/07/2021 | 564         |                      |
| 25   | 25/07/2021 | 428         | 1                    |
| 26   | 26/07/2021 | 494         |                      |
| 27   | 27/07/2021 | 671         |                      |
| 28   | 28/07/2021 | 613         |                      |
| 29   | 29/07/2021 | 563         |                      |
| 30   | 30/07/2021 | 512         |                      |
| 31   | 31/07/2021 | 496         |                      |
| -    | Average    | 575         |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register is available in Laboratory.

Telangana, India

Phone : +91 40 49783062 / 27016806 Fax 191 40 49763063

Hmail lab@bsenvitech.com.info@bsenvitech.com Website www.bsenvitech.com GIN No. U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/FDM/2021-07       |            |                          |                         | Issued to:                                 |
|---|------------|--------------------------|-------------------------|--|
| Reporting<br>Date                               | 03.08.2021 | Analysis<br>Starting on  | 02.08.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample<br>Received on                           | 02.08.2021 | Analysis<br>Completed on | 03.08.2021              | of<br>M/s JSW Steel Ltd.                   |
| Sample Description:<br>Fugitive Dust Monitoring |            |                          | Instrument<br>Used      | Respirable Dust<br>Sampler                 |
| Location/Code: Screen Plant/FDM-4               |            |                          | Model                   | Envirotech APM 460                         |
| Month : July-2021                               |            | Serial no                | 62-K-18                 |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd.,   |            |                          | Calibration<br>Validity | 19/10/2021                                 |

| S.NO | DATE       | SPM [ug/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
|      | 01/07/2021 | 648         |                      |
| 2    | 02/07/2021 | 716         |                      |
| 3    | 03/07/2021 | 663         |                      |
| 4    | 04/07/2021 | 711         |                      |
| 5    | 05/07/2021 | 590         | 1                    |
| 6    | 06/07/2021 | 582         |                      |
| 7    | 07/07/2021 | 696         |                      |
| 8    | 08/07/2021 | 643         |                      |
| 9    | 09/07/2021 | 532         |                      |
| 10   | 10/07/2021 | 546         |                      |
| 11   | 11/07/2021 | 452         |                      |
| 12   | 12/07/2021 | 483         | 1                    |
| 13   | 13/07/2021 | 472         |                      |
| 14   | 14/07/2021 | 513         | 1                    |
| 15   | 15/07/2021 | 623         |                      |
| 16   | 16/07/2021 | 432         | 1200                 |
| 17   | 17/07/2021 | 483         | [µg/m³]              |
| 1B   | 18/07/2021 | 493         |                      |
| 19   | 19/07/2021 | 552         |                      |
| 20   | 20/07/2021 | 673         |                      |
| 21   | 21/07/2021 | 693         |                      |
| 22   | 22/07/2021 | 483         |                      |
| 23   | 23/07/2021 | 513         |                      |
| 24   | 24/07/2021 | 473         |                      |
| 25   | 25/07/2021 | 493         |                      |
| 26   | 26/07/2021 | 514         |                      |
| 27   | 27/07/2021 | 448         |                      |
| 28   | 28/07/2021 | 415         |                      |
| 29   | 29/07/2021 | 391         |                      |
| 30   | 30/07/2021 | 374         |                      |
| 31   | 31/07/2021 | 342         |                      |
|      | Average    | 537         |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register is available at Laboratory

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neil flab@bsenvitech.com, infn@bsenvitech.com

Website ( www.bsenvitech.com CIN No. : D74210TG1999PT0032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                      | JSW/NPIMO/  | 2021-07        | Issued to:  |                            |
|---|-------------|----------------|---|----------------------------|
| Reporting 03.08.2021 Analysis Starting on       |             | 02.08.2021     | Narayanposhi Iron & Manganese Ore Mines of M/s JSW Steel Ltd. |                            |
| Sample 02.08.2021 Analysis Completed on         |             |                |   |                            |
| Sample Description:<br>Fugitive Dust Monitoring |             |                | Instrument<br>Used  | Respirable Dust<br>Sampler |
| Location/Cod<br>Point/FDM-5                     | e : Ore Sto | rage & Loading | Model   | Envirotech APM 460         |
| Month   | : July-2021 |                | Serial no   | 101-G-19                   |
| Sample Collected by: B.S. Envi-Tech (P) Ltd.,   |             |                | Calibration<br>Validity                                       | 19/10/2021                 |

| Standards as per CTC | SPM [µg/m³] | DATE       | S.NO |
|----------------------|-------------|------------|------|
|                      | 747         | 01/07/2021 | ı    |
|                      | 771         | 62/07/2021 | 2    |
|                      | 721         | 03/07/2021 | 3    |
|                      | 530         | 04/07/2021 | 4    |
|                      | 643         | 05/07/2021 | 5    |
|                      | 512         | 06/07/2021 | 6    |
|                      | 671         | 07/07/2021 | 7    |
|                      | 594         | 08/07/2021 | 8    |
|                      | 424         | 09/07/2021 | 9    |
|                      | 594         | 10/07/2021 | 10   |
|                      | 615         | 11/07/2021 | 11   |
|                      | 466         | 12/07/2021 | 12   |
|                      | 483         | 13/07/2021 | 13   |
|                      | 481         | 14/07/2021 | 14   |
|                      | 405         | 15/07/2021 | 15   |
| 1200                 | 623         | 16/07/2021 | 16   |
| iμg/m³]              | 602         | 17/07/2021 | 17   |
|                      | 425         | 18/07/2021 | 18   |
|                      | 483         | 19/07/2021 | 19   |
|                      | 517         | 20/07/2021 | 20   |
|                      | 592         | 21/07/2021 | 21   |
|                      | 462         | 22/07/2021 | 22   |
|                      | 478         | 23/07/2021 | 23   |
|                      | 543         | 24/07/2021 | 24   |
|                      | 599         | 25/07/2021 | 25   |
|                      | 497         | 26/07/2021 | 26   |
|                      | 589         | 27/07/2021 | 27   |
|                      | 555         | 28/07/2021 | 28   |
|                      | 497         | 29/07/2021 | 29   |
|                      | 425         | 30/07/2021 | 30   |
|                      | 402         | 31/07/2021 | 31   |
|                      | 547         | verage     | A    |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register is available at Laboratory.

Website::www.bsenvitech.com CIN No:: U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                      | JSW/NPIMO/    | Tesued to:               |                         |   |  |
|---|---------------|--------------------------|-------------------------|---|--|
| Reporting<br>Date                               |               |                          | 02.08.2021              | Narayanposhi Iron &<br>Manganese Ore Mine |  |
| Sample<br>Received on                           | 02.08.2021    | Analysis<br>Completed on | 03.08.2021              | of<br>M/s JSW Steel Ltd.                  |  |
| Sample Description:<br>Fugitive Dust Monitoring |               |                          | Instrument<br>Vecd      | Respirable Dust<br>Sampler                |  |
| Location/Cod                                    | e : Waste Dun | np/FDM-6                 | Model                   | RDS 9000                                  |  |
| Month : July-2021                               |               |                          | Serial no               | 0602101                                   |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd.,   |               |                          | Calibration<br>Validity | 19/10/2021                                |  |

| Standards as per CTC | SPM [µg/m³] | DATE       | S.NO |
|----------------------|-------------|------------|------|
|                      | 715         | 01/07/2021 | 1    |
|                      | 524         | 02/07/2021 | 2    |
|                      | 599         | 03/07/2021 | 3    |
|                      | 502         | 04/07/2021 | 4    |
|                      | 548         | 05/07/2021 | 5    |
|                      | 628         | 06/07/2021 | 6    |
|                      | 550         | 07/07/2021 | 7    |
|                      | 592         | 08/07/2021 | 8    |
|                      | 580         | 09/07/2021 | 9    |
|                      | 483         | 10/07/2021 | 10   |
| ľ                    | 498         | 11/07/2021 | 11   |
|                      | 593         | 12/07/2021 | 12   |
|                      | 559         | 13/07/2021 | 1.3  |
|                      | 550         | 14/07/2021 | 14   |
|                      | 683         | 15/07/2021 | 15   |
| 1200                 | 713         | 16/07/2021 | 16   |
| µg/m³                | 432         | 17/07/2021 | 17   |
|                      | 483         | 18/07/2021 | เช   |
|                      | 482         | 19/07/2021 | 19   |
|                      | 473         | 20/07/2021 | 20   |
|                      | 488         | 21/07/2021 | 21   |
|                      | 473         | 22/07/2021 | 22   |
|                      | 523         | 23/07/2021 | 23   |
|                      | 550         | 24/07/2021 | 24   |
|                      | 417         | 25/07/2021 | 25   |
|                      | 463         | 26/07/2021 | 26   |
|                      | 540         | 27/07/2021 | 27   |
|                      | 51 <b>i</b> | 28/07/2021 | 28   |
|                      | 496         | 29/07/2021 | 29   |
|                      | 424         | 30/07/2021 | 30   |
|                      | 399         | 31/07/2021 | 31   |
|                      | 532         | verage     | A    |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register a available at Laboratory

Email 195@bservitech.com.info@bservitech.com Website 1 www.bservitech.com

CIN No. : U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

AAQ-7 PARAMETERS

AUGUST-2021



Recognized by MoEF & CC, Gol: Valld upto August, 2022

#### TEST REPORT

Name & Address of the Customer :

M/s ISW Steel Limited

Navayanposhi Iron & Manganese Ore Mines

Sample Description: Ambient Air Quality sample

Qty & Packing

: I filter paper for

Load Bunzola) pyrone. Arsonie, Niekel

30ml absorbing solution for Ammonia.

10 nd absorbing solution for Ozone

I No Charcoal tube for Benzene

Test Required : As per given below

Test Repart No. : BNET/2021/TR-2620

Issue Date.

assistanti.

: 18 08.2021

Your Ref ..... : Letter dated 13.08 2021

Data of Receipt : 13 HS 2021

Date-of Registration 13.09.2021 Date of commencement of testing 13.08.2021 17,08,7021 Date of completion of testing

Sample condition at receipt Sample tested as received

Sampling Details

Date of Sampling: 10.08.2021

General Environment conditions: Ok

Location of Sampling: Mines Office Area

Page No: 1 of 1

Found nk

#### TEST RESULTS

| S. No. | Test Parameter   | Test Method                                 | Result | NAAQ Standards for<br>Industrial<br>Residential, Rural<br>and Other areas |
|--------|--|---|--------|---|
| 1      | Ozore (O <sub>3</sub> ), µg/ m <sup>3</sup>                            | IS:5182 (Part-1X) 1974<br>(Reaffirmed 2014) | 9.9    | 180 (1 Hour )   |
| 2      | Lead (Ph), pg/m <sup>3</sup>   | USEPA IO 32 1999,<br>BY AAS                 | 0.20   | I (24 Flours)   |
| 3      | Ammonia (NH <sub>3</sub> ), µg <sub>3</sub> m <sup>3</sup>             | BSET/SOP/AA-06.<br>(Indophenal Blag Method) | 14.2   | 400 (24 Hours )   |
| 4      | Непголе, ју <sub>в</sub> , т   | IS: 5182 (P-11):2006<br>(Realfirmed 2012)   | < 0.1  | 5 (Annual)  |
| 5      | Penzo (at Pyrene, (BaP)<br>Particulate phase only, ug / m <sup>3</sup> | IS 5182 (P-12) :2004<br>(Realtifred 2014)   | <1     | I (Annual)  |
| 6      | Arsenic (As), ng / m²  | USLPA TO 3.2 1999,<br>BY AAS - VGA          | 0.45   | 6 (Annual)  |
| 7      | Nickel (Nc), ng / m/   | USEPA - IO - 3.2 - 1999.<br>BY AAS          | 0.32   | 20 (Annual)   |

Interpretation of results. Nil Deviation from resumethed; Nil.

\*Complaints Register is available at Laboratory.

Emal

Hab@bschvilech.com.info@bsenvitech.com.

Website Ewww.bsenvillechicam CIN No. 1 074210TG1999PTC032458



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Customer :

Mis JSW Steel Limited

Narayanposhi Iron & Manganese Ore Mines

Sample Description: Ambient Air Quality sample

Qty & Packing

: I filter paper for

Lead, Benzofa) pyreno, Arsenio, Nickel

30ml absorbing solution for Anonoma

10 ml absorbing solution for Ozone

I No Charcoal tube for Benzene

Test Required: As non given below

Test Report No. : BSET/2021/TR-2621

Issue Date

: 18 08.2021

Your Ref.

: Lotter dated 13 08 2021

Date of Receipt : 13 08 2021

Date of Registration 13 08.2021

Date of commencement of testing | 13.08.2021

Date of completion of testing 17-08,2021

Sample condition at receipt Found ok

Sample tested as received

Sampling Details

Date of Sampling: 10 08:2021

General Environment conditions: Ok.

Location of Sampling: Work Shop Area

Page No: 1 of 1

#### TEST RESULTS

| S. No. | Test Parameter   | Fest Method                                 | Result | NAAQ Standards for<br>Industrial<br>Residential, Rural<br>and Other areas |
|--------|--|---|--------|---|
| :      | Ozone (O1), pg/ m1   | IS:5182 (Part-IX) 1974<br>(Reaffirmed 2014) | 10.1   | 180 (1 Hour )   |
| 2      | Foad (Pb), logi m <sup>1</sup>                               | USEPA 10 3.2- 1999.<br>BY AAS               | 0.15   | 1 ( 24 Hours )  |
| 3      | Airmonis (NE <sub>1</sub> ), pg. m <sup>3</sup>              | BSET/SOP/AA-66,<br>(Indepherol Blue Method) | 11.1   | 400 (24 Hours )   |
| 4      | Benzene, pg/ m <sup>3</sup>                                  | IS: 5182 (P-11):2006<br>(Reaffirmed 2012)   | < 0.1  | 5 (Annual)  |
| 5      | Bonzo (a) Pyreite, (Bai/)<br>Particulate phase only, ng / m' | IS: 5182 (P-12) :2004<br>(Reatfirmed 2014)  | < 1    | l'(Annual)  |
| ń      | Arsenic (As), ng / m²  | USEPA JO 32 1999.<br>BY AAS VGA             | 0.32   | 6 (Annual)  |
| 7      | Nickel (Ni), ng/m²   | USEPA – (O - 3 2 - 1999)<br>BY AAS          | 0.45   | 20 (Annual)   |

Interpretation of results. Nit Deviation from test method: Nit

Authorized Signatory

Monoplair to Register is available or Enboratory

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Websile I, www.bsenvitech.com CIN No. 3 U74210TG 1999P10032358



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#### TEST REPORT

Name & Address of the Customer :

M/s JSW Steel Limited

Narayanpushi Iron & Manganese Ore Mirres

Sample Description: Ambient Air Quality sample

Oty & Packing

: I filter paper for

Lead.Benzorar pyrene, Arsenie, Niekel-

Mind absorbing solution for Ammoria.

10 ml absorbing solution for Ozone

1 No Charcoal tube for Benzeno

Test Required : As not given below

Test Report No.: BSET/2021/TR-2622

Issue Date

: 18 08.2021

Your Ref.

: Letter dated 13 08:2021

Date of Receipt : 13 HX 2021

Date of Registration 13.08.2021

Date of commencement of testing 13.08.2021 17.08.2021

Date of completion of testing Sample condition at receipt Found ok

Sample tested as received

Sampling Details

Date of Sampling: 10 08:2021

General Environment conditions: Ok

Location of Sampling: Gute No.01

Page No: 1 of 1

#### TEST RESULTS

| S. No. | Test Parameter  | Test Method                                 | Result | NAAQ Standards for<br>Industrial<br>Residential, Rural<br>and Other areas |
|--------|---|---|--------|---|
| 1      | Ozone (Q:), jig/ m <sup>1</sup>                           | IS:S182 (Part-IX) 1974<br>(Reaffirmed 2014) | 8.1    | 180 (1 Hour )   |
| 2      | Lead (Pb), μg/ m²   | USEPA 10 3.2 1999,<br>BY AAS                | 0.10   | I (24 Hours)  |
| 3      | Arrimonia (NH1), ugi m'                                   | BSET/SOP/AA-06,<br>(Indophenni B'ue Method) | 13.3   | 400 (24 Hours )   |
| 4      | Benzene, µg/m/  | 18; 5182 (P-111)2006<br>(Reaffirmed 2012)   | < 0.1  | S (Annual)  |
| 5      | Benzo (a) Pyrene, (Baff)<br>Paniculate phase only, ng (m) | IS: 5182 (P-12) :2004<br>(Reaffirmed 2014)  | < (    | 1 (Annual)  |
| 6      | Arsenic (As), ng / m <sup>3</sup>                         | USEPA 10 3.2 (999)<br>BY AAS - VGA          | 0.24   | 6 (Annual)  |
| 7      | Niekel (Nit, ng / m <sup>3</sup>                          | USEPA TO 3.2 1999,<br>BY AAS                | 0.30   | 20 (Annual)   |

Interpretation of results: Nil-Deviation from test method. Nat

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CIN No ₹U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer :

Mrs JSW Steel Limited

Narayauposhi Irun & Manganese Ore Mines

Sample Description: Ambient Air Quality sample

Qty & Packing

: 1 filter paper for

Lead.Benzo(a) pyrene, Arsenie, Nickel.

30rd absorbing solution for Ammonia.

10 inhabsorbing solution for Ozone

I No Charcoal tube for Benzene

Test Required : As per given below

General Environment conditions: Ok-

Fest Report No. : HNICT/2021/TR-2623

Issue Date

; 18,08,2021

Your Ref.

all, etter dated 13:08:2021

Date of Receipt : 13.08 2021

flare of Registration 13.08.2021

Date of commencement of testing 13,08,2021

Date of completion of testing 17.08.2021 Found ak

Samplé condition at recelps

Sample tested as received.

Sampling Details

Date of Sampling: 10.08 2021

Location of Sampling: Gate No 02

Page No: 1 of 1

TEST RESULTS

| S. No. | Test Parameter   | Test Method                                 | Result | NAAQ Standards for<br>Industrial<br>Residential, Rural<br>and Other areas |
|--------|--|---|--------|---|
| J.     | Ozora (O1), ug/ m1                                     | IS:5182 (Part-IX) 1974<br>(Reaffirmed 2014) | 12.0   | 180 (1 Hour)  |
| 2      | Lead (Po), µg/m²                                       | USEPA 10 3.2 1999,<br>BY AAS                | 0.11   | 1 (24 Hours)  |
| j.     | Ammonia (NH+), jeg-m <sup>1</sup>                      | BSET-SOP/AA-06,<br>(Indophenol Blue Method) | 11.9   | 400 (24 Hours )   |
| 4      | Henzenc. µg. m²  | IS, 5182 (P-11) .2006<br>(Reaffirmed 2012)  | < 0.1  | 5 (Annual)  |
| 5      | Benzo (1) Pyrenc, (BaP) Particulate phase only, ng (m) | IS 5182 (P-12) 2004<br>(Realfirmed 2014)    | <1     | ) (Annual)  |
| 6      | Arsenic (As), ng / m <sup>1</sup>                      | USEPA - IO - 3.2 · · 1999,<br>BY AAS - VGA  | 0.24   | 6 (Annual)  |
| 7      | Nickel (Ni), ng / mi                                   | USEPA - IO - 3.2 - 1999,<br>BY AAS          | 0.33   | 20 (Annual  |

Interpretation of results: Nil-Deviation from test method: Nil.

\*Complaints Register is available at Laboratory

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Websile www.bsenvilech.com

OlN No. 10742101G1899PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Customer:

Mix JSW Steel Limited

Naravanposh: Iron & Manganese Ore Mines

Sample Description: Ambient Air Quality sample

Oty & Packing

r I litter paper for

Lead.Benzo(a) pyrene. Arsenie. Nickel

30ml absorbing solution for Ammonia

10 ml absorbing solution for Ozone

I No Charcool tube for Benzene

Test Required: As per given below

Test Report No.: BSET/2021/TR-2624

Issue Date

: 19.08 2021

Your Ref

: Letter dated 13.08.2021

Date of Receipt : 13.08.2025

13.08.2021 Date of Registration

10.08.2021 Date of commencement of testing

Date of completion of testing 17.08.2021

Sample condition at receipt Found o's

Sample tested as received.

Sampling Details

Date of Sampling: 10.08 2021 General Environment conditions: Ok Location of Sampling: Kasıra Basti

Page No: 1 of 1

#### TEST RESULTS

| S. No. | Test Parameter  | Test Method                                 | Result | NAAQ Standards for<br>Industrial<br>Residential, Rurat<br>and Other areas |
|--------|---|---|--------|---|
| 1      | Ozone (O <sub>1</sub> ), µg/ m <sup>3</sup>                 | (S:5182 (Part-LX) 1974<br>(Reaffirmed 2014) | 11.0   | 180 (1 Hnur )   |
| 2      | Coad (Ph), agr m <sup>1</sup>                               | USEPA TO 3.2 1999,<br>BY AAS                | 0.19   | 1 ( 24 Hours )  |
| 3      | Ammonia (NIII <sub>1</sub> ), µg, m'                        | BSET/SOP/AA-06,<br>(Indophenol Blue Method) | 10.9   | 400 (24 Hours )   |
| 4      | Benzene, ug/ m²   | IS: \$182 (P.11), 2006<br>(Reaffirmed 2012) | < 0.1  | 5 ( Annual )  |
| 5      | Benzo (a) Pytene, (Balt)<br>Particulate phase only, ng / m² | 15: 5182 (P-12) :2004<br>(Reaffirmed 2014)  | <1     | I ( Annual )  |
| 6      | Atsenie (As), ng / m²                                       | USEPA = 10 = 3.2 = 1999.<br>BY AAS - VGA    | 0.26   | 6 (Annual)  |
| 7      | Nickel (Ni), ng + m <sup>2</sup>                            | USEPA IO 3.2 1999.<br>BY AAS                | 0.42   | 20 (Annual)   |

Interpretation of results. Not Deviation from test memor: Nil

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Website I www.hsenvillech.com.

CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### **TEST REPORT**

Name & Address of the Customer :

M/s JSW Steel Limited

Narayanposhi Iron & Manganese Ore Mines

Sample Description: Ambient Air Quality sample

Qtv & Packing

: I filter paper for

Lead.Benzo(a) pyrene, Atsenie. Nickel.

from all surbring solution for Ammonia.

10 ml absorbing solution for Ozone

1 No Charcoal tube for Benzene

Test Required : As per given below

Test Report No.: BSET/2021/TR-2625

Issue Date

: 18.08.2021

Your Ref.

: Letter dated 13 09 2021

Date of Receipt ; 13 08 2021

Date of Registration

13.08.2021

13.08.2021 Date of commencement of testing

17 08:2021 Date of completion of testing Pound ok

Sample condition at receipt

Sample tested as received

Sampling Details

Date of Sumpling: 10.06.2021 General Environment conditions: Ok Location of Sampling: Koira Basti

Page No: 1 of 1

#### TEST RESULTS

| S. No. | Test Parameter   | f'est Method                                | Result | NAAQ Standards for<br>Industrial<br>Residential, Rural<br>and Other gress |
|--------|--|---|--------|---|
| 1      | Ozore (Ο <sub>1</sub> ), μ <u>μ</u> / m <sup>1</sup>                   | IS.5182 (Part-IX) 1974<br>(Reaffirmed 2014) | 4,6    | 180 (1 Hour )   |
| 2      | Lead (Ph), µg/m/   | USEPA 10 3.2 1999,<br>BY AAS                | 0.12   | I ( 24 Hours )  |
| 3      | Ammonia (NH <sub>1</sub> ), <sub>A</sub> igi m <sup>1</sup>            | BSET/SOP/AA-06,<br>(Indophenol Blue Method) | 10.9   | 400 (24 Hours )   |
| 4      | Benzene, agr m <sup>1</sup>  | IS: 5182 (P-I1) :2006<br>(Reaffirmed 2012)  | < 0.1  | 5 (Annual)  |
| 5      | Benzo (at Pyrene, (HaP)<br>Particulate phase only, ng / m <sup>3</sup> | IS: \$182 (P-12) :2004<br>(Reaffirmed 2014) | <1     | I (Anoual)  |
| K      | Arsenic (As), ag / m <sup>2</sup>                                      | USEPA 10 32 - 1999,<br>BY AAS - VGA         | 0,28   | 6 (Annual)  |
| 7      | Nickel (N.) ing / m <sup>3</sup>                                       | LSEPA TO 3.2 1999,<br>BY AAS                | 0.36   | 20 (Annual)   |

Interpretation of results. No Deviation from test method: Nil-

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CIN No. # U74210TG1999PTC032358



Recognized by MoEF & CC, Got: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Customer:

M/s JSW/Steel Limited

Narayanposhi Iron & Manganese Ore Mines

Sample Description: Ambient Air Quality sample

Qty & Packing

: I filter paper for

Lead, Benzo(a) pyrene. Arsenie. Niekel

30ml absorbing solution for Ammonia.

10 ml absorbing solution for Ozone

I No Charcoal tube for Benzene

Test Required: As per given below

Test Report No.: BSET/2021/TR-2626

Issue Date

: 13.08.2021

Your Ref.

: Letter dated 13.08-2021.

Date of Receipt : 13 flx 2021

Date of Registration

13.08.2021

Date of commencement of testing

13.08.2021 17 OF 2021

Date of completion of testing Sample condition at receipt

Found nk

Sample tested as received

Sampling Details

Date of Sampling: 10.04 2021 General Environment conditions: OkLocation of Sampling: Segasahi Village

Page No: 1 of 1

TEST RESULTS

| S. No. | Test Parameter  | Test Method                                 | Result | NAAQ Standards for<br>Industrial<br>,Residential, Rural<br>and Other press |
|--------|---|---|--------|--|
| Ī      | Ozome (O <sub>1</sub> ), µg/ m <sup>3</sup>             | IS:5182 (Part-IX) 1974<br>[Reaffirmed 2014] | 4.8    | 180 (t Hour )  |
| 2      | Coad (Pb), µg/m <sup>3</sup>                            | USEPA - IO - 3.2 - 1999,<br>BY AAS          | 0.10   | I (24 Hours)   |
| 3      | Ammunia (NIT.), µg/ m²                                  | BSET/SOP/AA-06,<br>(Indopheno, Blue Method) | 11.6   | 400 (24 Hours )  |
| 4      | Benzene, "rg/ m/  | 18: 5182 (P-11) :2006<br>(Realfirosed 2012) | < 0.1  | 5 (Annual)   |
| 5      | Benzo (a) Pyrene, (BaP) Particulate phase only, ag 1 m2 | IS 5182 (P-12) :2004<br>(Realtimed 2014)    | <1     | 1 ( Annual )   |
| ٨      | Americ (As), ng/m²                                      | USUPA TO 3.2 1999.<br>BY AAS - VGA          | 0.16   | 6 ( Annual )   |
| 7      | Nickel (Ni), ng / mi                                    | USEPA - IO 3.2 1999.<br>BY AAS              | 0.29   | 20 (Annual)  |

Interpretation of results. Ni Deviation from rest method, No.

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Website : www.hsenvitech.com.

CIN No U74210TG1999P1C032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### **TEST REPORT**

Name & Address of the Customer:

M-s JSW Steel Limited

Narayanposhi hon & Manganese Ore Mines

Sample Description: Ambient Air Quality sample

Qty & Packing

: 1 filter paper for

Lead.Benze(a) pyrene. Arsenie, Nickel 30ml absorbing solution for Ammeria.

10 ml absorbing solution for Ozune

I No Charcoal tube for Benzene

Test Regulred : As per given he ow

Test Report No. : BSE1/2021/TR-2627

Issue Date

: 18.08.2021

Your Ref.

: Letter dated 13.08.2021

Date of Receipt : 13.08 2021

Date of Registration 13.68.2021 13.08.2021 Date of communicating of testing 17 OK 2021 Date of completion of testing

Sample condition at receipt

Sample tested as received.

Sampling Details

Date of Sampling: 10 08 2021 General Environment conditions: Ok

Location of Sampling: Bhanjapah Villago

Page No: 1 of 1

Found ok

#### TEST RESULTS

| 5. Nac | Test Parameter   | Fest Method                                   | Result | NAAQ Standards for<br>Industrial<br>Residential, Rural<br>and Other areas |
|--------|--|---|--------|---|
| 1      | Ozone (O <sub>i</sub> ), µg/ m <sup>1</sup>                | IS:5182 (Part-IX) 1974<br>(Real/firmed 2014)  | 12.6   | 180 (1 Hour)  |
| 2      | Load (Ph), Jig/Jin <sup>3</sup>                            | USEPA 10 - 3.2 1999,<br>BY AAS                | 0.12   | I (24 Hours)  |
| 3      | Ammonia (NH <sub>2</sub> ), pg/ m <sup>1</sup>             | H\$ET/SOP/AA-06.<br>(Indophenal Blue Methost) | 10.5   | 400 (24 Hours )   |
| 4      | Benzene, Jeg in 1  | 15, 5182 (P-11) :2006<br>(Realtifued 2012)    | < 0.1  | 5 (Annual)  |
| ٩      | Herizo (a) Pyrene, (RaP)<br>Pa⊓iculate phase only, ng / m² | IS: 5187 (P-12) :2004<br>(Reaffirmed 2014)    | <1     | 1 (Anoual)  |
| ń      | Arsenic (As), ng/ m²                                       | USEPA - 10 - 3.2 - 1999,<br>BY AAS - VGA      | 0.24   | 6 ( Annual )  |
| 7      | Nickel (Ni), ng / m²                                       | USEPA - 10 - 3.2 - 1999,<br>BY AAS            | 0.20   | 20 (Annual)   |

Interpretation of results: No Deviation from text method. Nil.

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്ട് Iab@bsenvileth.com, info@bsenvitech.com **E**mail Website a www.bsenvitech.com/

CIN No U74210TG1999PTC032356

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

AAQ REPORT

AUGUST-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,            | /ENV/2021/AAQ                           | 2/2021-08     | Issued to:                                 |
|-----------------------|-----------------------|---|---------------|--|
| Reporting<br>Date     | 02-09.2021            | 2021 Analysis<br>Starting on 01.09.2021 |               |  |
| Sample<br>Received on | 01.09.2021            | Analysis<br>Completed on                | 02.09.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | i <b>ption:</b> Amble | ent Air Quality                         |               | of<br>M/a JSW Steel Ltd.                   |
| Location/Cod          | e : Mine:             | 9 Office Area/AA(                       | QCZ-1         | M/a dSW Steel Ltd.                         |
| Month                 | : Augu                | st-2021                                 |               |  |
| Sample Collec         | ted by: B.S.          | Envi-Tech (P) Ltd                       | .,            |  |
| Instruments 1         | sed Resp              | irable Dust Samp                        | der & Fine du | st Sampler                                 |
| Model                 |                       | ro RDS/EI 142 &                         |               |  |
| Serial no             | 136                   | G 20 & 91-G-19                          |               |  |
| Calibration va        | Hdity 27/1            | 0/2021 & 03/10                          | /2021         |  |

| S,NO | DATE                             | PM <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.6</sub><br> µg/m <sup>3</sup> | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m³]                            |
|------|----------------------------------|--|---|---|---|--|
|      | Protocol                         | IS:5182<br>Part 23                       | IS:5182<br>Part 24                      | IS:5182<br>Part 2                       | IS:5182<br>Part 6                       | BSET SOP<br>AA-09                        |
| 1    | 01/08/2021                       | 44                                       | 14                                      | 9                                       | 10.7                                    | 0.54                                     |
| 2    | 02/08/2021                       | 41                                       | 13                                      | 9.4                                     | 10.9                                    | 0.45                                     |
| 3    | 03/08/2021                       | 51                                       | 17                                      | 8.9                                     | 10.3                                    | 0.37                                     |
| 4    | 04/08/2021                       | 54                                       | 19                                      | 9.1                                     | 10.6                                    | 0.49                                     |
| 5    | 05/08/2021                       | 49                                       | 17                                      | 9.6                                     | 10.9                                    | 0.44                                     |
| 6    | 06/08/2021                       | 56                                       | 20                                      | 10.2                                    | 11.5                                    | 0.51                                     |
| 7    | 07/08/2021                       | 45                                       | 16                                      | 10.9                                    | 12.1                                    | 0.36                                     |
| 8    | 08/08/2021                       | 52                                       | [9                                      | 9.9                                     | 11.4                                    | 0.43                                     |
| 9    | 09/06/2021                       | 40                                       | 13                                      | 10.5                                    | 11.8                                    | 0.58                                     |
| 10   | 10/08/2021                       | 46                                       | 15                                      | 8.3                                     | 9.6                                     | 0.39                                     |
| 11   | 11/08/2021                       | 48                                       | 17                                      | 9.1                                     | 10.4                                    | 0.61                                     |
| 12   | 12/08/2021                       | 53                                       | 18                                      | 10.7                                    | 11.9                                    | 0.53                                     |
| 13   | 13/08/2021                       | 59                                       | 21                                      | 9.2                                     | 10.5                                    | 0.44                                     |
| 14   | 14/08/2021                       | 63                                       | 22                                      | 10.9                                    | 12.1                                    | 0.4                                      |
| 15   | 15/08/2021                       | 42                                       | 15                                      | 9.5                                     | 10.8                                    | 0.37                                     |
| (24  | Standards<br>1 hourly<br>andard) | 100<br>[µg/m³]                           | 60<br>[µg/m³]                           | 80<br>[µg/m³]                           | 80<br>[µg/m³]                           | 02<br> mg/m <sup>3</sup>  <br>(8 hourly) |

Legend:PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO₂-Sulphur Dioxide

NO2- NitrogenDioxide

CO-Carbon Monoxide

**Authorized Signatory** 

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\*Complaints Register is available at Laboratory

Websile: www.bschvilech.com

CIN No.: 1174210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: .          | JSW/NPIMO,           | ENV/2021/AAG             | /2021-08       | Issued to:                                 |
|-----------------------|----------------------|--------------------------|----------------|--|
| Reporting<br>Date     | 02.09.2021           | Analysis<br>Starting on  | 01.09.2021     |  |
| Sample<br>Received on | 01.09.2021           | Analysis<br>Completed on | 02.09.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr.         | <b>lption:</b> Ambie | nt Air Quality           |                | of<br>M/s JSW Steel Ltd.                   |
| Location/Cod          | e : Mine             | s Office Arca/AA(        | QCZ-1          | m/# don other ixu.                         |
| Month                 | : Augu               | st-2021                  |                |  |
| Sample Collec         | ted by: B.S.         | Envi-Tech (P) Ltd        |                |  |
| Instruments u         | sed Resp             | trable Dust Samp         | oler & Fine du | st Sampler                                 |
| Model                 | Envi                 | ro RDS/EI 142 &          | Enviro El 133  | 3  |
| Serial no             | 136-                 | G-20 & 91-G-19           |                |  |
| Calibration va        | lidity   27/1        | 0/2021 & 03/10           | /2021          |  |

| S.NO                                      |            | PM <sub>10</sub><br>[µg/m <sup>9</sup> ] | PM <sub>2.5</sub><br> µg/m³} | 5O <sub>2</sub><br>[µg/m <sup>3</sup> ] | ΝΟ <sub>2</sub><br>(μg/m³) | CO<br>[mg/m³]<br>BSET SOP<br>AA-09 |
|---|------------|--|------------------------------|---|----------------------------|------------------------------------|
|   | Protocol   | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:5182<br>Part 2                       | IS:5182<br>Part 6          |                                    |
| 16  | 16/08/2021 | 39                                       | 13                           | 10.3                                    | 11.7                       | 0.42                               |
| 17  | 17/08/2021 | 45                                       | 15                           | 11.1                                    | 12.2                       | 0.48                               |
| 18  | 18/08/2021 | 53                                       | l8                           | 9.9                                     | 11.5                       | 0.52                               |
| 19  | 19/08/2021 | 41                                       | 14                           | 10.6                                    | 119                        | 0,46                               |
| 20  | 20/08/2021 | 50                                       | 17                           | 10                                      | 11.2                       | 0.55                               |
| 21  | 21/08/2021 | 44                                       | 16                           | 11.4                                    | 12.7                       | 0,49                               |
| 22  | 22/08/2021 | 49                                       | 18                           | 10.3                                    | t I.B                      | 0.43                               |
| 23  | 23/08/2021 | 55                                       | 19                           | II                                      | 12.2                       | 0.38                               |
| 24  | 24/08/2021 | 60                                       | 20                           | 9.7                                     | 11                         | 0.41                               |
| 25  | 25/08/2021 | 51                                       | 17                           | 8.4                                     | 9.8                        | 0.47                               |
| 26  | 26/08/2021 | 43                                       | LS                           | 9.2                                     | 10.6                       | 0.54                               |
| 27  | 27/08/2021 | 38                                       | 12                           | 10                                      | 11.3                       | 0.57                               |
| 28  | 28/08/2021 | 45                                       | 16                           | 9.8                                     | 11.5                       | 0.49                               |
| 29  | 29/08/2021 | 40                                       | 13                           | 10,9                                    | 12.2                       | 0.31                               |
| 30  | 30/08/2021 | 37                                       | - 11                         | 9.3                                     | 10.6                       | 0.48                               |
| 31  | 31/08/2021 | 39                                       | 13                           | 10.4                                    | 11.9                       | 0.33                               |
| A   | verage     | 48                                       | 16                           | 9.9                                     | 11.2                       | 0.45                               |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]                           | 60<br>[µg/m³}                | 80<br>[µg/m³)                           | 80<br>(µg/m³)              | 02<br>[mg/m³]<br>(8 hourly)        |

Legend:PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- NitrogenDioxide

CO-Carbon Monoxide

**Authorized Signatory** 

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Website ( www.bsenvitedh.com

CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                   | JSW/NPIMO   | /ENV/2021/AAQ                      | /2021-08       | Issued to:                              |  |  |
|------------------------------|-------------|------------------------------------|----------------|---|--|--|
| Reporting<br>Date            | 02.09.2021  | Analysis<br>Starting on            | 01.09.2021     |   |  |  |
| Sample<br>Received on        | 01.09.2021  | Analysis<br>Completed on           | 02.09.2021     | Narayanposhi Iron & Manganese Ore Mines |  |  |
| Sample Descr<br>Location/Cod | -           | ent Air Quality<br>Shelter/AAQCZ-4 |                | of<br>M/s JSW Steel Ltd.                |  |  |
| Month<br>Sample Collec       |             | st-2021<br>Envi-Tech (P) Ltd       | .,             |   |  |  |
| Instruments t                | sed Rest    | irable Dust Samj                   | der & Fine du: | st Sampler                              |  |  |
| Model                        | Envi        | Enviro RDS/EJ 142 & Enviro El 133  |                |   |  |  |
| Serial no                    | 64-K        | -17 & 31-L-17                      |                |   |  |  |
| Calibration va               | didity 05/1 | 10/2021 & 19/10                    | /2021          |   |  |  |

| S.NO | DATE                             | PM <sub>10</sub><br>[µg/m <sup>9</sup> ] | PM <sub>2.5</sub><br> µg/m <sup>3</sup> | SO <sub>2</sub><br>(µg/m <sup>2</sup> ) | NO <sub>2</sub><br>[µg/m³] | CO<br> mg/m <sup>3</sup>    |
|------|----------------------------------|--|---|---|----------------------------|-----------------------------|
|      | Protocol                         | IS:5182<br>Part 23                       | IS:5182<br>Part 24                      | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP<br>AA-09           |
| L    | 01/08/2021                       | 46                                       | . 16                                    | 10.7                                    | 12.1                       | 0.44                        |
| 2    | 02/08/2021                       | 53                                       | 19                                      | 9.9                                     | 11.3                       | 0.63                        |
| 3    | 03/08/2021                       | 59                                       | 20                                      | 11.5                                    | 12.8                       | 0.51                        |
| 4    | 04/08/2021                       | 61                                       | 21                                      | 10.6                                    | 11.9                       | 0.47                        |
| 5    | 05/08/2021                       | 57                                       | 19                                      | 9.8                                     | 11.2                       | 0.38                        |
| 6    | 06/08/2021                       | 63                                       | 22                                      | 10.2                                    | 11.7                       | 0.62                        |
| 7    | 07/08/2021                       | 55                                       | 19                                      | 9.7                                     | 11                         | 0.67                        |
| 8    | 08/08/2021                       | 51                                       | 17                                      | 10.9                                    | 12.3                       | 0.49                        |
| 9    | 09/08/2021                       | 47                                       | 16                                      | 11.3                                    | 12.9                       | 0.52                        |
| 10   | 10/08/2021                       | 56                                       | [9                                      | 11.7                                    | 13                         | 0.74                        |
| 11   | 11/08/2021                       | 50                                       | 17                                      | 10                                      | 11.5                       | 0.61                        |
| 12   | 12/08/2021                       | 58                                       | 20                                      | 9.5                                     | 10.9                       | 0.52                        |
| 13   | 13/06/2021                       | 61                                       | 22                                      | 8.3                                     | 9.8                        | 0.66                        |
| 14   | 14/08/2021                       | 53                                       | . 18                                    | 9.1                                     | 10.7                       | 0.43                        |
| 15   | 15/08/2021                       | 50                                       | 17                                      | II II                                   | 12.3                       | 0,54                        |
| (2   | Standards<br>4 hourly<br>andard) | 100<br>[µg/m³]                           | 60<br>[wg/m³]                           | 80<br>[µg/m³]                           | 80<br>[µg/m³]              | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

**Authorized Signatory** 

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CIN No. #U74210TG1999PTC032358

Email



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: J          | SW/NPIMO,    | ENV/2021/AAG            | /2021-08       | Issued to:                                 |  |
|-----------------------|--------------|-------------------------|----------------|--|--|
| Reporting<br>Date     | 02.09.2021   | Analysis<br>Starting on | 01.09.2021     |  |  |
| Sample<br>Received on | 01.09.2021   | Analysis                |                | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Descrip        | ption: Ambie | ent Air Quality         |                | of<br>M/s JSW Steel Ltd.                   |  |
| Location/Code         | : Rest S     | Shelter/AAQCZ-4         |                | m/s daw acces fru.                         |  |
| Month                 | : Augus      | st-2021                 |                |  |  |
| Sample Collect        | ted by: B.S. | Envi-Tech (P) Ltd       | -,             |  |  |
| Instruments u         | sed Resp     | irable Dust Samp        | oler & Fine du | st Sampler                                 |  |
| Model                 | Envi         | ro RDS/El 142 &         | Enviro El 133  | 3  |  |
| Serial no             | 64-K         | -17 & 31-L-17           |                |  |  |
| Calibration val       | idity   05/1 | 0/2021 & 19/10          | /2021          |  |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[µg/m³] | \$O <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br> µg/m³] | CO<br>[mg/m <sup>3</sup> ]               |
|---|------------|--|------------------------------|--|----------------------------|--|
|   | Protocol   | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:5182<br>Part 2                        | IS:5182<br>Part 6          | BSET SOP<br>AA-09                        |
| 16  | 16/08/2021 | 47                                       | 16                           | 9.6                                      | II -                       | 0.48                                     |
| 17  | 17/08/2021 | 41                                       | 14                           | 10.5                                     | 11.9                       | 0.62                                     |
| 18  | 18/08/2021 | 50                                       | 19                           | 9.9                                      | 11.2                       | 0.57                                     |
| 19  | 19/08/2021 | 44                                       | 15                           | 9.2                                      | 10.8                       | 0.41                                     |
| 20  | 20/08/2021 | 48                                       | 17                           | 10.5                                     | 11.9                       | 0.6                                      |
| 21  | 21/08/2021 | 51                                       | 18                           | 10.8                                     | 12.3                       | 0.68                                     |
| 22  | 22/08/2021 | 40                                       | 14                           | 9.4                                      | 10.7                       | 0.45                                     |
| 23  | 23/08/2021 | 47                                       | 16                           | 10.1                                     | 11.5                       | 0.49                                     |
| 24  | 24/08/2021 | 59                                       | 21                           | 9.3                                      | 10.8                       | 0.37                                     |
| 25  | 25/08/2021 | 62                                       | 23                           | 11.6                                     | 13                         | 0.69                                     |
| 26  | 26/08/2021 | 55                                       | 20                           | 10.5                                     | 11.8                       | 0.53                                     |
| 27  | 27/08/2021 | 43                                       | 14                           | 11.8                                     | 13.2                       | 0.71                                     |
| 28  | 28/08/2021 | 41                                       | 13                           | 10.9                                     | 12.4                       | 0.64                                     |
| 29  | 29/08/2021 | 39                                       | 12                           | 11.5                                     | 12.9                       | 0.56                                     |
| 30  | 30/08/2021 | 44                                       | 15                           | 10.4                                     | 11.6                       | 0.61                                     |
| 31  | 31/08/2021 | 49                                       | 17                           | 9,6                                      | 10,6                       | 0.46                                     |
| - /                                       | verage     | B1                                       | 18                           | 10.3                                     | 11.7                       | 0.55                                     |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]                           | 60<br> µg/m³                 | 80<br>(µg/m³)                            | 80<br>[µg/m³]              | 02<br>[mg/m <sup>3</sup> ]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO2-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

**Authorized Signatory** 

"Complaints Register is available at Cabocatory.

Emuil

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Websile | www.bsonvilech.com CIN No. 107421IITG1999PTC032358



Recognized by MoEF & CC, Got: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,            | /ENV/2021/AAC           | 1/2021-08     | Issued to:                              |  |
|-----------------------|-----------------------|-------------------------|---------------|---|--|
| Reporting<br>Date     | 02.09.2021            | Analysis<br>Starting on | 01,09.2021    |   |  |
| Sample<br>Received on | 01.09.2021            | Analysis                |               | Narayanposhi Iron & Manganese Ore Mines |  |
| Sample Descr          | <b>iption</b> : Ambie | ent Air Quality         |               | of<br>M/s JSW Steel Ltd.                |  |
| Location/Cod          | e : Gate l            | No-02/AAQCZ-3           |               | May a obtr bicci bic.                   |  |
| Month                 | : Augus               | st-2021                 |               |   |  |
| Sample Collec         | eted by: B.S.         | Envi-Tech (P) Ltd       | -,            |   |  |
| Instruments 1         | used Resp             | irable Dust Samp        | der & Fine du | st Sampler                              |  |
| Model                 | Envi                  | rtech APM 460 &         | Enviro El 133 | 1                                       |  |
| Serial no             | 2052                  | DTG-2011 & 86           | -G-19         |   |  |
| Calibration va        | didity 19/1           | 0/2021 & 03/10          | /2021         |   |  |

| S.NO | O DATE                           | PM <sub>10</sub><br>[µg/m <sup>3</sup> ] | ug/m <sup>3</sup>    ug/m <sup>3</sup>  <br> S:5182   IS:5182 | 80 <sub>2</sub><br>[μg/m³] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]               |
|------|----------------------------------|--|---|----------------------------|----------------------------|--|
|      | Protocol                         | IS:5182<br>Part 23                       |   | IS:5182<br>Part 2          | IS:5182<br>Part 6          | BSET SOP<br>AA-09                        |
| 1 1  | 01/08/2021                       | 49                                       | 17  | 111                        | 12.6                       | 0.55                                     |
| 2    | 02/08/2021                       | 57                                       | 20  | 10.7                       | 12.3                       | 0.48                                     |
| 3    | 03/08/2021                       | 61                                       | 22  | (16                        | 12.9                       | 0.44                                     |
| 4    | 04/08/2021                       | 55                                       | 20  | 9.4                        | 10.8                       | 0.66                                     |
| 5    | 05/08/2021                       | 63                                       | 22  | 11.8                       | 13.3                       | 0.52                                     |
| 6    | 06/08/2021                       | 66                                       | 24  | 12.3                       | 13.7                       | 0.69                                     |
| 7    | 07/08/2021                       | 58                                       | 20  | LE.4                       | 12.8                       | 0.51                                     |
| 8    | 08/08/2021                       | 55                                       | 19  | 10.6                       | 11.9                       | 0.79                                     |
| 9    | 09/08/2021                       | 49                                       | 17  | 11.2                       | 12.6                       | 0.73                                     |
| 10   | 10/08/2021                       | 60                                       | 21  | 10.8                       | 12.2                       | 0.65                                     |
| II   | 11/08/2021                       | 57                                       | 19  | 9.3                        | 10.7                       | 0.49                                     |
| 12   | 12/08/2021                       | 54                                       | 18  | 10.5                       | 11.8                       | 0.61                                     |
| 13   | 13/08/2021                       | 64                                       | 23  | 9.4                        | 10.9                       | 0.47                                     |
| 14   | 14/08/2021                       | 56                                       | 19  | 10.6                       | 11.8                       | 0.68                                     |
| 15   | 15/08/2021                       | 52                                       | 18  | LII                        | 12.4                       | 0.54                                     |
| (2   | Standards<br>4 hourly<br>andard) | 100<br>[µg/m²]                           | 60<br>(µg/m³)   | 80<br>(µg/m³)              | 80<br>(µg/m³               | 02<br> mg/m <sup>3</sup>  <br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

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Website | www.bsenvitech.com

CIN No # U74210TG 1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO     | /ENV/2021/AAG            | /2021-08      | Issued to:                                 |  |
|-----------------------|---------------|--------------------------|---------------|--|--|
| Reporting<br>Date     | 02.09.2021    | Analysis<br>Starting on  | 01.09.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample<br>Received on | 01.09.2021    | Analysis<br>Completed on | 02.09.2021    |  |  |
| Sample Descr          | iption: Ambi  | ent Air Quality          |               | of<br>M/s JSW Steel Ltd.                   |  |
| Location/Cod          | e : Gate l    | No-02/AAQCZ-3            |               | Mys osw Steet Ltd.                         |  |
| Month                 | : Augus       | 1-2021                   |               |  |  |
| Sample Collec         | eted by: B.S. | Envi-Tech (P) Ltd        |               |  |  |
| Instruments :         | sed Resp      | irable Dust Samj         | der & Fine du | st Sampler                                 |  |
| Model                 |               |                          |               |  |  |
| Serial no             | 2052          | 2-DTG-2011 & 86          | -G-19         |  |  |
| Calibration ve        | lidity 19/1   | 10/2021 & 03/10          | /2021         |  |  |

| 9.NO                                      | DATE       | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[µg/m <sup>9</sup> ] | 50 <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>[µg/m <sup>3</sup> ] | CO<br>(mg/m³)               |
|---|------------|-----------------------------|---|----------------------------|---|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23          | IS:5162<br>Part 24                        | IS:5182<br>Part 2          | IS:5182<br>Part 6                       | BSET SOP                    |
| 16  | 16/08/2021 | 49                          | 17  | 9.7                        | 11.2                                    | 0.63                        |
| 17  | 17/08/2021 | 44                          | 15  | 12.3                       | 13.8                                    | 0.55                        |
| 18  | 18/08/2021 | 51                          | 18  | 12.8                       | 14                                      | 0.61                        |
| 19  | 19/08/2021 | 47                          | 16  | 10.1                       | 11.6                                    | 0.46                        |
| 20  | 20/08/2021 | 52                          | 18  | 11.5                       | 12.8                                    | 0.59                        |
| 21  | 21/08/2021 | 56                          | 19  | 9.9                        | 11.4                                    | 0.44                        |
| 22  | 22/08/2021 | 43                          | 15  | 11.4                       | 12.6                                    | 0.53                        |
| 23  | 23/08/2021 | 48                          | 17  | 11.8                       | 13.1                                    | 0.6                         |
| 24  | 24/08/2021 | 51                          | 18  | 9.6                        | l l                                     | 0.67                        |
| 25  | 25/08/2021 | 55                          | 20  | 12.1                       | 13.5                                    | 0.48                        |
| 26  | 26/08/2021 | 61                          | 22  | 10.5                       | 11.7                                    | 0.54                        |
| 27  | 27/08/2021 | 49                          | 17  | 10.7                       | 12                                      | 0.69                        |
| 28  | 28/08/2021 | 42                          | L4  | 9.3                        | 10.5                                    | 0.53                        |
| 29  | 29/08/2021 | 44                          | 15  | 8.11                       | 13.5                                    | 0.45                        |
| 30  | 30/08/2021 | 49                          | 17  | 10.4                       | 11.9                                    | 0.66                        |
| 31  | 31/08/2021 | 54                          | 19  | l l                        | 12.4                                    | 0.58                        |
| A   | Average    | 53                          | 19  | 10.8                       | 12.2                                    | 0.57                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]              | 60<br>[µg/m³]                             | 80<br>[µg/m³]              | 80<br>(µg/m³)                           | 02<br> mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory.

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Website: www.bsenvitech.com

CIN No. 4 U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: .                   | JSW/NPIMO,           | /ENV/2021/AAG                | /2021-08       | Issued to:                                 |
|--------------------------------|----------------------|------------------------------|----------------|--|
| Reporting<br>Date              | 02.09.2021           | Analysis<br>Starting on      | 01.09.2021     |  |
| Sample<br>Received on          | 01.09.2021           | Analysis<br>Completed on     | 02.09.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descri<br>Location/Code | e : Gate l           | No-01/AAQCZ-2                |                | of<br>M/s JSW Steel Ltd.                   |
|                                | ted by: B.S.         | st-2021<br>Envi-Tech (P) Ltd |                | 121  |
| Instruments u                  | ı <b>sed</b> Resp    | irable Dust Sam              | iler & Fine du | st Sampler                                 |
| Model                          | Envi                 | ro RDS/Et 142 8              | Enviro El 13   | 3  |
| Serial no                      | 66-K                 | -18 & 98-G-19                |                |  |
| Calibration va                 | <b>lidity</b>   05/1 | 0/2021 & 03/10               | /2021          |  |

| S.NO | DATE                             | PM <sub>10</sub><br>(µg/m³) | PM <sub>2.5</sub><br>[µg/m²] | 80 <sub>2</sub><br>[µg/m <sup>2</sup> ] | NO <sub>2</sub><br>(μg/m³] | CO<br>[mg/m <sup>3</sup> ]   |
|------|----------------------------------|-----------------------------|------------------------------|---|----------------------------|------------------------------|
|      | Protocol                         | IS:5182<br>Part 23          | IS:5182<br>Part 24           | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP<br>AA-09            |
|      | 01/08/2021                       | 54                          | 19                           | 10.7                                    | 12.2                       | 0.45                         |
| 2    | 02/08/2021                       | 60                          | 21                           | 11.9                                    | 13.3                       | 0.51                         |
| 3    | 03/08/2021                       | 64                          | 22                           | 10.2                                    | 11.6                       | 0.63                         |
| 4    | 04/08/2021                       | 58                          | 20                           | 11.1                                    | 12.4                       | 0.49                         |
| 5    | 05/08/2021                       | 6.5                         | 23                           | 9.8                                     | 11.3                       | 0.37                         |
| 6    | 06/08/2021                       | 61                          | 21                           | 10.4                                    | 11.9                       | 0.43                         |
| 7    | 07/08/2021                       | 56                          | 20                           | 9.7                                     | 11.2                       | 0.52                         |
| 8    | 08/08/2021                       | 51                          | 18                           | 10.6                                    | 12                         | 0.58                         |
| 9    | 09/08/2021                       | 53                          | 19                           | 12.1                                    | 13.5                       | 0.44                         |
| 10   | 10/08/2021                       | 62                          | 22                           | 11.8                                    | 13.3                       | 0.59                         |
| II   | 11/08/2021                       | 59                          | 20                           | 9.6                                     | 10.9                       | 0.5                          |
| 12   | 12/08/2021                       | 56                          | 18                           | 10.3                                    | 11.5                       | 0.65                         |
| 13   | 13/08/2021                       | .54                         | 17                           | 11.3                                    | 12.8                       | 0.57                         |
| 14   | 14/08/2021                       | 50                          | 16                           | 10.9                                    | 12.2                       | 0.48                         |
| LS.  | 15/08/2021                       | 58                          | 20                           | 11.5                                    | 12.9                       | 0.53                         |
| (2-  | Standards<br>4 hourly<br>andard) | 100<br>[µg/m³]              | 60<br>[µg/m³]                | 80<br>(µg/m³)                           | 80<br>(µg/m³)              | 02<br>[uig/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dloxide CO-Carbon Monoxide

**Authorized Signatory** 

"Complaints Register is available at Laboratory."

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Website : www.bsenvitech.com

CIN No. # U74210TG1899PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: .          | JSW/NPIMO.            | /ENV/2021/AAC            | /2021-08      | Issued to:                                 |
|-----------------------|-----------------------|--------------------------|---------------|--|
| Reporting<br>Date     | 02.09.2021            | Analysis<br>Starting on  | 01.09.2021    |  |
| Sample<br>Received on | 01.09.2021            | Analysis<br>Completed on | 02.09.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descri         | l <b>ption:</b> Ambie | ent Air Quality          |               | M/s JSW Steel Ltd.                         |
| Location/Cod          | e : Gate              | No-01/AAQCZ-2            |               | Mys BSW Steel Did.                         |
| Month                 | : Augu                | st-2021                  |               |  |
| Sample Collec         | ted by: B.S.          | Envi-Tech (P) Ltd        | -,            |  |
| Instruments v         | sed Resp              | irable Dust Samp         | let & Fine du | st Sampler                                 |
| Model                 | Envi                  | ro RDS/El 142 8          | Enviro El 13  | 3  |
| Serial no             |                       | -18 & 98-G-19            |               |  |
| Calibration va        | lidity   05/1         | 0/2021 & 03/10           | /2021         |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>(µg/m³] | 80 <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>[µg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|-----------------------------|------------------------------|----------------------------|---|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23          | IS:5182<br>Part 24           | IS:5182<br>Part 2          | IS:5182<br>Part 6                       | BSET SOP<br>AA-09           |
| 16  | 16/08/2021 | 52                          | 18                           | IL                         | 12.4                                    | 0.46                        |
| 17  | 17/08/2021 | 46                          | 16                           | 10.1                       | 11.5                                    | 0.54                        |
| 18  | 18/08/2021 | 56                          | 20                           | 11.4                       | 12.7                                    | 0.61                        |
| 19  | 19/08/2021 | 51                          | 17                           | 10.6                       | 11.9                                    | 0.48                        |
| 20  | 20/08/2021 | 45                          | 15                           | 11.2                       | 12.6                                    | 0.56                        |
| 21  | 21/08/2021 | 41                          | 14                           | 9.9                        | 11.3                                    | 0.63                        |
| 22  | 22/08/2021 | 48                          | 17                           | 10.5                       | 11.8                                    | 0,59                        |
| 23  | 23/08/2021 | 43                          | 14                           | 9.3                        | 10.6                                    | 0.42                        |
| 24  | 24/08/2021 | 52                          | 18.                          | 10.4                       | 11.7                                    | 0.58                        |
| 25  | 25/08/2021 | 56                          | 19                           | 10 1                       | 11.5                                    | 0.64                        |
| 26  | 26/08/2021 | 59                          | 21                           | 9.7                        | 11.2                                    | 0.43                        |
| 27  | 27/08/2021 | 53                          | 18                           | 11.2                       | 12.6                                    | 0.59                        |
| 28  | 28/08/2021 | 45                          | 15                           | 9.9                        | 11.3                                    | 0.47                        |
| 29  | 29/08/2021 | 49                          | . 17                         | 11.5                       | 12.9                                    | 0.52                        |
| 30  | 30/08/2021 | 52                          | t8                           | 10.7                       | 12.3                                    | 0.64                        |
| 31  | 31/08/2021 | 55                          | 19                           | 9.4                        | 10.8                                    | 0.41                        |
| -   | lverage    | 54                          | 18                           | 10.6                       | 12.0                                    | 0.52                        |
| NAAG Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³]              | 60<br>[µg/m³]                | 80<br>[µg/m³]              | 80<br>[µg/m³]                           | 02<br> mg/m² <br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is available at Laboratory."

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Website : www.bschwiech.com CIN No :: U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO    | /ENV/2021/AAQ                   | 2/2021-08      | Issued to:                                 |  |
|-----------------------|--------------|---------------------------------|----------------|--|--|
| Reporting<br>Date     | 02.09.2021   | 2021 Analysis<br>Starting on 01 |                |  |  |
| Sample<br>Received on | 01.09.2021   | Analysis<br>Completed on        | 02.09.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Descr          | iption: Ambi | ent Air Quality                 |                | of<br>M/s JSW Steel Ltd.                   |  |
| Location/Cod          | e : Kasin    | a Basti/AAQBZ-1                 |                | M/a osw steet Ltd.                         |  |
| Month                 | : Augu       | st-2021                         |                |  |  |
| Sample Collec         | ted by: B.S. | Envi-Tech (P) Ltd               | .,             |  |  |
| Instruments 1         | med Resi     | otrable Dust Sam                | pler & Fine du | st Sampler                                 |  |
| Model                 | RDS          | 9000 & Enviro E                 | 1 133          |  |  |
| Serial no             | 030-         | 408 & 36-L-17                   |                |  |  |
| Calibration va        | lidity 15/0  | 03/2022 & 19/10                 | /2021          |  |  |

| s.no                                   | DATE       | DATE               | PM <sub>10</sub><br>(μg/m³) | PM <sub>2.5</sub><br>[ <i>og</i> /m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³]  | CO<br>[mg/m <sup>3</sup> ] |
|--|------------|--------------------|-----------------------------|--|---|-----------------------------|----------------------------|
|  | Protocol   | IS:5182<br>Part 23 | IS:5162<br>Part 24          | IS:5182<br>Part 2                                  | IS:5182<br>Part 6                       | BSET SOP<br>AA-09           |                            |
| 1                                      | 02/08/2021 | 50                 | 18                          | 9.5  | 10,9                                    | 0.46                        |                            |
| 2                                      | 03/08/2021 | 56                 | 19                          | 10.3   | 11.8                                    | 0.39                        |                            |
| 3                                      | 09/08/2021 | 49                 | 17                          | 9.9  | 11.3                                    | 0.31                        |                            |
| 4                                      | 10/08/2021 | 51                 | 19                          | 10.7   | 12                                      | 0.48                        |                            |
| 5                                      | 16/08/2021 | 45                 | 15                          | 9.2  | 10.7                                    | 0.51                        |                            |
| 6                                      | 17/08/2021 | 49                 | 17                          | 9.8  | 11.2                                    | 0.44                        |                            |
| 7                                      | 23/08/2021 | 40                 | 14                          | 10.1   | 11.5                                    | 0.34                        |                            |
| 8                                      | 24/08/2021 | 44                 | 16                          | 9  | 10.4                                    | 0.45                        |                            |
| -                                      | verage     | 48                 | 17                          | 9.8  | 11.2                                    | 0.42                        |                            |
| NAAQ Standards<br>(24 hourly standard) |            | 100<br>(µg/m3)     | 60<br>[µg/m3]               | 80<br>[µg/m3]                                      | 80<br>[µg/m3]                           | 02<br>[mg/m3]<br>(8 hourly) |                            |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO2- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is available at Laboratory.

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Website I www.bsenvitech.com

CIN No U74210TG1999PTCG32358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: o          | JSW/NPIMO,           | /ENV/2021/AAQ           | /2021-08       | Issued to:                              |  |
|-----------------------|----------------------|-------------------------|----------------|---|--|
| Reporting<br>Date     | 02.09.2021           | Analysis<br>Starting on | 01.09.2021     |   |  |
| Sample<br>Received on | 01.09.2021           | Analusia                |                | Narayanposhi Iron & Manganese Ore Mines |  |
| Sample Descri         | l <b>ption:</b> Ambi | ent Air Quality         |                | of<br>M/s JSW Steel Ltd.                |  |
| Location/Code         | e : Kotra            | Basti/AAQBZ-2           |                | My a down sects tell.                   |  |
| Month                 | : Augu               | st-2021                 |                |   |  |
| Sample Collec         | ted by: B.S.         | Envl-Tech (P) Ltd       |                |   |  |
| Instruments u         | sed Resp             | irable Dust Samı        | oler & Fine du | st Sampler                              |  |
| Model                 | RDS                  | 9000 & Enviro E         | 1 133          |   |  |
| Serial no             | 0412                 | 235 & 37-L-17           |                |   |  |
| Calibration va        | lidity 15/0          | 3/2022 & 19/10          | /2021          |   |  |

| S.NO                                   | DATE       | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br> μg/m <sup>3</sup> | SO <sub>2</sub><br> µg/m³ | NO <sub>2</sub><br>(μg/m³) | CO<br>[mg/m³]               |
|--|------------|-----------------------------|---|---------------------------|----------------------------|-----------------------------|
|  | Protocol   | IS:5182<br>Part 23          | IS:5182<br>Part 24                      | IS:5182<br>Part 2         | IS:5182<br>Part 6          | AA-09                       |
| 1                                      | 02/08/2021 | 55                          | 19                                      | 10.7                      | 12.3                       | 0.61                        |
| 2                                      | 03/08/2021 | 61                          | 22                                      | 10.2                      | 11.6                       | 0.53                        |
| 3                                      | 09/08/2021 | 52                          | 19                                      | 11                        | 12.3                       | 0.48                        |
| 4                                      | 10/08/2021 | 54                          | 19                                      | 10.5                      | 11.9                       | 0.55                        |
| 5                                      | 16/08/2021 | 48                          | 17                                      | 9.9                       | 11.4                       | 0.41                        |
| 6                                      | 17/08/2021 | 51                          | 18                                      | 10.3                      | 11.8                       | 0.52                        |
| 7                                      | 23/08/2021 | 43                          | 15                                      | 9.6                       | 11                         | 0.6                         |
| 8                                      | 24/08/2021 | 46                          | 16                                      | 10.9                      | 12.2                       | 0.45                        |
| -                                      | verage     | 51                          | 18                                      | 10.3                      | 11.8                       | 0.51                        |
| NAAG Standards<br>(24 hourly standard) |            | 100<br> ug/m3               | 60<br>(ug/m3)                           | 80<br>(ug/m3)             | 60<br>[µg/m3]              | 02<br> mg/m3 <br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is evallable at Laboratury.

Website : www.bservitech.com CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: .          | JSW/NPIMO,            | /ENV/2021/AAG           | 2021-08       | Issued to:                                 |
|-----------------------|-----------------------|-------------------------|---------------|--|
| Reporting<br>Date     | 02.09.2021            | Analysis<br>Starting on | 01.09.2021    |  |
| Sample<br>Received on | 01.09.2021            | Amahada                 |               | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descri         | l <b>ption:</b> Ambie | ent Air Quality         |               | of<br>M/s JSW Steel Ltd.                   |
| Location/Code         | e : Segas             | ahi Village/AAQE        | 3Z-3          | M/SOSW Steel Led.                          |
| Month                 | _                     | st-2021                 |               |  |
| Sample Collec         | ted by: B.S.          | Envi-Tech (P) Ltd       |               |  |
| Instruments u         | sed Resp              | drable Dust Samp        | der & Fine du | st Sampler                                 |
| Model                 | RDS                   | 9000 & Enviro E         | 1 133         | - 2  |
| Serial no             | 0304                  | 108 & 36-L-17           | 1             |  |
| Calibration va        | <b>lidity</b> 15/0    | 3/2022 & 19/10          | /2021         |  |

| S.NO                                   | DATE       | O DATE             | PM <sub>10</sub><br>[µg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | SO <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³]  | CO<br>[mg/m <sup>3</sup> ] |
|--|------------|--------------------|--|---|---|-----------------------------|----------------------------|
|  | Protocol   | IS:5182<br>Part 23 | IS:5182<br>Part 24                       | IS:5182<br>Part 2                         | IS:5182<br>Part 6                       | BSET SOP<br>AA-09           |                            |
| l                                      | 05/08/2021 | 47                 | 16                                       | 9.6                                       | 10.9                                    | 0.42                        |                            |
| 2                                      | 08/08/2021 | 53                 | 18                                       | B.7                                       | 10.2                                    | 0.36                        |                            |
| 3                                      | 12/08/2021 | 42                 | 14                                       | Ŋ   | 10,5                                    | 0.45                        |                            |
| 4                                      | 13/08/2021 | 45                 | 15                                       | 9.3                                       | 10.9                                    | 0.31                        |                            |
| 5                                      | 19/08/2021 | 39                 | 13                                       | 9.1                                       | 10.6                                    | 0.25                        |                            |
| 6                                      | 20/08/2021 | 37                 | 12                                       | 8.5                                       | 9.8                                     | 0.28                        |                            |
| 7                                      | 26/08/2021 | 40                 | 13                                       | 9.8                                       | 10.4                                    | 0.34                        |                            |
| В                                      | 27/06/2021 | 36                 | 12                                       | 9.2                                       | 10.7                                    | 0.4                         |                            |
| - 1                                    | verage     | 42                 | 14                                       | 9.1                                       | 10.5                                    | 0.35                        |                            |
| NAAQ Standards<br>(24 hourly standard) |            | 100<br> µg/m3}     | 60<br>[µg/m3]                            | 80<br>[µg/m3]                             | 60<br>[µg/m3]                           | 02<br>[mg/m3]<br>(8 hourly) |                            |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

80<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

C'B

'Complaints Register is available at Laboratory.

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CIN No. : U74210TG1999PTC032358

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: .           | JSW/NPIMO,  | /ENV/2021/AAG                         | 2021-08       | Issued to:                                 |
|------------------------|-------------|---------------------------------------|---------------|--|
| Reporting<br>Date      | 02.09.2021  | O21 Analysis 01.09.2021               |               |  |
| Sample<br>Received on  | 01.09.2021  | Analysis<br>Completed on              | 02.09.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |
| Location/Cod           | e :Bhanj    | ent Air Quelity<br>Japali Village/AA( | 3BZ-4         | of<br>M/s JSW Steel Ltd.                   |
| Month<br>Sample Collec |             | st-2021<br>Envi-Tech (P) Ltd          |               |  |
| Instruments u          | used Resp   | irable Dust Samp                      | der & Fine du | st Sampler                                 |
| Model                  | RDS         | 9000 & Enviro E                       | I 133         |  |
| Serial no              | 0412        | 235 & 37-L-17                         |               |  |
| Calibration va         | lidity 15/0 | 3/2022 & 19/10                        | /2021         |  |

| S.NO  | DATE       | NO DATE            | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[µg/m³] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³]  | CO<br>[mg/m <sup>3</sup> ] |
|---|------------|--------------------|-----------------------------|------------------------------|---|-----------------------------|----------------------------|
|   | Protocol   | IS:5182<br>Part 23 | IS:5182<br>Part 24          | IS:5182<br>Part 2            | IS:5182<br>Part 6                       | BSET SOP                    |                            |
| l   | 05/08/2021 | 54                 | 19                          | 9.5                          | 10.8                                    | 0.45                        |                            |
| 2   | 06/08/2021 | 49                 | 17                          | 10.2                         | 11.7                                    | 0.54                        |                            |
| 3   | 12/08/2021 | 46                 | 16                          | 9.1                          | 10.4                                    | 0.41                        |                            |
| 4   | 13/08/2021 | 50                 | LR                          | 10.7                         | 12.1                                    | 0.36                        |                            |
| 5   | 19/08/2021 | 43                 | 15                          | 9.8                          | 11.3                                    | 0.47                        |                            |
| 6   | 20/08/2021 | 40                 | l3                          | 8.9                          | 10.4                                    | 0.33                        |                            |
| 7   | 26/08/2021 | 45                 | . 14                        | 9.4                          | 10.8                                    | 0.5                         |                            |
| В   | 27/08/2021 | 47                 | 16                          | 9                            | 10.6                                    | 0.42                        |                            |
| Average<br>NAAQ Standards<br>(24 hourly standard) |            | 47                 | 16                          | 9.5                          | 11.0                                    | 0.43                        |                            |
|   |            | 100<br>[µg/m3]     | 60<br>[µg/m3]               | 80<br>[µg/m3)                | 80<br>[µg/m3]                           | 02<br> mg/m3 <br>(8 hourly) |                            |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at a shoratory

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CIN No.: U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

# FUGITIVE DUST MONITORING REPORT

AUGUST-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:                                      | Issued to:     |                          |  |                            |  |
|---|----------------|--------------------------|--|----------------------------|--|
| Reporting 02.09.2021 Analysis Starting on       |                | 01.09.2021               | Narayanposhi Iron &<br>Manganese Ore Mines |                            |  |
| Sample<br>Received on                           | 01.09.2021     | Analysis<br>Completed on | 02.09.2021                                 | of<br>M/s JSW Steel Ltd.   |  |
| Sample Description:<br>Fugitive Dust Monitoring |                |                          | Instrument<br>Used                         | Respirable Dust<br>Sampler |  |
| Location/Cod                                    | e : Mines Face | /Bench/FDM-1             | Model                                      | Enviro RDS / EJ 142        |  |
| Month : August-2021                             |                |                          | Serial no                                  | 135-G-20                   |  |
| Sample Collec                                   | ted by: B.S. B | invi-Tech (P) Ltd.,      | Calibration<br>Validity                    | 27/10/2021                 |  |

| 9.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/08/2021 | 648         |                      |
| 2    | 02/08/2021 | 702         |                      |
| 3    | 03/08/2021 | 598         | 1                    |
| 4    | 04/08/2021 | 663         |                      |
| 5    | 05/08/2021 | 547         |                      |
| 6    | 06/08/2021 | 581         |                      |
| 7    | 07/08/2021 | 609         | 1                    |
| 8    | 08/08/2021 | 659         |                      |
| 9    | 09/08/2021 | 723         | 1                    |
| 10   | 10/08/2021 | 826         |                      |
| 11   | 11/08/2021 | 713         | 1                    |
| 12   | 12/08/2021 | 824         | 1                    |
| 13   | 13/08/2021 | 596         | 1                    |
| 14   | 14/08/2021 | 572         | 1                    |
| 15   | 15/08/2021 | 664         | 1                    |
| 16   | 16/08/2021 | 683         | 1200                 |
| 17   | 17/08/2021 | 583         | [µg/m³]              |
| 18   | 18/08/2021 | 570         | 1                    |
| 19   | 19/08/2021 | 691         | 1                    |
| 20   | 20/08/2021 | 826         |                      |
| 21   | 21/08/2021 | 549         |                      |
| 22   | 22/08/2021 | 538         | 1                    |
| 23   | 23/08/2021 | 688         | 1                    |
| 24   | 24/08/2021 | 649         |                      |
| 25   | 25/08/2021 | 729         |                      |
| 26   | 26/08/2021 | 548         | ]                    |
| 27   | 27/08/2021 | 682         |                      |
| 28   | 28/08/2021 | 755         |                      |
| 29   | 29/08/2021 | 703         |                      |
| 30   | 30/08/2021 | 743         | ]                    |
| 31   | 31/08/2021 | 569         | ]                    |
|      | Average    | 659         |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register is available at Laboratory.

Telangana, India

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Website : www.bsanwtech.com CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valld upto August, 2022

#### TEST REPORT

| REPORT NO:                                      | JSW/NPIMO/ | ENV/2021/FDM/            | 2021-08                 | Issued to:                                 |
|---|------------|--------------------------|-------------------------|--|
| Reporting 02.09.2021 Analysis Starting on       |            |                          | 01.09.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample<br>Received on                           | 01.09.2021 | Analysis<br>Completed on | 02.09.2021              | of<br>M/s JSW Steel Ltd.                   |
| Sample Description:<br>Fugitive Dust Moultoring |            |                          | Instrument<br>Used      | Respirable Dust<br>Sampler                 |
|   | - Id-      | lage Road/FDM-2          | Model                   | Envirotech APM 460                         |
| Month : August-2021                             |            |                          | Serial no               | 2838-DTA-2015                              |
| Sample Collected by: B.S. Envi-Tech [P] Ltd     |            |                          | Calibration<br>Validity | 19/10/2021                                 |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/08/2021 | 598         |                      |
| 2    | 02/08/2021 | 642         |                      |
| 3    | 03/08/2021 | 826         |                      |
| 4    | 04/08/2021 | 874         |                      |
| 5    | 05/08/2021 | 551         |                      |
| 6    | 06/08/2021 | 672         |                      |
| 7    | 07/08/2021 | 698         |                      |
| В    | 08/08/2021 | 622         |                      |
| 9    | 09/08/2021 | 726         |                      |
| 10   | 10/08/2021 | 713         |                      |
| 11   | 11/08/2021 | 564         |                      |
| 12   | 12/08/2021 | 569         |                      |
| 13   | 13/08/2021 | 768         | 1200                 |
| 14   | 14/08/2021 | 693         | [µg/m³]              |
| 15   | 15/08/2021 | 564         | (NR) in 1            |
| 16   | 16/08/2021 | 725         |                      |
| 17   | 17/08/2021 | 813         |                      |
| 81   | 18/08/2021 | 546         |                      |
| 19   | 19/08/2021 | 572         |                      |
| 20   | 20/08/2021 | 596         |                      |
| 21   | 21/08/2021 | 628         |                      |
| 22   | 22/08/2021 | 805         |                      |
| 23   | 23/08/2021 | 643         |                      |
| 24   | 24/08/2021 | 725         |                      |
| 25   | 25/08/2021 | 716         |                      |
| 26   | 26/08/2021 | 649         |                      |
| 27   | 27/08/2021 | 748         |                      |
| 28   | 28/08/2021 | 582         |                      |
| 29   | 29/08/2021 | 553         |                      |
| 30   | 30/08/2021 | 699         |                      |
| 31   | 31/08/2021 | 712         |                      |
|      | Average    | 671         |                      |

Legend:SPM-Suspended Particulate Matter

**Authorized Signatory** 

\*Complaints Register is available at Laboratory

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EC/370

CIN No. U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                    | JSW/NPIMO/     | ENV/2021/FDM/            | 2021-08                 | Issued to:                                 |  |
|---|----------------|--------------------------|-------------------------|--|--|
| Reporting<br>Date                             | 02.09.2021     | Analysis<br>Starting on  | 01.09.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample<br>Received on                         | 01.09.2021     | Analysis<br>Completed on | 02.09.2021              | of<br>M/s JSW Steel Ltd.                   |  |
| Sample Description:                           |                |                          | Instrument              | Respirable Dust                            |  |
| Fugitive Dust I                               | Monitoring     |                          | Used                    | Sampler                                    |  |
| Location/Cod                                  | e : Crusher Pl | ant/FDM-3                | Model                   | Envirotech APM 460                         |  |
| Month : August-2021                           |                |                          | Serial no               | 138-G-20                                   |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd., |                |                          | Calibration<br>Validity | 27/10/2021                                 |  |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/08/2021 | 645         | 3.5                  |
| 2    | 02/08/2021 | 823         | 1                    |
| 3    | 03/08/2021 | 726         |                      |
| 4    | 04/08/2021 | 713         | 1                    |
| 5    | 05/08/2021 | 596         | 1                    |
| 6    | 06/08/2021 | 482         | ]                    |
| 7    | 07/08/2021 | 473         | 1                    |
| 8    | 08/08/2021 | 682         | 1                    |
| 9    | 09/08/2021 | 597         | 1                    |
| 10   | 10/08/2021 | 520         | 1                    |
| 11   | 11/08/2021 | 690         |                      |
| 12   | 12/08/2021 | 743         | 1                    |
| 13   | 13/08/2021 | 821         | 1                    |
| 14   | 14/08/2021 | 683         | 1                    |
| 15   | 15/08/2021 | 713         | 1                    |
| 16   | 16/08/2021 | 493         | 1200                 |
| 17   | 17/08/2021 | 482         | [µg/m³]              |
| 18   | 18/08/2021 | 573         |                      |
| 19   | 19/08/2021 | 682         | 1                    |
| 20   | 20/08/2021 | 669         | 1                    |
| 21   | 21/08/2021 | 792         | 1                    |
| 22   | 22/08/2021 | 582         | 1                    |
| 23   | 23/08/2021 | 687         |                      |
| 24   | 24/08/2021 | 483         | 1                    |
| 25   | 25/08/2021 | 692         | 1                    |
| 26   | 26/08/2021 | 823         | 1                    |
| 27   | 27/08/2021 | 810         | 1                    |
| 28   | 28/08/2021 | 572         |                      |
| 29   | 29/08/2021 | 588         |                      |
| 30   | 30/08/2021 | 694         |                      |
| 31   | 31/08/2021 | 723         |                      |
|      | Average    | 653         |                      |

Legend: SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register's available at Laborators

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ECH

CIN No. : U74210TG1999P1C032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                    | JSW/NPIMO/     | ENV/2021/FDM/:           | 2021-09                 | Issued to:                                 |
|---|----------------|--------------------------|-------------------------|--|
| Reporting<br>Date                             |                |                          |                         | Narayanposhi iron &<br>Manganese Ore Mines |
| Sample<br>Received on                         | 01.09.2021     | Analysis<br>Completed on | 02.09.2021              | of<br>M/s JSW Steel Ltd.                   |
| Sample Descri                                 | iption:        |                          | Instrument              | Resptrable Dust                            |
| Fugitive Dust I                               | Monitoring     |                          | Used                    | Sampler                                    |
| Location/Cod                                  | e : Sereen Pla | int/FDM-4                | Model                   | Envirotech APM 460                         |
| Month : August-2021                           |                |                          | Scrial no               | 62-K-18                                    |
| Sample Collected by: B.S. Envi-Tech (P) Ltd., |                |                          | Calibration<br>Validity | 19/10/2021                                 |

| S.NO | DATE       | SPM [µg/m²] | Standards as per CTO |
|------|------------|-------------|----------------------|
| L    | 01/08/2021 | 648         |                      |
| 2    | 02/08/2021 | 735         |                      |
| 3    | 03/08/2021 | 702         |                      |
| 4    | 04/08/2021 | 563         | 1                    |
| 5    | 05/08/2021 | 694         | ]                    |
| 6    | 06/08/2021 | 831         | ]                    |
| 7    | 07/08/2021 | 473         |                      |
| 6    | 08/08/2021 | 664         |                      |
| 9    | 09/08/2021 | 713         |                      |
| 10   | 10/08/2021 | 549         |                      |
| 11   | 11/08/2021 | 772         |                      |
| 12   | 12/08/2021 | 692         |                      |
| 13   | 13/08/2021 | 583         |                      |
| 14   | 14/08/2021 | 666         |                      |
| 15   | 15/08/2021 | 713         |                      |
| 16   | 16/08/2021 | 463         | 1200                 |
| 17   | 17/08/2021 | 816         | [hg/ma]              |
| 16   | 18/08/2021 | 649         |                      |
| 19   | 19/08/2021 | 722         |                      |
| 20   | 20/08/2021 | 563         | 1                    |
| 21   | 21/08/2021 | 669         |                      |
| 22   | 22/08/2021 | 620         |                      |
| 23   | 23/08/2021 | 513         |                      |
| 24   | 24/08/2021 | 572         |                      |
| 25   | 25/08/2021 | 746         |                      |
| 26   | 26/08/2021 | 422         |                      |
| 27   | 27/08/2021 | 473         |                      |
| 28   | 28/08/2021 | 569         |                      |
| 29   | 29/08/2021 | 695         |                      |
| 30   | 30/08/2021 | 602         |                      |
| 31   | 31/08/2021 | 587         |                      |
|      | Average    | 645         |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register is available at Laboratory.

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Websile ( www.bsenvilach.com CIN No. : U742101G1999P1C032358



Recognized by MoEF & CC, Got: Valid upto August, 2022

#### TEST REPORT

| REPORT NO: -                                    | Issued to:  |                     |                         |  |
|---|---|---------------------|-------------------------|--|
| Reporting<br>Date                               | 02.09.2021 Analysis Starting on  01.09.2021 Analysis Completed on |                     | 01.09.2021              | Narayanposhi Iron &<br>Manganese Ore Mines<br>of<br>M/s JSW Steel Ltd. |
| Sample<br>Received on                           |   |                     | 02.09.2021              |  |
| Sample Description:<br>Fugitive Dust Monitoring |   |                     | Instrument<br>Used      | Respirable Dust<br>Sampler   |
| Location/Cod<br>Point/FDM-5                     | e : Ore Sto   | rage & Loading      | Model                   | Envirotech APM 460   |
| Month : August-2021                             |   |                     | Serial no               | 101-G-19   |
| Sample Collec                                   | ted by: B.S. E  | Invi-Tech (P) Ltd., | Calibration<br>Validity | 19/10/2021   |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| ]    | 01/08/2021 | 586         |                      |
| 2    | 02/08/2021 | 726         |                      |
| 3    | 03/08/2021 | 649         |                      |
| 4    | 04/08/2021 | 572         |                      |
| 5    | 05/08/2021 | 476         |                      |
| 6    | 06/08/2021 | 836         |                      |
| 7    | 07/08/2021 | 806         | 1                    |
| 8    | 06/08/2021 | 493         |                      |
| 9    | 09/08/2021 | 692         |                      |
| 10   | 10/08/2021 | 711         | 1                    |
| 11   | 11/08/2021 | 425         | 1                    |
| 12   | 12/08/2021 | 856         |                      |
| 13   | 13/08/2021 | 831         |                      |
| 14   | 14/08/2021 | 764         |                      |
| 15   | 15/08/2021 | 815         |                      |
| 16   | 16/08/2021 | 577         | 1200                 |
| 17   | 17/08/2021 | 680         | [µg/m³]              |
| 16   | 18/08/2021 | 643         |                      |
| 19   | 19/08/2021 | 597         |                      |
| 20   | 20/08/2021 | 726         |                      |
| 21   | 21/08/2021 | 718         |                      |
| 22   | 22/08/2021 | 446         | 1                    |
| 23   | 23/08/2021 | 826         |                      |
| 24   | 24/06/2021 | 573         | 1                    |
| 25   | 25/08/2021 | 691         |                      |
| 26   | 26/08/2021 | 475         |                      |
| 27   | 27/08/2021 | 813         |                      |
| 28   | 28/06/2021 | 649         |                      |
| 29   | 29/08/2021 | 573         |                      |
| 30   | 30/08/2021 | 527         |                      |
| 31   | 31/08/2021 | 692         |                      |
| 7    | Average    | 659         |                      |

Legend:SPM-Suspended Particulate Matter

**Authorized Signatory** 

"Gemplaints Register's available at Laboratory C B N

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                                    | lasued to:                 |                          |                         |   |  |
|---|----------------------------|--------------------------|-------------------------|---|--|
| Reporting<br>Date                             | porting On On One Analysis |                          | 01.09.2021              | Narayanposhi Iron & Manganese Ore Mines |  |
| Sample<br>Received on                         | 01.09.2021                 | Analysis<br>Completed on | 02.09.2021              | of<br>M/s JSW Steel Ltd.                |  |
| Sample Description:                           |                            |                          | Instrument              | Respirable Dust                         |  |
| Fugitive Dust I                               | Monitoring                 |                          | Used                    | Sampler                                 |  |
| Location/Cod                                  | e : Waste Dun              | np/FDM-6                 | Model                   | RDS 9000                                |  |
| Month : August-2021                           |                            |                          | Serial no               | 0602101                                 |  |
| Sample Collected by: B.S. Envi-Tech (P) Ltd., |                            |                          | Calibration<br>Validity | 19/10/2021                              |  |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/08/2021 | 586         |                      |
| 2    | 02/08/2021 | 643         |                      |
| 3    | 03/08/2021 | 713         |                      |
| 4    | 04/08/2021 | 562         |                      |
| 5    | 06/08/2021 | 694         |                      |
| 6    | 06/08/2021 | 771         |                      |
| 7    | 07/08/2021 | 468         |                      |
| 8    | 08/08/2021 | 473         |                      |
| 9    | 09/08/2021 | 499         |                      |
| 10   | 10/08/2021 | 526         |                      |
| 11   | 11/08/2021 | 746         |                      |
| 12   | 12/08/2021 | 625         |                      |
| 13   | 13/08/2021 | 452         |                      |
| 14   | 14/08/2021 | 584         |                      |
| 15   | 15/08/2021 | 762         | ]                    |
| 16   | 16/08/2021 | 513         | 1200                 |
| 17   | 17/08/2021 | 552         | [µg/m <sup>3</sup> ] |
| 16   | 18/08/2021 | 648         |                      |
| 19   | 19/08/2021 | 663         |                      |
| 20   | 20/08/2021 | 574         |                      |
| 21   | 21/08/2021 | 489         |                      |
| 22   | 22/08/2021 | 428         |                      |
| 23   | 23/08/2021 | 758         |                      |
| 24   | 24/08/2021 | 695         |                      |
| 25   | 25/08/2021 | 661         |                      |
| 26   | 26/08/2021 | 452         |                      |
| 27   | 27/08/2021 | 483         |                      |
| 28   | 28/08/2021 | 657         |                      |
| 29   | 29/08/2021 | 72H         |                      |
| 30   | 30/08/2021 | 581         |                      |
| 31   | 31/08/2021 | 632         |                      |
| 1.   | Average    | 608         |                      |

Legend:SPM-Suspended Particulate Matter

**Authorized Signatory** 

\*Complaints Register is available at baboratory.

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Websile : www.bsenvitech.com GIN No.: U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

AAQ REPORT

SEPTEMBER-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO     | /ENV/2021/AAQ            | /2021-09      | Issued to:                                 |
|-----------------------|---------------|--------------------------|---------------|--|
| Reporting<br>Date     | 02.10.2021    | 01.10.2021               |               |  |
| Sample<br>Received on | 01.10.2021    | Analysis<br>Completed on | 02.10.2021    | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambie | ent Air Quality          | la -          | of<br>M/s JSW Steel Ltd.                   |
| Location/Cod          | e : Near      | Mines Office/AAG         | OCZ-1         | Id/ B OSW Steel Ltd.                       |
| Month                 |               | ember-2021               |               |  |
| Sample Collec         | ted by: B.S.  | Envi-Tech (P) Ltd        | .,            |  |
| Instruments :         | ised Resp     | irable Dust Samp         | der & Fine du | st Sampler                                 |
| Model                 | Envi          | ro RDS/EI 142 &          | Enviro El 133 | 3  |
| Serial no             | 136-          | G-20 & 91-G-19           |               |  |
| Calibration va        | lidity 27/1   | 0/2021 & 03/10           | /2021         |  |

| в.ио                                      | DATE       | PM <sub>10</sub><br>[µg/m <sup>2</sup> ] | PM <sub>2.5</sub><br>[μg/m³) | 8O <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>(μg/m³) | CO<br>[mg/m <sup>3</sup> ]               |
|---|------------|--|------------------------------|----------------------------|----------------------------|--|
|   | Protocol   | Protocol IS:5182                         | IS:5182<br>Part 23           | IS:5182<br>Part 24         | 18:5182<br>Part 2          | IS:5182<br>Part 6                        |
| 1   | 01/09/2021 | 46                                       | 16                           | 8.3                        | 9.9                        | 0.41                                     |
| 2   | 02/09/2021 | 44                                       | 14                           | 7,9                        | 9.4                        | 0.36                                     |
| 3   | 03/09/2021 | 40                                       | 13                           | 8.1                        | 9.6                        | 0.44                                     |
| 4   | 04/09/2021 | 41                                       | 13                           | 8.8                        | 10.3                       | 0.52                                     |
| 5   | 05/09/2021 | 47                                       | 16                           | 9.2                        | 10.8                       | 0.57                                     |
| 6   | 06/09/2021 | 54                                       | 18                           | 9.9                        | 11.4                       | 0.49                                     |
| 7   | 07/09/2021 | 55                                       | 20                           | 10.1                       | 11.7                       | 0.45                                     |
| 8   | 08/09/2021 | 49                                       | 17                           | 7,7                        | 9.3                        | 0.39                                     |
| 9   | 09/09/2021 | 44                                       | 15                           | 8.4                        | 9.9                        | 0.42                                     |
| 10  | 10/09/2021 | 34                                       | 11                           | 8.2                        | 9.5                        | 0.48                                     |
| 11  | 11/09/2021 | 30                                       | 11                           | 8.6                        | 10                         | 0.51                                     |
| 12  | 12/09/2021 | 38                                       | 13                           | 9                          | 10.4                       | 0.47                                     |
| 13  | 13/09/2021 | 36                                       | 12                           | 9.7                        | 11.2                       | 0.43                                     |
| 14  | 14/09/2021 | 40                                       | 14                           | 10.3                       | 11.8                       | 0.5                                      |
| 15  | 15/09/2021 | 49                                       | 15                           | 9.9                        | 11.4                       | 0.53                                     |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m³}                           | 60<br>[μg/ ໝ <sup>3</sup> ]  | 80<br>[μg/m³]              | 80<br>[µg/m³]              | 02<br>[mg/m <sup>3</sup> ]<br>{8 hourly) |

Legend:PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

80<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

**Authorized Signatory** 

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'Complaints Register is evaluable at Exporatory

Websile Twww.bsenvilech.com CiN No. 1 U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:                              | JSW/NPIMO,    | /ENV/2021/AAQ            | 2/2021-09      | Issued to:                                 |  |
|---|---------------|--------------------------|----------------|--|--|
| Reporting<br>Date                       | 02.10.2021    | 2021 Analysis 01.10.2021 |                |  |  |
| Sample<br>Received on                   | 01.10.2021    | Analysis<br>Completed on | 02.10.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Descr                            | iption: Ambie | ent Air Quality          |                | oi<br>M/s JSW Steel Ltd.                   |  |
| Location/Cod                            | le : Near     | Mines Office/AAG         | QCZ-1          | MAY B GOW GCCC1 DCG.                       |  |
| Month                                   | : Scpte       | ember-2021               |                |  |  |
| Sample Collec                           | eted by: B.S. | Envi-Tech (P) Ltd        | .,             |  |  |
| Instruments                             | used Resp     | nrable Dust Samp         | oler & Finc du | st Sampler                                 |  |
| Model Enviro RDS/El 142 & Enviro El 133 |               |                          | 3              |  |  |
| Serial no 136-G-20 & 91-G-19            |               |                          |                |  |  |
| Calibration va                          | didity 27/1   | 0/2021 & 03/10           | /2021          |  |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>(μg/m <sup>3</sup> ) | IS:5182 IS:5182 |                   | NO₂<br>[µg/m³]    |                             |
|---|------------|--|-----------------|-------------------|-------------------|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23                       |                 | IS:5182<br>Part 2 | IS:5182<br>Part 6 |                             |
| 16  | 16/09/2021 | 51                                       | 18              | 10.5              | 11.9              | 0.45                        |
| 17  | 17/09/2021 | 54                                       | 19              | 10.9              | 12.2              | 0.58                        |
| 18  | 18/09/2021 | 58                                       | 21              | 9.5               | 10.8              | 0.31                        |
| 19  | 19/09/2021 | 49                                       | 17              | 8.9               | 10.4              | 0.36                        |
| 20  | 20/09/2021 | 52                                       | l B             | 9.9               | 11.2              | 0.44                        |
| 21  | 21/09/2021 | 47                                       | 16              | 9.1               | 10.6              | 0.29                        |
| 22  | 22/09/2021 | 33                                       | L I             | 8.8               | 10.3              | 0.42                        |
| 23  | 23/09/2021 | 37                                       | 13              | 8.6               | 10.1              | 0.35                        |
| 24  | 24/09/2021 | 44                                       | 16              | 9.4               | 10.7              | 0.41                        |
| 25  | 25/09/2021 | 41                                       | [4              | 8.2               | 9.5               | 0.3                         |
| 26  | 26/09/2021 | 39                                       | 13              | 7.8               | 9.3               | 0.25                        |
| 27  | 27/09/2021 | 42                                       | 15              | 9.3               | 10.9              | 0.38                        |
| 28  | 28/09/2021 | 46                                       | 17              | 9.9               | 11.2              | 0.44                        |
| 29  | 29/09/2021 | 50                                       | 18              | 10.2              | 11.7              | 0.49                        |
| 30  | 30/09/2021 | 54                                       | 10              | 10.6              | 12                | 0.51                        |
| Average                                   |            | 45                                       | 16              | 9.1               | 10.5              | 0.43                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/111 <sup>3</sup> ]            | 60<br>[µg/m³]   | 80<br>[µg/m³]     | 80<br>[µg/m³]     | 02<br>[mg/m³]<br>(8 hourly) |

Legend:PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

80<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

**CO-Carbon Monoxide** 

**Authorized Signatory** 

\*Complaints Register is available at Laboratory.

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Website : www.bservilech.com CIN No. : IU74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

| REPORT NO: 4          | REPORT NO: JSW/NPIMO/ENV/2021/AAQ/2021-09 |   |                            |  |  |
|-----------------------|---|---|----------------------------|--|--|
| Reporting<br>Date     | 02.10.2021                                | 2021 Analysis<br>Starting on 01.10.2021 |                            |  |  |
| Sample<br>Received on | 01.10.2021                                | Analysis<br>Completed on                | 02.10.2021                 | Marayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Descr          | iption: Ambie                             | ent Air Quality                         | //                         | of<br>M/s JSW Steel Ltd.                   |  |
| Location/Cod          | e : Rest S                                | Shelter/AAQCZ-4                         |                            | M/ COSW Steel Ltd.                         |  |
| Month                 |   | mber 2021                               |                            |  |  |
| Sample Collec         | ted by: B.S.                              | Envi-Tech (P) Ltd                       | .,                         |  |  |
| Instruments u         | ı <b>sed</b> Resp                         | irable Dust Samp                        | oler & Fine du             | st Sampler                                 |  |
| Model                 | Envi                                      | ro RDS/EI 142 &                         | RDS/Et 142 & Enviro Et 133 |  |  |
| Serial no             | 64-K                                      | 4-K-17 & 31-L-17                        |                            |  |  |
| Calibration va        | didity   05/1                             | 0/2021 & 19/10                          | /2021                      |  |  |

| B.NO                                      | DATE       | PM <sub>10</sub><br>[μg/m³] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[μg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|---|------------|-----------------------------|---|---|----------------------------|-----------------------------|
|   | Protocol   | IS:5182<br>Part 23          | IS:51B2<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                    |
| 1   | 01/09/2021 | 32                          | 18  | 10.8                                    | 12.2                       | 0.54                        |
| 2   | 02/09/2021 | 46                          | 15  | 11.2                                    | 12.9                       | 0.49                        |
| 3   | 03/09/2021 | 55                          | 19  | 10.4                                    | 11.7                       | 0.58                        |
| 4   | 04/09/2021 | 50                          | 17  | 11.9                                    | 13.3                       | 0.62                        |
| 5   | 05/09/2021 | 48                          | 16  | 10.1                                    | 11.5                       | 0.53                        |
| 6   | 06/09/2021 | 51                          | 18  | 11.3                                    | 12.8                       | 0.55                        |
| 7   | 07/09/2021 | 49                          | 17  | 10.2                                    | 11.7                       | 0.5                         |
| 8   | 08/09/2021 | 47                          | 16  | 11.5                                    | 12.9                       | 0.46                        |
| 9   | 09/09/2021 | 43                          | 15  | 10.8                                    | 12 4                       | 0.53                        |
| 10  | 10/09/2021 | 39                          | 13  | 9.9                                     | 11.2                       | 0.49                        |
| 11  | 11/09/2021 | 33                          | 12  | 11.+                                    | 12.7                       | 0.57                        |
| 12  | 12/09/2021 | 31                          | 11  | 10.6                                    | 11.9                       | 0.45                        |
| 13  | 13/09/2021 | 38                          | 13  | 11 1                                    | 12.5                       | 0.52                        |
| [4  | 14/09/2021 | 43                          | 15  | 10.9                                    | 123                        | 0.61                        |
| 15  | 15/09/2021 | 51                          | 17  | 10.5                                    | 118                        | 0.48                        |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m²]              | 60<br>[µg/m³]                             | ΒΟ<br>[μg/m³]                           | 80<br>[µg/m³]              | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

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"Complaints Register is available at Laboratory.

Website: www.bsenvitech.com

CIN No. # U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO,           | ENV/2021/AAQ                            | /2021-09      | Issued to:                                 |
|-----------------------|----------------------|---|---------------|--|
| Reporting<br>Date     | 02.10.2021           | 2021 Analysis<br>Starting on 01.10.2021 |               |  |
| Sample<br>Received on | 01.10.2021           | Analysis<br>Completed on                | 02.10.2021    | Marayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | <b>iption:</b> Ambie | nt Air Quality                          | n = =         | M/s JSW Steel Ltd.                         |
| Location/Cod          | le : Rest 5          | Shelter/AAQCZ-4                         |               | M/ G DOM OCCOL DCG.                        |
| Month                 | : Septe              | mber-2021                               |               |  |
| Sample Collec         | ted by: B.S.         | Envi-Tech (P) Ltd                       | .1            |  |
| Instruments (         | acd Resp             | irable Dust Samı                        | der & Fine du | st Sampler                                 |
| Model                 | Envi.                | ro RDS/EI 142 &                         | 3             |  |
| Serial no             | 64-K                 | -17 & 31-L-17                           |               |  |
| Calibration va        | Hdity   05/1         | 0/2021 & 19/10                          | /2021         |  |

| S.NO                                      | DATE       | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[µg/m <sup>3</sup> ] | [µg/m³] [µg/m³] [µg/m³] | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m³]<br>BSET SOP<br>AA-09 |
|---|------------|-----------------------------|---|-------------------------|----------------------------|------------------------------------|
|   | Protocol   | 18:5182<br>Part 23          | IS:5182<br>Part 24                        |                         | IS:5182<br>Part 6          |                                    |
| 16  | 16/09/2021 | 59                          | 21  | 11.3                    | 12.7                       | 0.56                               |
| 17  | 17/09/2021 | 53                          | 19  | 11.6                    | 12.9                       | 0.6                                |
| 18  | 18/09/2021 | 49                          | 17  | 10.8                    | 12.4                       | 0.46                               |
| 19  | 19/09/2021 | 43                          | 15  | 11                      | 12.8                       | 0.54                               |
| 20  | 20/09/2021 | 40                          | ;+  | 10.2                    | 11.6                       | 0.51                               |
| 21  | 21/09/2021 | 38                          | 12  | 9.7                     | 11.2                       | 0.47                               |
| 22  | 22/09/2021 | 33                          | 11  | 10.5                    | 11.8                       | 0.44                               |
| 23  | 23/09/2021 | 44                          | 15  | 9.9                     | 11.3                       | 0.53                               |
| 24  | 24/09/2021 | 41                          | 14  | 9.4                     | 10.7                       | 0.39                               |
| 25  | 25/09/2021 | 47                          | 16  | 10.6                    | 11.9                       | 0.46                               |
| 26  | 26/09/2021 | 50                          | 18  | 10 1                    | 11.5                       | 0.5                                |
| 27  | 27/09/2021 | 54                          | 20  | 11.4                    | 12.8                       | 0.55                               |
| 28  | 28/09/2021 | 49                          | 17  | 10.9                    | 12.3                       | 0.47                               |
| 29  | 29/09/2021 | 39                          | 14  | 10.2                    | 11.7                       | 0.52                               |
| 30  | 30/09/2021 | 11                          | 14  | 9.6                     | 11.1                       | 0.56                               |
| Average                                   |            | 45                          | 16  | 10.6                    | 12.0                       | 0.51                               |
| NAAQ Standards<br>(24 hourly<br>standard) |            | 100<br>[µg/m²]              | 60<br>[μg/m³]                             | 80<br>[μg/m³]           | 80<br>[µg/m³)              | 02<br>[mg/m³]<br>(8 hourly)        |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM25-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO2- Nitrogen Dioxide CO-Carbon Monoxide

uthorized Signatory

'Complaints Register is available at Laboratory

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Website I www.bservitech.com

CIN No. 1074210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO     | /ENV/2021/AAQ            | /2021-09       | Issued to:                              |
|-----------------------|---------------|--------------------------|----------------|---|
| Reporting<br>Date     | 02.10.2021    | Analysis<br>Starting on  | 01.10 2021     |   |
| Sample<br>Received on | 01.10.2021    | Analysis<br>Completed on | 02.10.2021     | Narayanposhi Iron & Manganese Ore Mines |
| Sample Descr          | iption: Ambi  | ent Air Quality          |                | of<br>M/s JSW Steel Ltd.                |
| Location/Cod          | le : Near l   | Baba Math Area/.         | AAQCZ-3        | Bijs oow bicer bea.                     |
| Month                 | : Septe       | mbcr-2021                | -              |   |
| Sample Collec         | eted by: B.S. | Envi-Tech (P) Ltd        | .,             |   |
| Instruments :         | used Rosp     | irable Dust Samp         | oler & Fine du | st Sampler                              |
| Model                 | Envi          | rtech APM 460 &          | Enviro El 133  | , , , , , , , , , , , , , , , , , , ,   |
| Serial no             | 2052          | 2 DTG 2011 & 86          | G 19           |   |
| Calibration va        | didity 19/1   | 0/2021 & 03/10           | /2021          |   |

| 8.NO D | DATE                             | PM <sub>10</sub><br>[µg/m³]  | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO₂<br>[µg/m³]    | NO₂<br>[µg/m³]    | CO<br>[mg/m <sup>3</sup> ]  |
|--------|----------------------------------|------------------------------|---|-------------------|-------------------|-----------------------------|
|        | Protocol                         | IS:5182<br>Part 23           | IS:5182<br>Part 24                        | IS:5182<br>Part 2 | IS:5182<br>Part 6 | BSET SOP                    |
|        | 01/09/2021                       | 48                           | 16  | 9.9               | 11.4              | 0.51                        |
| -2     | 02/09/2021                       | 43                           | 14  | 9.5               | 10.8              | 0.43                        |
| 3      | 03/09/2021                       | 50                           | 17  | 9.1               | 10.5              | 0.48                        |
| 4      | 04/09/2021                       | 55                           | 19  | 8.6               | 9.9               | 0.56                        |
| 5      | 05/09/2021                       | 51                           | 17  | 9.7               | 11.2              | 0.44                        |
| 6      | 06/09/2021                       | 59                           | 21  | 10. L             | 11.8              | 0.52                        |
| 7      | 07/09/2021                       | 53                           | 18  | 9.3               | 10.6              | 0.41                        |
| -8     | 08/09/2021                       | 49                           | 17  | 9.8               | 11.2              | 0.57                        |
| 9      | 09/09/2021                       | 46                           | 15  | 10.4              | 11.7              | 0.61                        |
| 10     | 10/09/2021                       | 42                           | 16  | 9.6               | 10.9              | 0.55                        |
| H      | 11/09/2021                       | 38                           | 12  | 10                | 11.5              | 0.46                        |
| 12     | 12/09/2021                       | 34                           | 11  | 9.2               | 10.8              | 0.53                        |
| 13     | 13/09/2021                       | 41                           | 15  | 10.5              | 11.9              | 0.59                        |
| 64     | 14/09/2021                       | 47                           | 16  | 10.8              | 12.2              | 0.51                        |
| 15     | 15/09/2021                       | 54                           | 18  | 10.3              | 11.7              | 0.47                        |
| (24    | Standards<br>4 bourly<br>andard) | 100<br>(µg/πι <sup>3</sup> ) | 60<br>[µg/æ³]                             | 80<br>[µg/m³]     | 80<br>[µg/m³]     | 02<br>[mg/m³]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10μm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

80<sub>2</sub>-Sulphur Dioxide NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

'Complaints Register's available at Leberatory.

Website www.bsgnvitech.com CIN No. U74210TG1999PTCC32358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:            | JSW/NPIMO,          | /ENV/2021/AAQ                      | /2021-09       | Issued to:                                 |
|-----------------------|---------------------|------------------------------------|----------------|--|
| Reporting<br>Date     | 02.10.2021          | 2021 Analysis<br>Starting on 01.10 |                |  |
| Sample<br>Received on | 01.10.2021          | Analysis<br>Completed on           | 02.10.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambie       | ent Air Quality                    | A <sup>p</sup> | of<br>M/s JSW Steel Ltd.                   |
| Location/Cod          | l <b>e</b> : Near I | Baba Math Area/.                   | AAQCZ-3        | pt/s dow steel btu.                        |
| Month                 | : Septe             | mber-2021                          | -              |  |
| Sample Collec         | eted by: B.S.       | Envi-Tech (P) Ltd                  |                |  |
| Instruments t         | used Resp           | irable Dust Semp                   | der & Fine du  | st Sampler                                 |
| Model                 | Envi                | rtech APM 460 &                    | Enviro El 133  |  |
| Serial no             | 2052                | 2-DTG-2011 & 86                    | -G-19          |  |
| Calibration va        | didity 19/1         | 0/2021 & 03/10                     | /2021          |  |

| S.NO        | DATE                           | PM <sub>10</sub><br>(μg/m³) |                    | 8O <sub>2</sub><br>[µg/m³] | NO <sub>2</sub><br>[μg/m³] | CO<br>[mg/m³]                            |
|-------------|--------------------------------|-----------------------------|--------------------|----------------------------|----------------------------|--|
|             | Protocol                       | IS:5182<br>Part 23          | IS:5182<br>Part 24 | I8:5182<br>Part 2          | IS:5182<br>Part 6          | BSET SOP                                 |
| 16          | 16/09/2021                     | 37                          | 20                 | III                        | 12.4                       | 0.54                                     |
| 17          | 17/09/2021                     | 48                          | 17                 | 9.7                        | 11.3                       | 0.44                                     |
| 18          | 18/09/2021                     | 45                          | 16                 | 8.9                        | 10.5                       | 0.49                                     |
| 19          | 19/09/2021                     | 40                          | 14                 | 9.6                        | 11.1                       | 0.41                                     |
| 20          | 20/09/2021                     | 44                          | Hi                 | 9.4                        | 10.9                       | 0.38                                     |
| 21          | 21/09/2021                     | 41                          | 13                 | 10.1                       | 11.6                       | 0.53                                     |
| 22          | 22/09/2021                     | 36                          | 12                 | 9.8                        | 11.3                       | 0.4)                                     |
| 23          | 23/09/2021                     | 47                          | 16                 | 10.5                       | 11.9                       | 0.45                                     |
| 24          | 24/09/2021                     | +3                          | 14                 | 9.3                        | 10.7                       | 0.52                                     |
| 25          | 25/09/2021                     | 49                          | 17                 | 10.7                       | 12.3                       | 0.57                                     |
| 26          | 26/09/2021                     | 45                          | 15                 | 8.8                        | 10.4                       | 0.61                                     |
| 27          | 27/09/2021                     | 51                          | 18                 | 9.2                        | 10.8                       | 0.53                                     |
| 28          | 28/09/2021                     | 54                          | 19                 | 9.5                        | 11.1                       | 0.48                                     |
| 29          | 29/09/2021                     | 11                          | ]4                 | 10.9                       | 12.4                       | 0.59                                     |
| 30          | 30/09/2021                     | 45                          | 15                 | 11.2                       | 12.6                       | 0.62                                     |
| - 1         | verage                         | 47                          | 16                 | 9.8                        | 11.3                       | 0.50                                     |
| NAAQ<br>(24 | Standards<br>hourly<br>andard) | 100<br>[µg/m³]              | 60<br>[µg/m³]      | 80<br>[μg/m³]              | 80<br>[µg/m³]              | 02<br>[mg/m <sup>3</sup> ]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

802-Sulphur Dioxide

NO2- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory,

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Website I www.bserwitech.com CIN No : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO: .          | JSW/NPIMO,           | /ENV/2021/AAC            | 2021-09        | Issued to:                                 |
|-----------------------|----------------------|--------------------------|----------------|--|
| Reporting<br>Date     | 02,10,2021           | Analysis<br>Starting on  | 01.10.2021     |  |
| Sample<br>Received on | 01.10.2021           | Analysis<br>Completed on | 02.10.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descri         | <b>iption:</b> Ambie | ent Air Quality          |                | of<br>M/s JSW Steel Ltd.                   |
| Location/Cod          | e : Gate l           | No-1/AAQCZ-2             |                | m/a Jaw Steel Ltd.                         |
| Month                 | : Septe              | mber-2021                |                |  |
| Sample Collec         | ted by: B.S.         | Envi-Tech (P) Ltd        | 11             |  |
| Instruments v         | sed Resp             | irable Dust Sam          | oler & Fine du | st Sampler                                 |
| Model                 |                      | ro RDS/EI 142 8          |                |  |
| Serial no             |                      | -18 & 98-G-19            |                |  |
| Calibration va        | lidity 05/1          | 0/2021 & 03/10           | /2021          |  |

| S.NO | DATE                           | PM <sub>10</sub><br>(μg/m³) | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | 80 <sub>2</sub><br>(µg/m²) | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m³]                            |
|------|--------------------------------|-----------------------------|---|----------------------------|---|--|
|      | Protocol                       | 18:5182<br>Part 23          | IS:5182<br>Part 24                        | IS:5182<br>Part 2          | IS:5182<br>Part 6                       | AA-09                                    |
| 1    | 01/09/2021                     | 51                          | 18  | 9.5                        | 10.9                                    | 0.46                                     |
| 2    | 02/09/2021                     | 43                          | 15  | 10.8                       | 12.4                                    | 0.55                                     |
| 3    | 03/09/2021                     | 48                          | 16  | 11.2                       | 12.7                                    | 0.43                                     |
| 4    | 04/09/2021                     | 57                          | 20  | 10.6                       | 11.9                                    | 0.51                                     |
| 5    | 05/09/2021                     | 54                          | 18  | 10.5                       | 11.5                                    | 0.58                                     |
| 6    | 06/09/2021                     | 61                          | 21  | 9.9                        | 11.3                                    | 0.14                                     |
| 7    | 07/09/2021                     | 55                          | 19  | 8.8                        | 10.4                                    | 0.5                                      |
| 8    | 08/09/2021                     | SI                          | 17  | 9.4                        | 10.9                                    | 0.47                                     |
| 9    | 09/09/2021                     | 49                          | 16  | 10.3                       | 11.7                                    | 0.52                                     |
| 10   | 10/09/2021                     | 46                          | 15  | 10.8                       | 12.3                                    | 0.6                                      |
| 11   | 11/09/2021                     | 40                          | 13  | 11.4                       | 12.9                                    | 0.56                                     |
| 12   | 12/09/2021                     | 36                          | 12  | 11.7                       | 13                                      | 0.43                                     |
| 13   | 13/09/2021                     | 44                          | 15  | 12.1                       | 13,4                                    | 0.48                                     |
| ]4   | 14/09/2021                     | 48                          | 17  | 10.3                       | 11.6                                    | 0.52                                     |
| 15   | 15/09/2021                     | 56                          | 19  | 11.4                       | 12.7                                    | 0.63                                     |
| (24  | Standards<br>hourly<br>andard) | 100<br>[µg/m³]              | 60<br>[μg/m³]                             | 80<br>(µg/m³)              | 80<br>[µg/m³]                           | 02<br>[mg/m <sup>3</sup> ]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

80<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

Authorized Signatory

"Complaints Register is available at Laucrethry

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CIN No : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:            | JSW/NPIMO            | /ENV/2021/AAQ                     | /2021-09       | Issued to:                                 |
|-----------------------|----------------------|-----------------------------------|----------------|--|
| Reporting<br>Date     | 02.10.2021           | 021 Analysis<br>Starting on 01.10 |                |  |
| Sample<br>Received on | 01.10.2021           | Analysis<br>Completed on          | 02.10.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambi         | ent Air Quality                   |                | of<br>M/a JSW Steel Ltd.                   |
| Location/Cod          | e : Gato             | No-1/AAQCZ-2                      |                | m/a osw steel but.                         |
| Month                 |                      | ember-2021                        |                |  |
| Sample Collec         | ted by: B.S.         | Envi-Tech (P) Ltd                 |                |  |
| Instruments :         | ned Resp             | irable Dust Samt                  | oler & Fine du | st Sampler                                 |
| Model                 | Envi                 | ro RDS/El 142 8                   | Enviro EI 13   | 3  |
| Serial no             | 66-k                 | -18 & 98-G-19                     |                |  |
| Calibration va        | <b>lidity</b>   05/1 | 0/2021 & 03/10                    | /2021          |  |

| S.NO        | DATE                             | PM <sub>10</sub><br>[µg/m³] | PM <sub>2.5</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | NO <sub>2</sub><br>[µg/m³] | CO<br>(mg/m³)                            |
|-------------|----------------------------------|-----------------------------|---|---|----------------------------|--|
|             | Protocol                         | IS:5182<br>Part 23          | (8:5182<br>Part 24                        | IS:5182<br>Part 2                       | IS:5182<br>Part 6          | BSET SOP                                 |
| 16          | 16/09/2021                       | 60                          | 21  | 10.9                                    | 12.3                       | 0.56                                     |
| 17          | 17/09/2021                       | 51                          | 17  | 9.7                                     | 11.2                       | 0.45                                     |
| 18          | 18/09/2021                       | 48                          | 16  | 10.5                                    | 11.8                       | 0.4                                      |
| 19          | 19/09/2021                       | 43                          | 15  | 111                                     | 12.7                       | 0.59                                     |
| 20          | 20/09/2021                       | 47                          | 16  | 10.7                                    | 12                         | 0.62                                     |
| 21          | 21/09/2021                       | 44                          | 15  | 9.8                                     | 11.2                       | 0.54                                     |
| 22          | 22/09/2021                       | 38                          | 13  | 9.3                                     | 10.6                       | 0.41                                     |
| 23          | 23/09/2021                       | 50                          | 27  | 9.1                                     | 10.7                       | 0.45                                     |
| 24          | 24/09/2021                       | 15                          | 16  | 9.6                                     | 11.1                       | 0.53                                     |
| 25          | 25/09/2021                       | 43                          | :5  | 10.2                                    | 11.8                       | 0.49                                     |
| 26          | 26/09/2021                       | 40                          | 13  | 10.9                                    | 12.2                       | 0.54                                     |
| 27          | 27/09/2021                       | 48                          | 16  | 11.4                                    | 12.9                       | 0.57                                     |
| 28          | 28/09/2021                       | 56                          | 19  | 10.5                                    | 11.8                       | 0.61                                     |
| 29          | 29/09/2021                       | 44                          | 15  | 10                                      | 11.4                       | 0.55                                     |
| 30          | 30/09/2021                       | 49                          | 17  | 10.8                                    | 12                         | 0.59                                     |
| A           | verage                           | 48                          | 17  | 10.4                                    | 11.8                       | 0.51                                     |
| NAAQ<br>(24 | Standards<br>4 hourly<br>andard) | 100<br>[µg/m³]              | 60<br>(μ <b>g/m</b> ³]                    | 80<br>[µg/m³]                           | 80<br>[μg/m³]              | 02<br>[mg/m <sup>3</sup> ]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide NO2- Nitrogen Dioxide CO-Carbon Monoxide

Authorized Signatory

\*Complaints Register is available at Laboratory.

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO.    | /ENV/2021/AAQ            | /2021-09       | Issued to:                                 |
|-----------------------|---------------|--------------------------|----------------|--|
| Reporting<br>Date     | 02.10.2021    | 2021 Analysis 01.10.     |                |  |
| Sample<br>Received on | 01.10.2021    | Analysis<br>Completed on | 02.10.2021     | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | lption: Ambie | ent Air Quality          |                | of<br>M/s JSW Steel Ltd.                   |
| Location/Cod          | le : Kasira   | a Başti/AAQBZ-1          |                | m/s JSW Steel Ltd.                         |
| Month                 |               | mber-2021                |                |  |
| Sample Collec         | cted by: B.S. | Envi-Tech (P) Ltd        | -,             |  |
| Instruments i         | used Resp     | irable Dust Samp         | oler & Fine du | st Sampler                                 |
| Model                 |               | 9000 & Enviro E          |                | -  |
| Serial no             | 0304          | 108 & 36-L-17            |                |  |
| Calibration va        | didity 15/0   | 3/2022 & 19/10           | /2021          |  |

| s.No                                   | DATE       | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[µg/m³] | 80 <sub>2</sub><br>(µg/m³) | NO <sub>2</sub><br>[µg/m³] | CO<br>[mg/m <sup>3</sup> ]  |
|--|------------|--|------------------------------|----------------------------|----------------------------|-----------------------------|
|  | Protocol   | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | IS:5182<br>Part 2          | IS:5182<br>Part 6          | BSET SOP                    |
| ]                                      | 06/09/2021 | 45                                       | 16                           | 8.2                        | 9.8                        | 0.51                        |
| 2                                      | 07/09/2021 | 51                                       | 18                           | 8.8                        | 10.3                       | 0.45                        |
| 3                                      | 13/09/2021 | 40                                       | 14                           | 9.1                        | 10.7                       | 0.38                        |
| 4                                      | 14/09/2021 | 37                                       | 12                           | 96                         | 11                         | 0.42                        |
| 5                                      | 20/09/2021 | 34                                       | II                           | 9.4                        | 10.8                       | 0.49                        |
| - 6                                    | 21/09/2021 | 39                                       | 13                           | 9.9                        | 113                        | 0.44                        |
| 7                                      | 27/09/2021 | 44                                       | 15                           | 8.5                        | 9.8                        | 0.41                        |
| 8                                      | 28/09/2021 | 50                                       | 17                           | 9.2                        | 10.6                       | 0.5                         |
| A                                      | Lverage    | 43                                       | 15                           | 9.0                        | 10.5                       | 0.45                        |
| NAAQ Standards<br>(24 hourly standard) |            | 100<br>[µg/m3]                           | 60<br>[µg/m3]                | 80<br>[µg/m3]              | 80<br>[µg/m3]              | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

802-Sulphur Dioxide

NO2- Nitrogen Dioxide

CO-Carbon Monoxide

**Authorized Signatory** 

\*Complaints Register is available at Lauoratory

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CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

| REPORT NO: .          | JSW/NPIMO,   | ENV/2021/AAQ               | /2021-09   | Issued to:                              |
|-----------------------|--------------|----------------------------|------------|---|
| Reporting<br>Date     | 02.10.2021   | 2021 Analysis 01.10.2021   |            |   |
| Sample<br>Received on | 01.10.2021   | Analysis<br>Completed on   | 02.10.2021 | Narayanposhi Iron & Manganese Ore Mines |
| Sample Descr          | iption: Ambi | ent Air Quality            | •          | of<br>M/s JSW Steel Ltd.                |
| Location/Cod<br>Month |              | Basti/AAQBZ-2<br>mber-2021 |            | at/s oow beer acc.                      |
|                       |              | Envi-Tech (P) Ltd          | .,         |   |
| Instruments o         |              | irable Dust Samp           |            | st Sampler                              |
| Model                 |              | 9000 & Enviro E            |            | - 0                                     |
| Serial no             | 0412         | 235 & 37-L-17              |            |   |
| Calibration va        | lidity 15/0  | 3/2022 & 19/10             | /2021      |   |

| S.NO                                   | DATE       | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.6</sub><br>[μg/m <sup>3</sup> ] | SO <sub>2</sub><br>[μg/m³] | NO <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]  |
|--|------------|--|---|----------------------------|---|-----------------------------|
|  | Protocol   | IS:5182<br>Part 23                       | IS:5182<br>Part 24                        | IS:5182<br>Part 2          | IS:5182<br>Part 6                       | AA-09                       |
| L                                      | 06/09/2021 | 49                                       | 18  | 9.5                        | 10.9                                    | 0.47                        |
| 2                                      | 07/09/2021 | 55                                       | 19  | 9.9                        | 11.3                                    | 0.56                        |
| 3                                      | 13/09/2021 | 44                                       | 16  | 10.3                       | 11.9                                    | 0.49                        |
| 4                                      | 14/09/2021 | 40                                       | 15  | 9.2                        | 10.6                                    | 0.52                        |
| 5                                      | 20/09/2021 | 38                                       | 13  | 9.7                        | 11.1                                    | 0.44                        |
| Ó                                      | 21/09/2021 | 43                                       | 15  | 10                         | 11.4                                    | 0.58                        |
| 7                                      | 27/09/2021 | 48                                       | 17  | 8.9                        | 10.3                                    | 0.51                        |
| 8                                      | 28/09/2021 | 5.3                                      | 18  | 9.4                        | 10.8                                    | 0.43                        |
| - 1                                    | Average    | 46                                       | 16  | 9.6                        | 11.0                                    | 0.50                        |
| NAAQ Standards<br>(24 hourly standard) |            | 100<br>(µg/m3]                           | 60<br>[µg/m3]                             | 80<br>[µg/m3]              | 80<br>[µg/m3]                           | 02<br>[mg/m3]<br>(8 bourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5μm)

80<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

**Authorized Signatory** 

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CIN No. : U74210TG1999PTC032356



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

| REPORT NO:            | JSW/NPIMO     | /ENV/2021/AAQ            | /2021-09   | Issued to:                                 |
|-----------------------|---------------|--------------------------|------------|--|
| Reporting<br>Date     | 02.10.2021    | Analysis<br>Starting on  | 01.10.2021 |  |
| Sample<br>Received on | 01.10.2021    | Analysis<br>Completed on | 02.10.2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Descr          | iption: Ambie | ent Air Quality          |            | of<br>M/s JSW Steel Ltd.                   |
| Location/Cod          | e : Segas     | ahi Village/AAQB         | 3Z-3       | M/B USW Steel IXC.                         |
| Month                 |               | mber • 2021              |            |  |
| Sample Collec         | ted by: B.S.  | Envi-Tech (P) Ltd        | .,         | 1  |
| Instruments :         |               | irable Dust Samp         |            | st Sampler                                 |
| Model                 |               | 9000 & Enviro E          |            | •  |
| Serial no             | 0304          | 108 & 36-L-17            |            |  |
| Calibration ve        | didity 15/0   | 3/2022 & 19/10           | /2021      |  |

| 8.NO | DATE                          | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | РМ <sub>2.5</sub><br>[µg/m³] | 8O <sub>2</sub><br>[µg/m <sup>3</sup> ] | NO₂<br>[µg/m³]    | CO<br>[mg/m <sup>2</sup> ]  |
|------|-------------------------------|--|------------------------------|---|-------------------|-----------------------------|
|      | Protocol                      | IS:5182<br>Part 23                       | IS:5182<br>Part 24           | I8:5182<br>Part 2                       | I8:5182<br>Part 6 | BSET SOP                    |
| l    | 02/09/2021                    | 49                                       | 17                           | 8.8                                     | 10.4              | 0.38                        |
| 2    | 03/09/2021                    | 42                                       | 15                           | 9.2                                     | 19.6              | 0.31                        |
| 3    | 09/09/2021                    | 35                                       | 12                           | 8.5                                     | 9.9               | 0.44                        |
| 4    | 10/09/2021                    | 30                                       | 11                           | 9,4                                     | 10.7              | 0.25                        |
| 5    | 16/09/2021                    | 41                                       | l+                           | 7.9                                     | 9.3               | 0.36                        |
| б    | 17/09/2021                    | 46                                       | 16                           | 8.3                                     | 9.8               | 0.29                        |
| 7    | 23/09/2021                    | 39                                       | 13                           | 9.1                                     | 10.4              | 0.41                        |
| 8    | 24/09/2021                    | 13                                       | 15                           | 7.7                                     | 9.2               | 0.33                        |
| - /  | verage                        | 41                                       | 14                           | 8.5                                     | 10.0              | 0.34                        |
|      | ) Standards<br>orly standard) | 100<br>[µg/m3]                           | 60<br>[µg/m3]                | 80<br>[µg/m3]                           | 80<br>[µg/m3]     | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM10-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

**Authorized Signatory** 

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Websile I www lisenvileth com

CIN No.: U74210TG1999PTC032:158



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

| REPORT NO: .          | JSW/NPIMO,    | /ENV/2021/AAQ            | /2021-09                                  | Issued to:               |
|-----------------------|---------------|--------------------------|---|--------------------------|
| Reporting<br>Date     | 02.10.2021    | Analysis<br>Starting on  | 01.10.2021                                |                          |
| Sample<br>Received on | 01.10.2021    | Analysis<br>Completed on | Narayanposhi Iron &<br>Manganese Ore Mine |                          |
| Sample Descr          | iption: Ambie | ent Air Quality          |   | of<br>M/s JSW Steel Ltd. |
| Location/Cod          | e : Bhanj     | apali Village/AAQ        | )BZ-4                                     | M/S JSW Beer Ltd.        |
| Month                 | : Septe       | mber-2021                |   |                          |
| Sample Collec         | ted by: B.S.  | Envi-Tech (P) Ltd        | .,  |                          |
| Instruments 1         | ised Resp     | irable Dust Samp         | oler & Fine du                            | st Sampler               |
| Model                 | RDS           | 9000 & Enviro E          | [ 133                                     |                          |
| Serial no             | 0412          | 35 & 37-L-17             |   |                          |
| Calibration va        | lidity 15/0   | 3/2022 & 19/10           | /2021                                     |                          |

| S.NO | DATE                        | PM <sub>10</sub><br>[μg/m <sup>3</sup> ] | PM <sub>2.5</sub><br>[μg/τη <sup>3</sup> ] | SO <sub>2</sub><br>[μg/m <sup>3</sup> ] | ΝΟ <sub>2</sub><br>[μg/m <sup>3</sup> ] | CO<br>[mg/m <sup>3</sup> ]  |
|------|-----------------------------|--|--|---|---|-----------------------------|
| 2    | Protocol                    | IS:5182<br>Part 23                       | 18:5182<br>Part 24                         | IS:5182<br>Part 2                       | IS:5182<br>Part 6                       | BSET SOP                    |
| ]    | 02/09/2021                  | 53                                       | 19   | 9                                       | 10.7                                    | 0.51                        |
| 2    | 03/09/2021                  | 46                                       | 16   | 9.6                                     | 10.9                                    | 0.46                        |
| 3    | 09/09/2021                  | 41                                       | 15   | 8.1                                     | 9.6                                     | 0.37                        |
| 4    | 10/09/2021                  | 35                                       | 13   | 9.7                                     | 11.2                                    | 0.52                        |
| 5    | 16/09/2021                  | 48                                       | 16   | 8.8                                     | 10.4                                    | 0.44                        |
| 6    | 17/09/2021                  | 50                                       | 17   | 7.9                                     | 9.3                                     | 0.35                        |
| 7    | 23/09/2021                  | 4+                                       | 16   | 9.1                                     | 10.5                                    | 0.49                        |
| 8    | 24/09/2021                  | 49                                       | 18   | 9.5                                     | 10.8                                    | 0.54                        |
| A    | Lverage                     | 46                                       | 16   | 8.9                                     | 10.4                                    | 0.46                        |
| •    | Standards<br>orly standard) | 100<br>[µg/m3]                           | 60<br>[μg/m3]                              | 80<br>[µg/m3]                           | 80<br>[µg/m3]                           | 02<br>[mg/m3]<br>(8 hourly) |

Legend: PM<sub>10</sub>-Particulate Matter(Size Less than 10µm)

PM<sub>2.5</sub>-Particulate Matter(Size Less than 2.5µm)

SO<sub>2</sub>-Sulphur Dioxide

NO<sub>2</sub>- Nitrogen Dioxide

CO-Carbon Monoxide

thorized Signatory

Phone 1+91 40 49783062 / 27018806 Fax : +91 40 49783063 Email lab@bsenvitech.com. info@bsenvitech.com

Website I www bservitech com

CIN No. 3 U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

FUGITIVE DUST MONITORING REPORT

SEPTEMBER-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:                                    | JSW/NPIMO/     | ENV/2021/FDM/:           | 2021-09                 | Issued to:                                 |
|---|----------------|--------------------------|-------------------------|--|
| Reporting 02.10.2021 Analysis Starting on     |                |                          | 01.10.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample<br>Received on                         | 01.10.2021     | Apalysis<br>Completed on | 02.10.2021              | of<br>M/s JSW Steel Ltd.                   |
| Sample Descr                                  | iption:        | 1000                     | Instrument              | Respirable Dust                            |
| Fugitive Dust I                               | Monitoring     |                          | Vaed                    | Sampler                                    |
| Location/Cod                                  | e : Mines Pace | /Bench/FDM-1             | Model                   | Enviro RDS / El 142                        |
| Month : September-2021                        |                |                          | Serial no               | 135-G-20                                   |
| Sample Collected by: B.S. Envi-Tech (P) Ltd., |                |                          | Calibration<br>Validity | 27/10/2021                                 |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO         |
|------|------------|-------------|------------------------------|
| 1    | 01/09/2021 | 441         |                              |
| 2    | 02/09/2021 | 406         |                              |
| 3    | 03/09/2021 | 492         |                              |
| 4    | 04/09/2021 | 517         |                              |
| 5    | 05/09/2021 | 543         |                              |
| 6    | 06/09/2021 | 557         |                              |
| 7    | 07/09/2021 | 501         |                              |
| R    | 08/09/2021 | 598         |                              |
| 9    | 09/09/2021 | 616         |                              |
| LO   | 10/09/2021 | 568         |                              |
| 11   | 11/09/2021 | 585         |                              |
| 12   | 12/09/2021 | 517         |                              |
| 13   | 13/09/2021 | 483         |                              |
| 14   | 14/09/2021 | 499         |                              |
| 15   | 15/09/2021 | 551         | 1                            |
| 16   | 16/09/2021 | 570         | 1200                         |
| 17   | 17/09/2021 | 592         | [μ <b>g/m</b> <sup>3</sup> ] |
| 18   | 18/09/2021 | 649         |                              |
| 19   | 19/09/2021 | 676         |                              |
| 20   | 20/09/2021 | 618         |                              |
| 21   | 21/09/2021 | 577         |                              |
| 22   | 22/09/2021 | 519         |                              |
| 23   | 23/09/2021 | 428         |                              |
| 24   | 24/09/2021 | 444         |                              |
| 25   | 25/09/2021 | 469         |                              |
| 26   | 26/09/2021 | 437         |                              |
| 27   | 27/09/2021 | 497         |                              |
| 28   | 28/09/2021 | 528         |                              |
| 29   | 29/09/2021 | 545         |                              |
| 30   | 30/09/2021 | 511         |                              |
|      | Average    | 531         |                              |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

\*Compaints Register is available at Laboratory.

St Ann's Road, Jamaka, Secunderapad - 500017, Telangana, India

1 91 40 49783062 / 27016806 Fax +91 40 49763063 ිab මූර් senvitech com, info@bsenvitech.com. Email

Website I www.liservitech.com. CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:                                     | JSW/NPIMO/ | ENV/2021/FDM/:           | 2021-09                 | Issued to:                                |  |
|--|------------|--------------------------|-------------------------|---|--|
| Reporting Date 02.10.2021 Analysis Starting on |            |                          | 01.10.2021              | Narayanposhi Iron 8<br>Manganese Ore Mine |  |
| Sample<br>Received on                          | 01.10.2021 | Analysis<br>Completed on | 02.10.2021              | of<br>M/s JSW Steel Ltd.                  |  |
| Sample Descr                                   | iption:    | 0 637                    | Instrument              | Respirable Dust                           |  |
| Fugitive Dust I                                | Monitoring |                          | Used                    | Sampler                                   |  |
|  |            | lage Road/FDM-2          | Model                   | Envirotech APM 460                        |  |
| Month : September-2021                         |            |                          | Serial no               | 2838-DTA 2015                             |  |
| Sample Collec                                  |            | Envi-Tech (P) Ltd.,      | Calibration<br>Validity | 19/10/2021                                |  |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/09/2021 | 489         |                      |
| 2    | 02/09/2021 | 467         |                      |
| 3    | 03/09/2021 | 523         | 1                    |
| 4    | 04/09/2021 | 559         | 1                    |
| 5    | 05/09/2021 | 578         |                      |
| б    | 06/09/2021 | 521         |                      |
| 7    | 07/09/2021 | 490         |                      |
| 8    | 08/09/2021 | 547         |                      |
| 9    | 09/09/2021 | 576         |                      |
| 10   | 10/09/2021 | 523         |                      |
| 11   | 11/09/2021 | 592         |                      |
| 12   | 12/09/2021 | 550         |                      |
| 13   | 13/09/2021 | 524         | 1200                 |
| 14   | 14/09/2021 | 567         | 1                    |
| 15   | 15/09/2021 | 578         | [µg/m³]              |
| lń   | 16/09/2021 | 603         |                      |
| 17   | 17/09/2021 | 638         |                      |
| 18   | 18/09/2021 | 698         |                      |
| 19   | 19/09/2021 | 715         |                      |
| 20   | 20/09/2021 | 642         |                      |
| 21   | 21/09/2021 | 617         |                      |
| 22   | 22/09/2021 | 553         |                      |
| 23   | 23/09/2021 | 470         |                      |
| 24   | 24/09/2021 | 495         |                      |
| 25   | 25/09/2021 | 511         |                      |
| 26   | 26/09/2021 | 456         |                      |
| 27   | 27/09/2021 | 525         |                      |
| 28   | 28/09/2021 | 558         |                      |
| 29   | 29/09/2021 | 593         |                      |
| 30   | 30/09/2021 | 537         |                      |
| A    | verage     | 557         |                      |

Legend:SPM-Suspended Particulate Matter

Authorized Signatory

\*Complaints Register is available at Laboratory.

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Website: www.bservitech.com CN No. U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

| REPORT NO:                                    | lasued to: |                          |                         |  |
|---|------------|--------------------------|-------------------------|--|
| Reporting 02.10.2021 Analysis Starting on     |            |                          | 01.10.2021              | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample<br>Received on                         | 01.10.2021 | Analysia<br>Completed on | 02.10.2021              | of<br>M/s JSW Steel Ltd.                   |
| Sample Descr                                  | lption:    | 577                      | Instrument              | Respirable Dust                            |
| Fugitive Dust                                 |            |                          | Deed                    | Sampler                                    |
| Location/Cod                                  |            | ant/PDM-3                | Model                   | Envirotech APM 460                         |
| Month : September-2021                        |            |                          | Serial no               | 138-G-20                                   |
| Sample Collected by: B.S. Envi-Tech (P) Ltd., |            |                          | Calibration<br>Validity | 27/10/2021                                 |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/09/2021 | 475         |                      |
| 2    | 02/09/2021 | 413         |                      |
| 3    | 03/09/2021 | 401         |                      |
| 4    | 04/09/2021 | 522         |                      |
| 5    | 05/09/2021 | 546         |                      |
| 6    | 06/09/2021 | 559         |                      |
| 7    | 07/09/2021 | S15         |                      |
| 8    | 08/09/2021 | 573         |                      |
| 9    | 09/09/2021 | 553         |                      |
| 10   | 10/09/2021 | 496         |                      |
| 11   | 11/09/2021 | 627         |                      |
| 12   | 12/09/2021 | 589         |                      |
| 13   | 13/09/2021 | 541         |                      |
| 14   | 14/09/2021 | 580         |                      |
| 15   | 15/09/2021 | 593         |                      |
| 16   | 16/09/2021 | 645         | 1200                 |
| 17   | 17/09/2021 | 671         | [µg/m³],             |
| 18   | 18/09/2021 | 660         |                      |
| 19   | 19/09/2021 | 629         |                      |
| 20   | 20/09/2021 | 616         |                      |
| 21   | 21/09/2021 | 587         |                      |
| 22   | 22/09/2021 | 502         |                      |
| 23   | 23/09/2021 | 441         |                      |
| 24   | 24/09/2021 | 518         |                      |
| 25   | 25/09/2021 | 539         |                      |
| 26   | 26/09/2021 | 490         |                      |
| 27   | 27/09/2021 | 576         |                      |
| 28   | 28/09/2021 | 618         |                      |
| 29   | 29/09/2021 | 567         |                      |
| 30   | 30/09/2021 | 521         |                      |
|      | Average    | 553         |                      |

Legend:SPM-Suspended Particulate Matter

**Authorized Signatory** 

\*Complaints Register is available at Laboratory.

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ÇIN No. 3 ⊔74210TG1999PTC002358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:                                      | JSW/NPIMO/     | Issued to:               |                         |   |  |
|---|----------------|--------------------------|-------------------------|---|--|
| Reporting 02.10.2021 Analysis Starting on       |                |                          | 01.10.2021              | Narayanposhi Iron &<br>Manganese Ore Mine |  |
| Sample<br>Received on                           | 01.10.2021     | Analysis<br>Completed on | 02.10.2021              | of<br>M/s JSW Steel Ltd.                  |  |
| Sample Description:<br>Fugitive Dust Monitoring |                |                          | Instrument<br>Used      | Respirable Dust<br>Sampler                |  |
| Location/Cod                                    | e : Screen Pla | mt/FDM-4                 | Model                   | Envirotech APM 460                        |  |
| Month : September-2021                          |                |                          | Serial no               | 62-K-18                                   |  |
| Sample Collected by: B.S. Envi Tech (P) Ltd.,   |                |                          | Calibration<br>Validity | 19/10/2021                                |  |

| S.NO | DATE       | SPM [µg/m³] | Standards as per CTO |
|------|------------|-------------|----------------------|
| 1    | 01/09/2021 | 126         | - 00                 |
| 2    | 02/09/2021 | 397         | ].                   |
| 3    | 03/09/2021 | 411         |                      |
| 4    | 04/09/2021 | 480         | 1                    |
| 5    | 05/09/2021 | 443         |                      |
| 6    | 06/09/2021 | 497         | ]                    |
| 7    | 07/09/2021 | 450         | 1                    |
| 8    | 08/09/2021 | 525         |                      |
| 9    | 09/09/2021 | 509         |                      |
| 10   | 10/09/2021 | 482         |                      |
| 11   | 11/09/2021 | 591         |                      |
| 12   | 12/09/2021 | 543         | 1                    |
| 13   | 13/09/2021 | 506         | 1                    |
| 14   | 14/09/2021 | 5:24        | 1                    |
| 15   | 15/09/2021 | 499         |                      |
| 16   | 16/09/2021 | 577         | 1200                 |
| 17   | 17/09/2021 | 628         | [µg/m³]              |
| 18   | 18/09/2021 | 639         | 1                    |
| 19   | 19/09/2021 | 595         |                      |
| 20   | 20/09/2021 | 602         |                      |
| 21   | 21/09/2021 | 563         | 7                    |
| 22   | 22/09/2021 | 490         |                      |
| 23   | 23/09/2021 | 407         |                      |
| 24   | 24/09/2021 | 361         |                      |
| 25   | 25/09/2021 | 389         |                      |
| 26   | 26/09/2021 | 441         |                      |
| 27   | 27/09/2021 | 424         |                      |
| 28   | 28/09/2021 | 395         |                      |
| 29   | 29/09/2021 | 479         |                      |
| 30   | 30/09/2021 | 508         |                      |
| - 1  | Average    | 493         |                      |

Legend:SPM-Suspended Particulate Matter

**Authorized Signatory** 

\*Complaints Register is available at Laboratory.

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CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:                                      | JSW/NPIMO/     | ENV/2021/FDM/:           | 2021-09                 | Issued to:                                |  |
|---|----------------|--------------------------|-------------------------|---|--|
| Reporting<br>Date                               | _              |                          | 01.10.2021              | Narayanposhi Iron 6<br>Manganess Ore Mine |  |
| Sample<br>Received on                           | 01.10.2021     | Analysis<br>Completed on | 02.10.2021              | of<br>M/s JSW Steel Ltd.                  |  |
| Sample Description:<br>Fugitive Dust Monitoring |                |                          | Instrument<br>Used      | Respirable Dust<br>Sampler                |  |
| Location/Cod<br>Point/FDM-5                     | e : Ore Sto    | rage & Loading           | Model                   | Envirotech APM 460                        |  |
| Month   | : Septembe:    | r-2021                   | Serial no               | 101-G-19                                  |  |
| Sample Collec                                   | ted by: B.S. E | Envi-Tech (P) Ltd.,      | Catibration<br>Validity | 19/10/2021                                |  |

| S.NO | DATE       | SPM [µg/m³]     | Standards as per CTO |
|------|------------|-----------------|----------------------|
| 1    | 01/09/2021 | 517             |                      |
| 2    | 02/09/2021 | 493             |                      |
| 3    | 03/09/2021 | 544             |                      |
| 4    | 04/09/2021 | 582             |                      |
| 5    | 05/09/2021 | 597             |                      |
| 6    | 06/09/2021 | 571             |                      |
| 7    | 07/09/2021 | 546             |                      |
| 8    | 08/09/2021 | 621             |                      |
| 9    | 09/09/2021 | 635             |                      |
| 10   | 10/09/2021 | 605             |                      |
| l l  | 11/09/2021 | 646             |                      |
| 12   | 12/09/2021 | 531             |                      |
| 13   | 13/09/2021 | 477             |                      |
| 14   | 14/09/2021 | 518             |                      |
| 15   | 15/09/2021 | 625             |                      |
| 16   | 16/09/2021 | 660             | 1200                 |
| 17   | 17/09/2021 | <del>69</del> 6 | [µg/th³]             |
| 18   | 18/09/2021 | 721             |                      |
| 19   | 19/09/2021 | 743             |                      |
| 20   | 20/09/2021 | 652             |                      |
| 21   | 21/09/2021 | 639             |                      |
| 22   | 22/09/2021 | 575             |                      |
| 23   | 23/09/2021 | 459             |                      |
| 24   | 24/09/2021 | 537             |                      |
| 25   | 25/09/2021 | 564             |                      |
| 26   | 26/09/2021 | 523             |                      |
| 27   | 27/09/2021 | 588             |                      |
| 28   | 28/09/2021 | 640             |                      |
| 29   | 29/09/2021 | 617             |                      |
| 30   | 30/09/2021 | 493             |                      |
|      | Average    | 587             |                      |

Legend: SPM-Suspended Particulate Matter

Authorized Signatory

"Complaints Register's available at Lacoratory."

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CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

| REPORT NO:                                      | JSW/NPIMO/        | ENV/2021/FDM/            | 2021-09                 | Issued to:                             |  |
|---|-------------------|--------------------------|-------------------------|--|--|
| Reporting<br>Date                               | - 107 10 2021 1 1 |                          | 01.10.2021              | Narayanposhi Iron & Manganese Ore Mine |  |
| Sample<br>Received on                           | 01.10.2021        | Analysis<br>Completed on | 02.10.2021              | of<br>M/s JSW Steel Ltd.               |  |
| Sample Description:<br>Fugitive Dust Monitoring |                   |                          | Instrument<br>Used      | Respirable Dust<br>Sampler             |  |
| Location/Cod                                    | e : Waste Dun     | np/FDM-6                 | Model                   | RDS 9000                               |  |
| Month   | : September-      |                          | Serial no               | 0602101                                |  |
| Sample Collec                                   | ted by: B.S. E    | Invi-Tech (P) Ltd.,      | Calibration<br>Validity | 19/10/2021                             |  |

| S.NO | DATE       | SPM [µg/m³]      | Standards as per CTO |
|------|------------|------------------|----------------------|
| ı    | 01/09/2021 | 108              |                      |
| 2    | 02/09/2021 | 371              |                      |
| 3    | 03/09/2021 | 362              |                      |
| 4    | 04/09/2021 | 399              |                      |
| 5    | 05/09/2021 | 414              |                      |
| 6    | 06/09/2021 | 468              |                      |
| 7    | 07/09/2021 | 479              |                      |
| 8    | 08/09/2021 | 501              |                      |
| 9    | 09/09/2021 | 495              |                      |
| 10   | 10/09/2021 | 483              |                      |
| 11   | 11/09/2021 | 558              |                      |
| 12   | 12/09/2021 | 505              |                      |
| 13   | 13/09/2021 | 429              |                      |
| 14   | 14/09/2021 | 465              |                      |
| 15   | 15/09/2021 | 517              |                      |
| 16   | 16/09/2021 | 543              | 1200                 |
| 17   | 17/09/2021 | 580              | [µg/m³]              |
| 18   | 18/09/2021 | 603              |                      |
| 19   | 19/09/2021 | 579              |                      |
| 20   | 20/09/2021 | \$9 <del>6</del> | 1                    |
| 21   | 21/09/2021 | 545              |                      |
| 22   | 22/09/2021 | 474              |                      |
| 23   | 23/09/2021 | 386              |                      |
| 24   | 24/09/2021 | 353              |                      |
| 25   | 25/09/2021 | 377              |                      |
| 26   | 26/09/2021 | 414              |                      |
| 27   | 27/09/2021 | 400              |                      |
| 28   | 28/09/2021 | 379              |                      |
| 29   | 29/09/2021 | 448              |                      |
| 30   | 30/09/2021 | 461              |                      |
|      | Average    | 466              |                      |

Legend:SPM-Suspended Particulate Matter

**Authorized Signatory** 

'Complaints Register is available at Laboratory.

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ÇIN No. 1074210TG 1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

GROUND WATER LEVEL REPORT

APRIL-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

Client : M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month : April

Date : 13.04.2021

#### GROUND WATER LEVEL, DEPTH FROM SURFACE

| 8.No | Location                          | Ground Water Level In Meters |
|------|-----------------------------------|------------------------------|
| 1,,  | Dug Well Koira Basti              | 10.18                        |
| 2.   | Dug Well Kasira Basti             | 9.36                         |
| 3.   | Site Services Area (Pizometer-01) | 19.51                        |
| 4.   | Near 650 crusher (Pizometer-02)   | 14.32                        |
| 5.   | Crusher plant area (Pizometer 03) | 35.44                        |

For B.S Envi-Tech (P) Ltd.,

Authorised Signatory

"Complaints Register's available at Laboratory.

Email | | | lab@bsenvitech.com, info@bsenvitech.com | Website | | www.bsenvitech.com

CIN No. 3 U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

SURFACE WATER QUALITY REPORT

APRIL-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Contraser: Mrs. JAW Stept Limited

Test Report No.: BSRT/7071.WS-00704

Lah Code No. 210919604

: 20104-2021

: Lener Dated 99.04.2031

Date of Receipt . 09.04.2021

Project Name: Nacayanpants from & Masganese are Mines Sample Description: Surface Wave Sample

Quantity : I Super Differ Sample

No. 4 501 pt Nample (Metals).

900 ml Wide mouth Glass bottle Jos Odefi

1 No. 3 259 ml Nample Pre Sternaged Bottle For Milen

Patking , Place Dottes Leal Required : As piver below Date of Registration 34,04,0021 THE SET there of commencement of essing Outs of completion of feeling PL64L2221

Found ok

Sanight condition at appear Sample tested as received

Date of Sumpling: 06.64.2011 Location of Sampling: (Irahamsala upstream

Sampling Details

Sampling Method/Procedure: 18 3025 Part 1

General Koverenment treditions; ak . Page No. 1 of f.

TEST RESPETS

| 5.<br>4.        | TeM Parameter                         | Units             | Tot Mehot  | Hermit | hames for Stream Wate<br>Standards |
|-----------------|---------------------------------------|-------------------|--|--------|------------------------------------|
|                 | Colour                                | Hazer Hrein, Man. | 15 ¥025 (Beri4)  | 10     | ,6:0                               |
| 2               | рE                                    | 565               | IS 3025 (Pan-11)   | 4.93   | IO se RN                           |
| L.              | Lotal Dissolved Salics                | right, Mar        | 19 1927 (Pag. 16)  | 115    | 1500                               |
| 1               | (Allonde (gr < 1)                     | rrg. I, Max.      | 18 Roos (Page St)  | 12     | (ALD                               |
| ١.              | Inin (as <sup>L</sup> C)              | ngil Mar.         | 71.11 B of<br>AIMIA 23 <sup>M</sup> Campa 2017   | 0.20   | 5p                                 |
| ń               | Sulphones (as SO <sub>4</sub> )       | mg.l, Max.        | 18 1675 (Part-21)  | 8.1    | 40K                                |
| 7,              | Humida (as 7)                         | mpl. Max.         | 1500-F (1),<br>APII A 21° Edicum 2012  | OL IID | ,05                                |
| 8               | Marates (as 1907)                     | mgl. Mp           | 1 younge, B<br>UV Specuciphotomeric<br>Scientific Method   | 1.2    | 49                                 |
| ٩               | Cupper (av Cu)                        | ngel, Mas.        | THE FUND APPLIES APPLIES APPLIES AND THE PROPERTY APPLIES APPL | -0.02  | 1,5                                |
| 10              | Scienium (ax Sc)                      | mgel, Max.        | APITA 23 <sup>th</sup> Edward 2017   | <0.01  | 925                                |
| H <sub>ee</sub> | Zinc (25 Zh)                          | mgel, Mas         | 91 to Blow<br>APHA 231 School 2017   | กุเม   | 11                                 |
| 12              | Cadmient (In C.d.)                    | irigit, Man       | APHA 28 <sup>4 a</sup> caren 2017  | <0.003 | -:0,1                              |
| D.              | Local (so. Pb)                        | mgrl, Max         | 3111 B of<br>0.PHA 23 <sup>2</sup> Edition 2013  | <#.DI  | à.1                                |
| 14              | Arsenio (as As)                       | regri, Max        | J114 U el<br>APHA 21 <sup>rd</sup> Edition 2011  | -49.01 | 0.2                                |
| 4               | Cyanide (as CN)                       | mg'. Max          | 499 CN L, Sclarman c<br>Meikod, APTIA 25" I-doven<br>3017  | <11,02 | 5,05                               |
| 16,             | Chumum (as Cr*)                       | mg', Max          | 3111 B of<br>A391A 23 <sup>st</sup> Indicate 2017  | 40.42  | 0,05                               |
| 17              | Anionic Delergenis (as MBAS)          | nigil, Max        | Arms, K. or 18 1 (248)   | વા     | :                                  |
| B               | Phonolic Compounds (as C(10011)       | mu/l, Mux.        | S 5021 (Pan-41)  | -0.400 | 0,005                              |
| 19              | BH (C) (see Og)                       | mpl               | IS 5024 (Pare-14)  | 2      | 1                                  |
| 3C              | Disvolved Oxygon (pv.C <sub>0</sub> ) | ngt. Mn           | 15 3025 (Pmt-18)   | 4.5    | 1                                  |
| 1               | Ohl & Greate                          | mgd, Max          | IS 3025 (Part-39)  | JECAN  | 61                                 |
| 22              | Intal Celiform                        | (mpn/100mi), Max. | 38 1622  | 135    | 5010                               |

Interpretation of results. Not, Consultrin from 1951 method: Not

\*\*\* End of the Report \*\*\*

Complaints Register is available at Laboratory

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Website : www.bsenvitech.com

OIN No.:: U74210TG1999PTG032358

G. Chindra Monte | B. Chindra Monte | B. Chindra Monte |



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

harme & Artifices of the Operation : Min. JSW Specificinated

Lest Report And (IBSET/2021/WS>00/05

Lah Code No. 1, 210479364 : 20,04,202. Ideac Date

Your Ref 11 June - Jacob 20,54,21(2)

Butnot Receipt (09:11.2021 Project Name: Naraganguiki Iren & Managantar um Mines

Sample Description: Surface Water Sample Quantity : I Notes 50 turn Sample

1 No. of them. Sample (Morally, 100 ml Wide north Class builte for M&G 1 No. 3 200 ml Sample (ve Semitoral Same For Moral

Packing : Plastic Battley Less Required . As given below

Date of Registration 09.34.2521 10.04.3031 Date of summers were of testing Date of completion of sesting 19.04.2021 Sample condition at except Esmithit

Sample reared as received

Sampling Details

Dare of Sampling: 96.04.2021 Location of Sampling: Oraharetale Buterstream Sampling Method-Procedure: 18 JULS Part I.

General Environment conditions; ok . Page No: or :

#### TEST RESULTS

| S.<br>No.      | heat forwagter                    | Units              | Tol Method  | Menalt                              | Limets for Steman Wedge<br>Standards |
|----------------|-----------------------------------|--------------------|---|-------------------------------------|--------------------------------------|
| L,             | Calcur                            | Haven Units Max.   | IS 1025 (Part-4)  | 10                                  | 9;p                                  |
| 2,             | pil                               | 1 20               | 15 2025 (Part-11)   | 2,84                                | 6.5 × 6.5                            |
| 3              | Total Disorderd Solids            | mg-l, Max          | PS 2025 (Part 16)   | 149                                 | 530                                  |
| 4.             | Chlonde (as CI)                   | rigit, Max.        | 18 (00 s (Pag-1));  | 24                                  | AR)                                  |
| 1,             | horogas Fe'l                      | прі Ма             | 1 11 8 of<br>A#84 23* Editor 2017                                     | II JA                               | 41                                   |
| 6              | Sulphaso. (se 50);                | ng1, Max.          | 15,3425 (Part-24)   | ja .                                | 10.                                  |
| i,             | Uluonde (35 °)                    | Tip 1, Max.        | ASIDA FIL<br>APIJA 23 <sup>N</sup> Lamon 2017                         | q.2n                                | 1.5                                  |
| 4.             | Nitrates (en NO <sub>1</sub> )    | mg-1, Mak          | uyiro NO. IA<br>DV Spectrophotometric<br>Screening Method             | 4.7                                 | 50                                   |
| è.             | Copper (as Ca)                    | nig I, Maa         | NH U of<br>APHA 22 <sup>th</sup> Edward 3012                          | <0.02                               | 1.5                                  |
| ıń,            | Selenam (16.5c)                   | mpd, Maa           | 31 14 II of<br>APHA 21" Editor 2010                                   | <0.01                               | 0.09                                 |
| H <sub>a</sub> | Zine (as 7n)                      | mg I, Max          | 31 [1 B Ld]<br>APSCA 21 <sup>8</sup> Edwine 2017                      | 11117                               | 15                                   |
| 12             | Cadmium ras (CII)                 | ingel, Max         | 91 (1 (0 or<br>91 (4 / 2)* 1 dipon 2017                               | <fu003< td=""><td>-0.</td></fu003<> | -0.                                  |
| 13             | Lead (as Pb)                      | mail, Mas          | 31 (1 B of AP9(A 21 <sup>st</sup> testion 2017                        | <0.01                               | AL.                                  |
| 4              | Amonto (sa As)                    | mg I, Max          | 911c ( 1)r<br>APNA 21 <sup>4</sup> Editor 2017                        | KIKÜL                               | 9,2                                  |
| ۲,             | Cyande (as CN)                    | mg I, Mas          | 4504 UST Calenmore<br>Method, APIA 21 <sup>st</sup> Education<br>2017 | ≈6.02                               | C 35                                 |
| 18.            | Chromam (as C) <sup>n</sup> )     | reg I, Max.        | THE B of APRA 28th April 2013   | o9.1\2                              | 430                                  |
| יו             | Amana Decoyonta (as MILAS)        | mg'l, Max          | Mines, Kladd's 19248  | ×0.1                                | ı                                    |
| IK,            | Phenolic Compounds (as Cyley()11) | mgs 1, Max.        | 18 7025 (Part-41)   | 30,1931                             | 0.005                                |
| 14             | J00((m/15)                        | ngt                | IS 2025 (form-4)  | 5                                   | 1                                    |
| 21_            | Desilved Claygon (gs (%)          | eigh Ma            | 15 2025 (Isan-35)   | 4.5                                 | 1                                    |
| 21             | Oil & Oresec                      | arp1, Max          | IS 2025 (Pant-35)   | 275 N                               | 0,1                                  |
| :2             | Total Cukform                     | emps, (400mR, Max. | IS 1622   | 150                                 | 5000                                 |

Interpretation of results. Nil, Deviation from rost medical Is I

\*\*\* And of the Report \*\*\*

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Authorized Signarary (C. Chariffer Mash ) Confragmental Sciences

് lab@asenvilech com, info@bsenvitech.com Website I www.bsenvitech.com

CIN No 11/74210TG1999PTC032358



Quantity:

# **B.S. ENVI - TECH PVT. LTD.**

Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

Name & Addense of the Container: MAs JSW Steel Lamital

Leut Report No.; DIST 1/2021/04/\$-01/056

Fab Cede No. 1: 210979404 faster Date 120/04/2021

Date of Receipt (CVI01.2021)

: Late 0xxx (900C/01)

Project Name: Narayanipasis Iran & Mangagere are Metts

Sample Description, Surface Water Sample 1 No. 85 DE tra Sample

1 No. v 200 ml Sample (Metaly) 500 m. Wille mouth Glass bentle for O&C

1 No. v 299 ml Sample Pre Stor fixed Bodge Pro-Micro-

Pecking : Plastic Boules Test Required : As given helder

Date of Samplings (6.44.202)

Location of Sampling: Navo Hiver Up Stream

Page of Registration 29.24.2020 10.04.0021 Date of commencement of testing 1904-5031

Pate of completion of testing Sample condition as receipt Formal ric

Sample tested as occurred

Sampling Details

Sampling MethodiProcedure: ES 3025 Part I

Gestetal Environment combiners: et . Page You . of t

TRATER ENGINEERS

| S.<br>No. | Test Personeler                       | 4 nils            | Ted Method   | Result          | Limes By Stream Water<br>Stradents |
|-----------|---------------------------------------|-------------------|--|-----------------|------------------------------------|
| L         | Colma                                 | Hazen Corts, Max. | 16 1075 (Pan-4)  | 70              | 101                                |
| 2         | На                                    | -                 | 18 935 (Parchi)  | n 75            | 6,5 m 2,5                          |
| 1.        | Local Dissolved Schills               | ngt, Mu           | IS 3006 (Part - N)   | 125             | 1401                               |
| 4         | Unlimige (je Cl)                      | mg/l, Mga.        | IS 3005 (Fail-12)  | 25              | 600                                |
| V. 1      | Iron (as Lc)                          | ngil, Mps         | 111 H of<br>APHA 23 <sup>rd</sup> Edings 2011                | 4.1             | vj                                 |
| 6.        | Salphates (35 SO <sub>1</sub> )       | myl, Mas          | FS 3025 (Plat. 34)   | 12              | <b>850</b>                         |
| 7.        | Funnsletts: F)                        | mg/l, Mqs         | 4500-F D;<br>APMA 23" balton 2017                            | 0.20            | 1,5                                |
| a,        | Nicates (as NOat                      | mg/1, Mass        | 4500-NO8<br>UV Sprutophdometha<br>Serconing Mothad           | 3.6             | :11                                |
| 9,        | Спуркт (м. Сп)                        | ng", Mac          | APHA 23 <sup>rd</sup> Edition 2017                           | - <b>:0.</b> 02 | 1_5                                |
| IC.       | Solutium (ss. Sc)                     | mg/LMex.          | 4014 A of<br>APHA 73 <sup>4</sup> Edition 2017               | e4,III          | 11.05                              |
| Lg        | Zinc (az Yn)                          | rag/1, Max.       | Attlift of<br>APIIA 25 <sup>4</sup> Edition 2015             | 4.10            | ١                                  |
| 12        | Culmium (as Co)                       | mg/l, Max         | 3111B of<br>APHA 2V <sup>2</sup> Edition 2011                | <b>≈0.003</b>   | <2.1                               |
| 17.       | Ficaditan Po)                         | mg/l Max.         | 41(11)5 of<br>APTIA 22° Edition 2913                         | 44,0)           | 11,1                               |
| 14        | Arsenic (as As)                       | ngl, Max          | 30H C of<br>APHA (3 <sup>rd</sup> Educe (301)                | 40.00           | 5.2                                |
| 15        | Cyanido (86 CM)                       | ngl. Max          | 4500 CN F, Color metric<br>Method, APIDA 211 Faltion<br>2017 | <0.92           | 0.05                               |
| .6        | Стомыци (зв (3°°)                     | ngt, Mps.         | 7111  3   of<br>APITA 23 <sup>rd</sup> Edwine 2011           | -51,92          | 6,07                               |
| 17        | Amonic Delegann (as MBAS)             | mp1. Max          | Annex, N. 2f IS 11248  | <b>≺</b> 0∟1    | I I                                |
| 18        | Planelic Compounds (in Callabili)     | mg1, Max          | 15 3025 (Pen.43)   | -0.001          | 0,005                              |
| lu[]      | BOD (2+0;)                            | mgd               | 75,900% (Par-48)   | 4               | ,                                  |
| 20        | Dissolved Ovygon (as O <sub>2</sub> ) | rigit Min         | 15 9925 (Pan-J8)   | 5.0             | 1                                  |
| ) i       | Oil & Grease                          | mg/l, Max         | (N. 3025 (Pan+19)  | 8.1             | 4,1                                |
| 22        | Talai Cristom                         | (mpn/100ml) Max   | 15 1672  | 240             | 5000                               |

Interpretation or results: Not Deviation from text method. Not

\*\*\* End of the Report \*\*\*

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G.Chandra Mosh )

Entail | lab@bsenvitech.com, infa@bsenwtech.com Website I www.bservitech.com

CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Costoner: Mrs. 15W Navel I imited

Ten Report No. : IISE (/2021/WS-00701

Talk Code Na 100979304

lewe (Mile : 2001) 2031

Voer Hef : Long Pated 07/04,2021

Date of Receipt : 99/01/2021

Project Name: Narayanpashi limn & Mangagere nee Mijner

Sample Description: Surface Water Sample Quantity : 1 No. x i. 2 . ark Sample

. No. a S00 mt Sunda (Metals)

Location of Sampling: Name Birer Bowmonyage (Agis Near Gate Novi)

Noticed Wide mouth these population O&S: Notice 250 m. Sample Designed and Builde has Micro

Patieng . Plastic Britis.
Tea Required : As given below

Oute of Registration 99,04,5021

Oute of commencement of reading 10,04,0021

Date of completion of tenting 19,04,3021

Sample condition at receipt

Sample terred us received

mat reesipt brond ak

Date of Sampling: 06.44.2021

Sampling Details

Sampling Method/Procedure: 15 3025 (94)

General Environment conditioner ak . Pagy No: 1 of [

TEST RESULTS

| N <sub>O</sub> | Test Personates                   | Linite            | Lear Meithod   | Result   | Limits for Stream Water<br>Standards |
|----------------|-----------------------------------|-------------------|--|----------|--------------------------------------|
| 1,             | Colque                            | Habes Units, Mex. | 18 P05 (Pag 1)   | 111      | 300                                  |
| 2,             | DII                               | 40                | (5.3025 (e8e-11)   | 6.75     | 6,5 to 8,5                           |
| A, i           | Tatal Direnticed Solids           | mgd, Max          | IS 3025 (Part-16)  | 145      | 1900                                 |
| ٤,             | Cliferide (as Ch                  | mg/l, Max.        | IS 3025 (Peri-72)  | 20       | ыш                                   |
| ۲.             | Isanyas her                       | mg/ . Max         | 111 H of<br>APJ:A 21" Library 2017                                     | 0.18     | 50                                   |
| le.            | Stripholes (as 904)               | mgC, Max          | IS 1025 (Part-24)  | In       | 100                                  |
|                | Hamilde (as 8)                    | mg/l, Max.        | 4500-F ()<br>APHA 23° Ed4 sin 2011                                     | 4.13     | . 4                                  |
| Ř,             | Nizelra (p. NCb)                  | mgol, Mass        | 4504 NOVAL<br>U.V. Sprepreprovency c<br>Screening (Marked              | 5        | 50                                   |
| ۹              | Eupper Jas (Ca)                   | mgt. Max          | 30 (0.057<br>APRIA 391 Salam 2017                                      | <0.93    | 1.5                                  |
| 111-           | Sewittati (38 Se)                 | mg/l. Mex         | 1113 [3 of<br>APITA 2112 believe 2017                                  | 40.41    | C)24                                 |
| H.             | aire (av Zn)                      | repl, Max         | Official<br>APID 274 Edition 2017                                      | DLL      | 15                                   |
| 12             | Cadenon (as Cil)                  | mg/i, Mga,        | 211 ( B) of<br>APHA 23 <sup>rd</sup> Falation 2017                     | <0,000)  | -11.1                                |
| ( <del>)</del> | Lead (as Pb)                      | mg/1, Man         | J111 [5 of<br>APTIA 27" Edition 2017                                   | <0.01    | 4.1                                  |
| I4             | Amonic (gr. (gr.)                 | mg/l hdan         | 9014 C of<br>APHA 215 Edger 2217                                       | < LUI    | 0,2                                  |
| IS.            | Cyamda (ss. (°N)                  | пд' Мал           | 4500 CN E, Culkametric<br>Method APHA 27 <sup>rd</sup> Fuldion<br>2017 | 40.02    | s us                                 |
| 16.            | Chronium (as Cr <sup>2</sup> )    | ng', May          | 3111 H   55<br>A 211A 23 <sup>10</sup> Edet on 2012                    | 4.00.002 | <.55                                 |
| 17_            | Armine Detergens (as MBA\$)       | mp7. Max          | Aurea, R of S 15248  | -9.1     | ·                                    |
| I E            | Phenolic Companion (a) (74 ), (8) | mpl. Max          | (\$3025 (Pat-19)   | <0.001   | 8905                                 |
| 14,            | BOD (as 0 <sub>1</sub> )          | mgt               | 15 3925 (Part.41)  | 4        | 3                                    |
| ш,             | Histolised Congan (as Oat         | mg/l, Wrn         | K 34/2 V (Part 18)   | 5.2      |                                      |
| 1,             | Clif A, Cricise                   | ingel, Max        | N.362 V (Pan - JP)   | -1       | 0.1                                  |
| 72             | total Coliform                    | (mpw/: PCmH, Max. | 18/1622  | HOME     | 5000                                 |

Interpretation of results, Not, Deviation from test method, Not

\*\*\* Fiel of the Report | \*\*\*

\*Complaints Register is available at Laboratory

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ital Belentigt

Website : www.bsanvitech.com

CIN No. 1174210TG1999PTC032358



Quantity

## **B.S. ENVI - TECH PVT. LTD.**

Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Customer ; MA, JSW Seed L-mired

Test Report No. . HSFT/2520/W5-20103

Inb Cade No. 210979284

Book Date - 25,04,000 ( Your Bet : Later Dated IN 24/27/0 Date of Receipt : 09 04 2021

Date of Registration

Project Name: Naceyangrobil I ran & Manageres we blisted Sample Rescription Number Water Sample

1 No. of 0 Little Santale

I Na ix 500 rel Samble (Metals)

500 nd Wide mouth Chay hattle for Odet i

Packing . Pluste, Bastika Test Required : As given believe

I No. x 250 rd Sample Pre Stentized Jointy For Micro

Sampling Details

Date of Sumpling: 06,04,2021 Larance of Sampling; Rasina Nata ( Nata Between Quarry Na.) & 4 ). Sampling Method/Procedure: IS 1005 Part 1.

Date of commencement of testing

Date of completion of toping

Straute condition at receipt

Kample tested as received

General Karlingsment candillous; nk., Page Nat Lef I

(19.16f.2011)

10.04.2021

19 04 3021

Hound ok

#### TEST RESULTS

| S.<br>Nu | Test Parameter                   | Elajes              | Tou Morked  | Résult                       | Limits for Stream Water<br>Standards |
|----------|----------------------------------|---------------------|---|------------------------------|--------------------------------------|
| 1,       | Colour                           | Haven Conts, Moss   | 35 3005 (Part-4)  | I#                           | чи                                   |
| 2, ,     | μЕ                               |                     | 19 3125 (Park-11)   | 4-T5                         | 6.5 In 8.5                           |
| ١,       | Total Disselves Solide           | пр'СМах.            | 19 M(25 / Pap. 16)  | 140                          | 1500                                 |
| 6        | Chloride (as Ch                  | прі. Мах            | S 9(25 - Part-) 21  | В                            | 500                                  |
| ٤.,      | Iron (as Fe)                     | mgrl, Max.          | JHT Biol<br>APHA 13 <sup>4</sup> Edition 2017             | 0.88                         | 50                                   |
| 6,       | Sulpouter tax SO <sub>4</sub> )  | mg/l, Max           | 15 9025 (Part-74)   | III .                        | 400                                  |
| 1,       | Fluorice (er 11                  | mpd. Max            | 4500-9 D;<br>A-MA 23° 5566-9 20° 7                        | 026                          | 1.5                                  |
| R        | Nitrates rate NO <sub>II</sub>   | mol, Mar            | ayangayan<br>UV Sekuruphoranaca<br>Selecting Method       | 4.5                          | ٩ıı                                  |
| ٠,       | Cooper (as Cu)                   | mg/I, Max           | 10 FB of<br>APHA 201 Edition 2017                         | <0.02                        | 15                                   |
| ĸ,       | No colon (as Sr)                 | ng't Max            | 1(14 H of<br>APHA 22° Edition 2017                        | 40.01                        | 9.39                                 |
| П        | Zieu (m. Zn)                     | mg* , Mass          | J111 B of<br>APHA 2112 Edition 2017                       | 4 0.02                       | 15                                   |
| P.       | Carlmium (as Culi                | mg' Max             | APHA 27° Educa 2017                                       | <pre><pre>prings</pre></pre> | · U                                  |
| IS)      | Lead (25 (Pr)                    | 100's Max           | 3111 B of<br>APITA 22" Edition 2011                       | et.UI                        | d.1                                  |
| 14       | Assenic (e. Asi)                 | mp′ . Mz×.          | 01 (4.0° pr<br>APIIA 23 <sup>8</sup> Edition 2513         | 49,00                        | u,2                                  |
|          | Cyanide tas UNI                  | mg1, Max            | #SALCN E. Colormeins<br>Method, APIPA 217 Edicion<br>2017 | <b>≈0.</b> D2                | C.D5                                 |
| ь        | Chamban (se Cr <sup>16</sup> )   | mg/l, Max           | 3111 B v C<br>APIIA 23 Edine 2017                         | <b>41.02</b>                 | 9,65                                 |
| 17.      | Anothy Detergen's (as MBAS)      | mg/l, Max           | Annes   K <   15   132   8                                | <b>-0.1</b>                  |                                      |
| I K.     | Phonelic Compounds (as Cataliti) | mgl, Mns.           | 15 3225 (Part-13)   | ⊲0.001                       | 4.00%                                |
| 14       | NOO (86 Og)                      | Fyrin               | 25 3025 (Pmt-44)  | 3                            | J                                    |
| 200      | Disarhori (haygar (as t).)       | mg/l, Min           | (8 3625 (Part-18)   | 4.5                          | 4                                    |
| 21       | 4 til A. Crorec                  | ngit, Max           | 15 3035 (Pan J9)  | 5.1                          | n.i                                  |
| 22       | Total Colifiens                  | (mpie (diant), Max. | 19 10/22  | 7世》                          | 1990                                 |

Interpretation of results: Nil, Desinton from near rigited, Nil,

\*\*\* bad of the Repen \*\*\*

\*Complaints Register is available at Linberstory

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C'BA

interioral Signatory G. Canodra Mauli I Cayleadasantal Sciencisc

lab@bsenvitech.com, info@bsenvitech,com Email

Website : www.bsenviech.com CIN No. #U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

WATER FLOW RATE REPORT

APRIL-2021



Recognized by McEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: April

Date

: 19.04.2021

#### SURFACE WATER FLOW RATE OF STREAMS

| S.No | Location                                     | Flow rate (Velocity)<br>in Meter/Second |
|------|--|---|
| 138  | Orahari Nala Up Stream                       | 0.258                                   |
| 2.   | Confluence of Orahari & Karo Nala            | 0.513                                   |
| 3,   | Kasira Nala (Nala between Quarry no-3 & 4)   | 0.221                                   |
| 4,   | Karo River Down Stream (Nala near Gate no-1) | 0.595                                   |

For B.S Envi-Tech (P) Ltd.,

athorised Signatory

C'BAD

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\*Comptaints Register is available at Laboratory.

Website www.bsenvltech.com

CIN No. 1074210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

GROUND WATER LEVEL REPORT

**MAY-2021** 



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: May

Date

: 18.05.2021

#### GROUND WATER LEVEL, DEPTH FROM SURFACE

| S.No | Location                          | Ground Water Level<br>In Meters |
|------|-----------------------------------|---------------------------------|
| 1,   | Dug Well Koira Basti              | 10.27                           |
| 2.   | Dug Well Kasira Basti             | 9.46                            |
| 3,   | Site Services Area (Pizometer-01) | 19.73                           |
| 4.   | Near 650 crusher (Pizometer-02)   | 14.41                           |
| 5.   | Crusher plant area (Pizometer-03) | 35.55                           |

For B.S Envi-Tech (P) Ltd.,

Authorised Signatory

\*Complaints Register 3 available at Laboratory,

Email lab@bsenvitech.com, info@bsenvitech.com Wabsite www.bsenvitech.com CIN No. : U74210TG1999PTC032358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

GROUND WATER QUALITY REPORT

**MAY-2021** 



Recognized by MoEF & CC, Gol: Valld upto August, 2022

#### TEST REPORT

Name & Address of the Customer: M/s. JSW Steel Limited

Test Report No. ; BSET/2021/WS-01266

Lab Code No

. 210923405

Issue Date

: 25 05,2021

Your Ref.

: Letter Dated 15,85,2021

Project Name: Narsyanposhi Iron & Manganese ore Mines

Date of Receipt : 15,05,2021

Qty

Sample Description: Ground Water Sample

I No. x 2.01 trs Sample

I No. x 503 and Sample (Metals).

I No x 250 ml Sample (Microbiology).

Packing.

: Plastic Buttle & Pre-Sterilized Buttle

Test Required: As given below.

Date of Registration. 15 05:2021 15 05,2021 Date of enumencement of testing Date of completion of testing 24,05,2021 Sample condition at receipt Found ok

Sample tested as received

Sampling Details

Date of Sampling: 12 05 2031

Location of Sampling: Dug Well Kerra Bastr

Sampling Method/Procedure: IS 3025 Part 1.

General Environment conditions: Ok

Page No: 1 of 2

#### TEST RESULTS

| S.  |                                       |         |   |           |                     | iroment as per<br>10500:2012                        |
|-----|---------------------------------------|---------|---|-----------|---------------------|---|
| Na. | Test Parameter                        | 1. mits | Test Method   | Result    | Acceptable<br>Uml/s | Permistible limits in absence of alternative source |
| 1,  | Odour                                 | 53      | LS:3025 -Part-5   | Agreeable | Agrocable           | Agreeable   |
| 2   | Colour                                | Hazen   | IS.3025 -Pam-4  | < 5       | 5                   | 15  |
| 3,  | рH                                    | 2       | 15:3025- Part-11  | 6.81      | 6.5-8.5             | No Relaxation                                       |
| 4   | Turnidity                             | NTU     | 18:3025 (Part+10  | <1        |                     | 5   |
| 20  | Total Hardness at CaCO <sub>3</sub>   | ing/t   | FS:3025 -Part-21  | 80        | 200                 | 600   |
| 6.  | Iron as Fe                            | ing/l   | 3111 B of<br>APHA 23 <sup>™</sup> Edition 2017                        | 1.09      | 1.0                 | Ni: Relaxation                                      |
| 7,  | Chlorides as Cl                       | mgʻl    | 15:3025 -Part-32  | 44        | 250                 | 1090  |
| S,  | Trital Dissolved Solids @ 105°C.      | mg/I    | 15.3025 - Part-16   | 180       | 5100                | 2000  |
| 9,  | Cateium as Ca                         | ing/l   | 18:3025• Part•40  | 29        | 75                  | 200   |
| IU. | Magnesium as Mg                       | ing/l   | 18:1025 -Part-46  | 2,4       | 30                  | 100   |
| He  | Sulphate as SO <sub>2</sub>           | mg/l    | 18:3025 -Part-24  | 31        | 260                 | 410   |
| 12. | Nitrate as NO <sub>3</sub>            | mg/l    | 4500-NO <sub>3</sub> -I8 UV<br>Spectrophotometric<br>Screening Method | 12        | 45                  | No Relaxation                                       |
| 13. | Fluorice as F                         | ing/l   | 4500-F D.<br>APBA 23 <sup>rd</sup> Edition 2017                       | 0.34      | I                   | 1.5   |
| 14. | Total Alkalinity as CaCO <sub>3</sub> | mg/l    | IS:3025 -Part-23  | 36        | 2400                | 600   |

Interpretation of results. Nil, Deviation from test method. Nil.

(Cichandra Moull) mmental Scientist

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CIN No. 1074210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: M/s, JSW Steel Limited

Test Report No. : BSET/2021/WS-0-266

Luh Cude Nu

: 2M/927405

lasue Date

: 25.05.2021

Your Ref

: Letter Dated 15 05 2021

Project Name: Narsyanposhi Iron & Manganese ore Mines

Date of Receipt : 15.95.2021

Sample Description: Ground Water Sample

: I No a 2 ft Lits Sample

1 No. x 500 (at Sample) Metals).

1 No x 250 ml Sample (Microbiology).

Packing

: Plastic Bottle & Pro Steriused Bottle

Test Required: As given below

15.03.2021 Date of Registration 15 05 2021 Date of commencement of testing 24.05 2021 Date of completion of testing Found ok Sample condition at receipt

Sample tested as received

Sampling Details

Date of Sampling: 12.05.2021.

Location of Sampling: Dug Well Korra Basti

Sampling Method/Procedure: IS 3025 Part 1

General Environment conditions: Ok-

Page No: 2 of 2

#### TEST RESULTS

| s.  |                       |           |  |         | Requirement as pa<br>IS 10500;2012 |   |
|-----|-----------------------|-----------|--|---------|------------------------------------|---|
| No. | Test Parameter        | Doits     | Test Method  | Result  | Acceptable<br>limits               | Permissible limits<br>In absence of<br>alternutive source |
| 150 | Borne as B            | mg/l      | 4500-8 B.<br>Curcumin Method.<br>APHA 23° Edwar 2017 | < 0.10  | 0.5                                | 2.4   |
| 16  | Aleminium as Al       | mg/l      | 3500 Al B Brichrome<br>Cyanine Rimethod              | < 0.02  | 0.03                               | 0.0   |
| L)  | Copper as Cu          | ம்பூர     | 2111 B of<br>APELA 23 <sup>rd</sup> Edition 2017     | < 0.02  | 0.05                               | 1.5   |
| 18. | Manganese ax Mn       | mg/l      | 3111 B of<br>APHA 23 <sup>rd</sup> Edition 2017      | < 0.02  | 0.1                                | 41.3  |
| 190 | Selontum as Se        | mg/l      | 31.14 C of<br>APHA 25 <sup>th</sup> Edition 2017     | < 0.01  | 0.01                               | No Relaxation   |
| 20. | Zinc as Zn            | mg/l      | 3111 B of<br>APEIA 23 <sup>th</sup> Edition 2017     | < 0.01  | 5                                  | 15  |
| 21/ | Cadmium as Cd         | mg/l      | 3111 C of<br>APHA 23" Edition 2017                   | < 0.003 | 0.003                              | No Relaxation   |
| 22. | Lead as Pb            | மதி       | 3111 C of<br>APHA 25 <sup>th</sup> Edition 2017      | < 0.01  | 0.01                               | No Rolnxarion   |
| 20, | Mercury as Hg         | figit     | 3112 Blof<br>APDA 23 <sup>d</sup> Obtain 2017        | < 0.001 | 0.001                              | No Kelakation   |
| 24. | Total Arsenic as As   | mg/l      | 3114 C of<br>APHA 23 <sup>rd</sup> Edition 2017      | < 0.01  | 0.01                               | 0.05  |
| 25, | Total ("promium as Cr | mg/I      | 3111 C of<br>APHA 23 <sup>rt</sup> Edition 2017      | < 0.02  | 0.05                               | No Relaxation   |
| 26. | Total Coliforns       | CTU/160m1 | [S: 1620   198]                                      | Absent  |                                    | 12  |

Interpretation of results. Nil, Deviation from test method: Nil.

(G.Chandra Moull) Invironmental Scientist

\*Complaints Registressorship in the polysporatory

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CJN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer : M/s. JSW Steel Limited

Test Report No.: BSET/2021/WS-01267

Lab Code No.

2109233065

Issue Date

: 25 05,2021

Your Ref.

: Letter Dated 15 05 2021

Project Name: Narayanposhi Iron & Manganese ore Mines.

Date of Receipt 1: 15.05.2021

QO.

Sample Description: Ground Water Sample

1 No. x 2.0 Ltrs Sample

1 No. x 500 m1 Sample(Moia's).

1 Na x 250 ml Sample (Microbiology)

Packing

: Plastic Bottle & Pre-Sierchzed Bottle

Test Required : As given below:

Date of Registration 15 05:2021 15 05.2021 Date of communications of testing 24 05,2021 Date of completion of lesting Found ok Sample condition at receipt

Sample tested as received.

Sampling Details

Date of Sampling: 12.05.2021

Lineating of Sampling: Dog Well Kasira Bosti

Sampling Method/Procedure: IS 3025 Part I General Environment conditions: Ok

Page Not 1 of 2

#### TEST RESULTS

| <b>5</b> . |                                       |        |   |           | Requirement as per<br>18 10500:2012 |   |
|------------|---------------------------------------|--------|---|-----------|-------------------------------------|---|
| No.        | Test Parameter                        | Linics | Test Method   | Result    | Acceptable<br>limits                | Permissible limits<br>in absence of<br>alternative source |
| L,         | Odour                                 | -      | IS:3025 -Part+5   | Agreeable | Agreeable                           | Agreeable   |
| 2.         | Coleur                                | Hazen  | IS: 3025 -Part-4  | < 5       | 5                                   | 15  |
| λ.         | pH                                    | 144    | 15:3025- Part-11  | 6.86      | 6.5-8-5                             | No Relayation   |
| ۷          | Turhidity                             | NTU    | 15:3025 -Part-10  | <1        | 1                                   | 5   |
| 5.         | Total Hardness as CaCO <sub>3</sub>   | mg/l   | 15:3025 -Pan-21   | 108       | 200                                 | 600   |
| 6.         | tron as Fe                            | mg/I   | 3111 B of<br>APIBA 23 <sup>3</sup> Edition 2017                       | 0.07      | 1.0                                 | No Relaxation   |
| de.        | Chlorides as CI                       | ing/l  | 15:3025 (Parti-32   | 64        | 250                                 | 1000  |
| g.         | Total Dissulved Solids in 105°C       | mg/l   | IS:1025 - Part-16   | 292       | 500                                 | 2000  |
| 9.         | Calcium is Ca                         | mg/I   | 15:3025- Part-40  | 40        | 75                                  | 200   |
| 10         | Magnesium as Mg                       | mµI    | 15:3025 -Part-44  | 1.9       | 30                                  | 100   |
| Ц          | Suiphace as SO <sub>4</sub>           | Ing/l  | 15:3625 -Part-24  | 36        | 200                                 | 4 <b>(1)</b>  |
| 12         | Nitrole as NO <sub>1</sub>            | ing/l  | 4503-NO <sub>1</sub> -B IJV<br>Spectrophotemetric<br>Screening Method | 23        | 45                                  | No Relaxation   |
| L5.        | Fluoride as F                         | mg/I   | 450H/FTD.<br>APHA 23 <sup>rd</sup> Edition 2017                       | 0.45      |                                     | 1.5   |
| 14.        | Total Alkalmity as CaCO <sub>3.</sub> | ing/I  | 18:2025 (Part-23)   | 70        | 200                                 | 6/10  |

Interpretation of results. Nill, Deviation from test method: Nill.

Anthorized Signatory Chandra Mouli ) Environmental Scientist

\*Complainte Register is available at Laboratory.

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Websile : www.bsenvitech.com CIN No. 1U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### **TEST REPORT**

Name & Address of the Customer: M/s, JSW Steel Limited

Test Report No. : BSE 1/2021/WS-01267

Lah Code No : 210923305

Isaue Date

: 25.05 2021

Your Ref.

: Letter Dated 15.05.2021

Project Name: Narayanposhi Iron & Manganese ore Mines

Date of Reccipt : 15.05.2021

Sample Ocseription: Ground Water Sample

Q(y

: 1 No. x 2.0 Lits Sample

I No. x 500 ml Sample (Metals).

I No x 250 ml Sample (Microbiology)

Packing

: Plastic Bottle & Pre-Stentived Bottle

Test Required: As given below

Date of Registration 15.05.2021 15.05.2021 Date of commencement of testing 24.05.2021 Date of completion of testing Sample condition at receipt Found ok

Sample rested as received

Sampling Details

Date of Sampling: 12.05.2021

Location of Sampling: Dug Well Kasira Basri

Sampling Method/Procedure: 15.3925 Part 1 General Environment conditions: Ok

Page No: 2 of 2

#### TEST RESULTS

| 5.  |                      |           |  |         |                      | rement as pec<br>10500:2012 |
|-----|----------------------|-----------|--|---------|----------------------|-----------------------------|
| No. | Test Parameter       | Limits    | Test Method  | Result  | Acceptable<br>limits |                             |
| 15. | Huron as H           | rhig/I    | 4500-B B.<br>Curcumin Method,<br>APHA 23° Edition 2017 | < 0.10  | 0.5                  | 2.4                         |
| 16. | Aluminium as Al      | mg/l      | 3500 ALB Erichrome<br>Cyanine Rimethod                 | < 0.02  | 0.03                 | 0.2                         |
| 17. | Copper as Cu         | nigit     | 3111 B of<br>APHA 23 <sup>rd</sup> Edition 2017        | < 0.02  | 0.03                 | 1.5                         |
| 18. | Manganese as Min     | nig/I     | 3111 B of<br>APHA 23 <sup>rd</sup> Faltition 2017      | < 0.02  | 0.1                  | 0.2                         |
| 19. | Selenium ux Se       | mg/l      | 1114 Claf<br>APHA 23 <sup>rd</sup> Edition 2017        | < 0.04  | 0.01                 | No Re'akation               |
| 20  | Zinc as Zr           | mg/li     | 1111 B of<br>APHA 23 <sup>rd</sup> Edition 2017        | < 0.02  | 5                    | 15                          |
| 21. | Cachtiting as Cd     | nigʻl     | 3111 C of<br>APHA 23 <sup>th</sup> Edition 2017        | < 0.003 | 0.003                | No Relexation               |
| 22. | Lead as Pb           | mg:[      | JHH C of<br>APHA 23 <sup>rd</sup> Edition 2013         | < 0.01  | 0.01                 | No Relaxation               |
| 21. | Mercury as Hg        | mert      | 3112 B of<br>APHA 23" Edition 2017                     | < 0.001 | 0.001                | No Relaxation               |
| 24. | Total Arsenie as As  | nigil     | 3114 Clof<br>APHA 23 <sup>st</sup> Edition 2017        | < 0.01  | 0.01                 | 0.05                        |
| 25. | Total Chremium as Cr | mg/l      | 2111 Claft<br>APHA 23 <sup>rd</sup> Edition 2017       | < 0.02  | 0.05                 | No Relaxation               |
| 26. | Tutal Coblumns       | CFG/180ml | IS: 1622 1981  | Absent  |                      | 8                           |

Interpretation of results: Not. Deviation from test method, Not

athorized Signatory (A handra Mnuli) avironmental Scientist

· End of the Reportise

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Website I www.bsenvitech.com

CIN No. 1074210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

Name & Address of the Customer: M/s. JSW Steel Limited

Test Report No. : 35ET/2021/WS-01268

Lab Code No.

. 210923205

Isane Date

: 25,05,2021

Your Ref.

: Lotter Dated 15,05,2021

Project Name: Narayanposhi Ivon & Manganese ore Mines.

Date of Receipt : 15.05 2021

Sample Description: Ground Water Sample : I No. x 2 ft Lirs Sample

1 No. x 500 rail Sample (Metals).

No x 250 ml Sample (Microbiology).

Packing

: Plastic Battle & Pre-Stetilized Bottle

Test Required: As given below

15.05 2021 Date of Registration. 15.05.2021 Dute of commencement of testing Date of completion of testing 24.05.2021 Faund ok Sample condition at receipt

Sample tested as received.

Sampling Details

Date of Sampling: 12.05 2021

Location of Sampling: Site Services Area (Perameter - 01.)

Sampling Method/Procedure: IS 3025 Part L

General Environment conditions: Ok

Page No: 1 of 2

#### TEST RESULTS

| 5.   |                                       |       |   |           | Requirement as per<br>IS 10500:2012 |   |
|------|---------------------------------------|-------|---|-----------|-------------------------------------|---|
| No.  | Test Parameter                        | Units | Test Method   | Respill   | Acceptable<br>limits                | Permissible limits<br>in absence of<br>atternative source |
| 1,   | Odour                                 | **    | 15:3925 -Pan-5  | Agreeable | Agrepable                           | Agreeable   |
| 2,   | Colour                                | Hazen | 15:3025 -Part-4                                       | < 5       | 5                                   | 15  |
| 3.   | РН                                    | 44    | IS:3025- Part-11                                      | 6.87      | 6.5-8.5                             | No Relaxation   |
| 4.   | Inribidity                            | NIII  | 18.3025 -Part-10                                      | <1        | I I                                 | 5   |
| 5.   | Total Hardness as Cattus              | mg/l  | IS:3025 -Part-21                                      | 64        | 2011                                | 600   |
| 6.   | from as Fe                            | mg/l  | 3111 B of<br>APHA 23 <sup>rd</sup> Edition 2017       | 0.07      | 1.0                                 | No Relaxation   |
| 75   | Cliforales as C1                      | mp/l  | IS:3025 -Part-32                                      | 60        | 250                                 | 1900  |
| 8.   | Total Dissolved Solids in, 105°C      | mg/l  | JS: 5025 - Pan-16                                     | 238       | 500                                 | 24100   |
| 9.   | Calcium as Ca                         | ing/l | JS.3025- Part-40                                      | 20        | 75                                  | 200   |
| 10,  | Magnosium as Mg                       | mg/l  | 3S 3025 -Part-46                                      | 3.4       | 70                                  | 100   |
| Te.  | Sulphate as 504                       | mg/l  | IS 3025 -Part-24                                      | 28        | 200                                 | 400   |
| · 2. | Ninate as NO <sub>3</sub>             | mg/l  | 4500-NOB UV<br>Spectrophroxmetric<br>Screeming Method | 21        | 45                                  | No Relayation   |
| (3.) | Fluorde as F                          | ingil | 4500-F D.<br>APITA 23 <sup>th</sup> Edition 2017      | 0.39      | 1                                   | 1.5   |
| (4,  | Total Alkalimity as CaCO <sub>1</sub> | mg/l  | IS:3025 -Part-23                                      | 52        | 200<br>C//                          | 6(8)  |

Interpretation of results: Nil, Deviation from test method, Nil

marized Signutory (G-Chandra Moul) Environmental Scientist

\*Complaints Register is available at Laboratory.

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Website : www.bserwitech.com

CIN No. EU74210TG1999PT(X)32358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: M/s. ISW Steel Limited

Test Report No.: BSBT/2021/WS-B1268

Lab Code No. : 210923205

Date of Registration.

Issue Date

: 25.05.2021

Your Ref.

(Letter Dated 15,05,2021)

Project Name: Narayanposhi Iron & Manganese ore Mines

Date of Receipt : 15.05.2021

Date of completion of feating

Sample condition at receipt

Date of commencement of testing

Sample Description: Cround Water Sample

: I No. x 2.0 Dirk Sample

1 No. x 500 inf Sample(Metals).

I. No x 250 ml Sample (Microbiology).

**Packing** : Plastic Bottle & Pre-Stenhaed Bottle

Sample tested as received

Test Required: As given below

Sampling Details

Date of Sampling: 12.05 2021 Location of Sampling: Site Services Area ( Preometer - 01 ) Sampling Method/Procedure: (\$ 3025 Part 1) General Environment conditions: Ok.

Page Not 2 of 2

15.05.2021

13.05.2021

24.05.2021

Found ok

#### TEST RESULTS

| S.  |                      |               |   |         | Requirement as per<br>IS 10500:2012 |               |  |
|-----|----------------------|---------------|---|---------|-------------------------------------|---------------|--|
| Su. | Test Parameter       | Units         | Test Method   | Result  | Acceptable<br>limits                |               |  |
| 15. | Boron as B           | mg/l          | 4500-B B.<br>Curtumin Method,<br>APHA 23 <sup>rd</sup> Edition 2017 | < 0.10  | 0.5                                 |               |  |
| 16. | Aluminjum os Al      | mg/l          | 3500 ALB – Ecichrome<br>Cyanine R method                            | < 0.02  | 0.03                                | 0.2           |  |
| 17, | Copper as Cu         | ing/I         | 3111 B of<br>APIIA 23" Dilition 2017                                | < 0.02  | 0.05                                | 1.5           |  |
| LK. | Manganese as Mn      | mg/l          | 3111 B of<br>APITA 23'S Edition 2012                                | < 0.02  | 0.1                                 | 0.3           |  |
| 19. | Selenium as Se       | mg/l          | 3114 C of<br>APHA 25 <sup>th</sup> Edition 2017                     | < 0.01  | 0.01                                | No Relaxation |  |
| 20. | Zinc es Zn           | me/I          | 3111 B of<br>APIIA 23 <sup>rd</sup> Edition 2017                    | < 0.02  | 5                                   | 15            |  |
| 21. | Cadmium as Cd        | mg/l          | 3111 C of<br>APHA 23" Edition 2017                                  | < 0.003 | 0.003                               | No Relaxation |  |
| 22. | Lead as Ph           | m <u>e</u> /I | NTH C of<br>APHA 25 <sup>th</sup> Edition 2017                      | < 0.01  | 0.01                                | No Helakstran |  |
| 23, | Mercury as Hg        | Nig/I         | 3112 B of<br>APHA 23 <sup>rd</sup> Edition 2017                     | < 0.001 | 0.001                               | No Relaxation |  |
| 24. | Tetal Assenie as As  | ngil          | 3114 C of<br>APHA 23 <sup>rd</sup> Edition 2017                     | < 0.01  | 0.01                                | 0.03          |  |
| 25, | Total Chromnum as Cr | mg/l          | MHI C of<br>APHA 23 <sup>th</sup> Edition 2017                      | < 0.02  | 0.05                                | No Relaxation |  |
| 26. | Total Conforms       | CFI./100ml    | 15: 1620   1981   | Absent  | 00                                  | Ř.            |  |

Interpretation of results. Nil, Deviation from test method. Nil.

Authorized Signatory C.Chandra Mouli ) Environmental Scientist

so bad of the Kenerssa

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Wabsite ( www.bsenvitech.com)

CIN No 1 U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Customor: M/s, JSW Steel Limited

Test Report No. : BSE 1/2021/WS-01269

Lub Cade No 210923105

Issue Date

: 25.05.2021

Your Ref

: Letter Dated 15,05 3021

Project Name: Narayanpushi Iron & Manganese ore Mines

Date

Date of Receipt : 15.05.2021

Sample Description: Ground Water Sample

Qty

: 1 No. + 2 0 Littl Nample

I No. x 500 ml Sample(Metals)

1 No. x 250 ml Sample (Microbinlagy)

Packing

: Plastic Bortle & Pre-Stenlized Hortle

Test Required : As given below

Date of Registration | 15.05.2621 |
Date of commencement of testing | 15.05.2621 |
Date of completion of testing | 24.05.2021 |
Sample condition at receipt | Found ok

Sample tested as received

Sampling Details

Date of Sampling: 12,03,2021

Location of Sumpling: Near 650 Crusher ( Przemeter - 02 )

Sampling Method/Procedure: IS 3025 Part I

General Environment conditions: Ok.

Page Vot 1 of 2

#### TEST RESULTS

| 5.         |   |       |  |           | Requirement as per<br>IS 10500:2012 |   |
|------------|---|-------|--|-----------|-------------------------------------|---|
| No.        | Fest Parametee                              | Units | Test Method  | Retuit    | Acceptable limits                   | Permissible limits<br>in absence of<br>alternative source |
| da .       | Odour                                       |       | IS:3025 (Part-5  | Agreeable | Agreeable                           | Agreeable   |
| 2.         | Colour                                      | Hazen | IS:1025 /Part-4  | < 5       | ș.                                  | 15  |
| 3.         | рН  | -     | 1S:3025- Part-11   | 6.62      | h 5-8 5                             | No Relaxation   |
| 4.         | Jurbidity                                   | NTLI  | 18:3025 -Part-10   | <1        | 1                                   | 5   |
| 5,         | Total Hardness as CaCO <sub>2</sub>         | mg/l  | 18 3025 -Part-21   | 72        | 200                                 | 600   |
| 6          | tren as Fa                                  | mg/l  | 3111 B of<br>APHA 23 <sup>th</sup> Edition 2047                      | 0.09      | 10                                  | No Relaxation   |
| 7.         | Chlorides as C1                             | mg/l  | IS.3025 -Part-32   | 58        | 250                                 | 1000  |
| 8.         | Total Dissolved Sulids @ 105 <sup>0</sup> C | mg/l  | 15:3025 - Part-16  | 252       | 500                                 | 2000  |
| 9.         | Calcium as Ca                               | mg-l  | IS:3025- Part-40   | 14        | 75                                  | 200   |
| Ю,         | Magnesium as Mg                             | mg/l  | IS:3025 -Part-46   | 2.9       | 30                                  | 100   |
| $\Pi_{j0}$ | Sulphate as SO <sub>4</sub>                 | mg/l  | IS:3025 -Part-24   | 33        | 200                                 | 400   |
| 12         | Nutrate as VO <sub>3</sub>                  | mg/l  | 4500-NO <sub>3</sub> -B DV<br>Spectrophotometric<br>Scroening Method | 21        | 45                                  | No Relaxation   |
| 13         | Fluorido as F"                              | nig-1 | 45015 F.D.<br>APITA 23 <sup>rd</sup> Edition 2017                    | 0.43      | L                                   | 15  |
| 14         | Total Alkahanty as CaCO <sub>1.</sub>       | mg/I  | 1S:3025 -Part-23   | 67        | 200                                 | 600   |

Interpretation of results: Nil, Deviation from test method: Nil.

Authorized Signatory (C.Chandra Moull) Environmental Scientist

\*Compleints Register is available at Laboratory

Phone #+91 40 49783062 / 27016806 Fax : +91 40 49783063

Email : lab@bservitech.com, info@bservitech.com Website : www.bservitech.com

CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: M/s. JSW Steel Limited

Test Report No. : BSET/2021/WS-01269

Lab Code No.

. 210923105

Issue Date

: 25/05/2021

Your Ref

: Letter Dated 15 ft5.2021

Project Name: Narayanposhi Iton & Manganese ore Mines

Date of Receipt : 15.05.2021

Sample Description: Ground Water Sample

I No. x 2.01 trs Sample

I No. x 500 and Sample(Metals)

I. No x 050 mit Sample (Microbiology).

**Packing** 

: Plastic Bottle & Pre-Stenlived Bottle

Test Required: As given below

Date of Registration 15 05:2021 15 05,2021 Date of commencement of testing Date of completion of testing 24.05.2021 Sample condition at receipt Found ok

Sample tested as received

Sampling Details

Date of Sampling: 12 05 2021

Location of Sampling: Near 650 Crusher ( P.zameter | 02 )

Sampling Method/Procedure: IS 3025 Part I

General Environment conditions: Ok

Page No: 2 of 2

#### TEST RESULTS

| S.  |                      |           |   |         | Requirement as per<br>IS 10500:2012 |   |  |
|-----|----------------------|-----------|---|---------|-------------------------------------|---|--|
| No. | Test Purameter       | Linits    | Test Method   | Result  | Acceptable<br>Himles                | Permissible limits<br>in absence of<br>afternative source |  |
| 15. | Buron ±s B           | mg/l      | 4500 B B.<br>Curcumin Method.<br>APHA 23 <sup>rd</sup> Edition 2017 | < 0.10  | 0.5                                 | 2.4   |  |
| 16. | Aluminium as Al      | mg/.      | 3500 ALB – Etichronic<br>Cyanine R method                           | < 0.02  | 0.03                                | 0.2   |  |
| 17  | Copper as Cu         | mg/.      | 3111 B of<br>APHA 23" Filtron 2017                                  | < 0.02  | 0.05                                | 5   |  |
| 18. | Мапуалезе аз Мо      | mg/       | 3111 B of<br>APHA 25" Edition 2017                                  | < 0.02  | 0.1                                 | 0.3   |  |
| 19. | Selenium as Se       | mg/l      | 3114 Cof<br>APHA 25 <sup>th</sup> Folition 2017                     | < 0.01  | 0.01                                | No Relaxation   |  |
| 20. | Zine as Zn           | ngt.      | 3111 B of<br>APMA 23 <sup>rd</sup> Edition 2017                     | < 0.02  | 5                                   | 15  |  |
| 21, | Cadimium as Cd       | mg/l      | 3131 Claf<br>APHA 23" Edition 2017                                  | < 0.003 | 0,003                               | No Relaxation   |  |
| 22. | Lead as Ph           | mg/l      | 3171 C of<br>APHA 23 <sup>th</sup> Edition 2017                     | < 0.01  | 17411                               | No Relizzation  |  |
| 23, | Mercury as 11g       | nigil     | 3112 H of<br>APHA 23 <sup>11</sup> Edition 2017                     | < 0.001 | 0.01/1                              | No Relaxation   |  |
| 24. | Total Arsenic 33 As  | mg/l      | 3104 Claf<br>APHA 23 <sup>rd</sup> Ed non 2017                      | < 0.01  | 0.01                                | 0.05  |  |
| 25  | Total Chromium as Cr | mg/l      | 3111 C of<br>APHA 23 <sup>th</sup> Edition 2017                     | < 0.02  | 0.05                                | No Relaxation   |  |
| 26. | Total Coliforms      | CFU/100m1 | IS: 1622 – 1981   | Absent  |                                     | 485   |  |

Interpretation of results. Nil. Deviation from test method: Nil.

uthorized Signatory G.Chandra Mouli ) Sironmental Scientist

on End of the Report on

"Complaints Register is evaluable at Laboratory."

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Email

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lab@bsenvitech.com.info@bsenvitech.com Website I www haenvitech com-

CIN No. EU74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Customer: M/s. JSW Steel Limited

Test Report No. : BSET/2021/WS-01270

Lab Code No.

210923005

Issue Date

: 25 06 2021

Your Ref.

: Letter Dated 15.05.2821

Project Name: Narayanposhi Iron & Manganese ore Mines

Date of Receipt : 15 05,2021

Sample Description: Ground Water Sample

2. I. No. x 2.0 Lars Sample

1 No. x 500 inf Sample(Metals).

Ne v 250 mi) Sample (Microbiology).

Packing.

: Plastic Bottle & Pre-Sterilized Bottle

Tyst Required a As given below

Date of Registration 15.05 2021 £5.05 2021 Date of commencement of testing 24.05.2021 Date of completion of testing Found ok Sample condition at receipt

Sample tested as received

Sampling Details

Date of Sampling: 12.05.2021

Location of Sampling: Crusher Plant Area ( Przometer 1831)

Sampling Method/Procedure: IS 3025 Part 1

Ceneral Environment conditions: Ok

Page No: 1 of 2

#### TEST RESULTS

| S.   | 10                                    |                                    |   |                      | Requirement as per<br>IS 10500:2012                       |               |
|------|---------------------------------------|------------------------------------|---|----------------------|---|---------------|
| Nis. | Test Purameter                        | Purameter Units Test Mathod Result |   | Acceptable<br>timits | Permissible limits<br>in absence of<br>alternative source |               |
| 4,   | Odmir                                 | -                                  | (S:3025 -Pan-3  | Agreeable            | Agreeable   | Agreeable     |
| 2,   | Colour                                | Hazen                              | 15, 9025 -Part-4  | < 5                  | 5   | 13            |
| 3.   | гн                                    | 7 E                                | IS:0025- Part-11  | 6.94                 | 6.5 8.5   | No Relaxation |
| 4.   | Turbdity                              | NTL                                | IS:2025 (Part 10  | <1                   | L   | S             |
| 5,   | Total Hardness as CaCO <sub>3</sub>   | arge/I                             | IS:3025 -Part-21  | 86                   | 200   | 600           |
| 6.   | from as Fe                            | mg/l                               | 3111 B of<br>APILA 23 <sup>nl</sup> Edition 2017                      | 0.11                 | 1.41  | No Relaxation |
| 76   | Chlorides as CI                       | mg/l                               | IS:3025-Part-32   | 70                   | 250   | 140000        |
| 8    | Total Dissolved Solids at HISTC       | mg/l                               | IS 3025 - Part-16   | 292                  | 50H   | 2000          |
| 9.   | Calcium as Ca                         | nigri                              | IS:3025- Part-40  | 2R                   | 75  | 2011          |
| 10,  | Magnesium as Mg                       | mg/l                               | IS:3025 -Part-46  | 3.9                  | 10  | 100           |
| Пе   | Sulphate as SO <sub>4</sub>           | mg/l                               | IS:3025 -Part-24  | 37                   | 200   | 400           |
| 12.  | Notrate as NO <sub>3</sub>            | mg/l                               | 4500-NO <sub>3</sub> -B L V<br>Spectrophotometric<br>Screening Method | 24                   | 45  | No Relaxation |
| 13.  | Fluoride as F                         | mg/I                               | 4500-F D;<br>APHA 23 <sup>rd</sup> Edition 2017                       | 0.47                 | 1   | 1.5           |
| 14.  | Total Alkalimity as CaCO <sub>3</sub> | mg/l                               | 1S 3025 -Part-23  | 64                   | 200   | 600           |

Interpretation of results. Nal, Deviation from test method. Not

G Chandra Moult ) my ronmental Scientist

\*Comptaints Register is available at Laboratory.



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Customer: M/s, JSW Steel Limited

Test Report No. : BSET/2021/WS-01270

Lab Code No

: 2109230H5

Issue Date

(25,05,2021)

Your Ref

: Letter Dated 15.05.2021

Project Name: Natayanposhi Iron & Manganese ore Mines

Date of Receipt : 15.05.2021

Sample Description: Ground Water Sample

Qŋ

: 1 No. x 2.0 Ltrs Sample

1 No. x 500 ml Sample(Metals)

l No.a 250 oil Sangle (Microbiology)

Packing

: Plasho Bottle & Pre-Sterilized Borde

Test Required : As given below

Date of Registration 15.05.2021

Date of commencement of testing 15.05.2021

Date of completion of testing 24.05.2021

Sample condition at receipt Found ok

Sample tested as received

Sampling Details

Date of Sampling: 12.05.2021

Location of Sampling: Crusher Plant Area ( Pizameter - 03 )

Sampling Method/Procedure: 18 3025 Part I

General Environment conditions: Ok.

Page No: 2 of 2

#### TEST RESULTS

| 5.   |                        |           |  |         | Requirement as per<br>35 10500:2012 |   |
|------|------------------------|-----------|--|---------|-------------------------------------|---|
| No.  | Test Parameter         | Linkis    | Test Method  | Result  | Acceptable<br>linets                | Permissible limits<br>in absence of<br>alternative source |
| 15.  | Raren s <sub>2</sub> B | mg'l      | 4500-B B<br>Curcumin Method,<br>APHA 23 <sup>rd</sup> Edition 2017 | < 0.10  | 0.5                                 | 2.4   |
| 16.  | Alummum as Al          | mg/t      | 350ff Al B – Krichrome<br>Cyanine R method                         | < 0.02  | 0.03                                | 0.2   |
| 17,  | Copper as Cu           | mg/       | 3111 B of<br>APHA 231 Edition 2017                                 | < 0.02  | 0.05                                | 1.5   |
| 18   | Mangonese as Mo        | mg/.      | 3111 H of<br>APHA 23 <sup>rd</sup> Edition, 2017                   | < 0.02  | 0.1                                 | 0.3   |
| 19.  | Selomum as Se          | ngt.      | 3114 C of<br>APHA 23 <sup>M</sup> Edition 2017                     | < 0.01  | 0.01                                | No Relaxation   |
| 201, | Zinc as Zn             | mg/l      | 3111 B of<br>APHA 23 <sup>3</sup> Edicion 2011                     | < 0.02  | ۲                                   | 15  |
| 214  | Cintminum as Cd        | (Hg/:     | 3111 C of<br><b>APHA 23<sup>rd</sup> E</b> dition 2017             | < 0.003 | 0.003                               | No Relaxation   |
| 22   | Lead as Pb             | ńigil     | 3111 C of<br>APHA 21 <sup>st</sup> Edition 2017                    | < 0.01  | 0.811                               | No Relaxation   |
| 23.  | Mercury as Hg          | ngfl      | 3112 B of<br>APHA 23 <sup>3</sup> Edition 2011                     | < 0.001 | 000                                 | No Relaxition   |
| 24.  | Total Assenie as As    | (महर्ग    | 3)14 C of<br>APHA 23 <sup>d</sup> Edition 2017                     | < 0.01  | 0.01                                | 0.05  |
| 25   | Total Chromium as Ur   | mg/l      | 3111 C of<br>APBA 23 <sup>rd</sup> Edition 2017                    | < 0.02  | 0.05                                | No Relaxation   |
| 26   | Total Celiforms        | CFU/100mg | (S 1622 – 1981   | Absent  |                                     | , E.  |

Interpretation of results: Not. Deviation from test method: Nill

Abthorized Signatory (G.Chandra Muuli) Environmental Scientist

··· End of the Renuct···

\*Complaints Register is available at Laboratory.

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Email : lab@bsenvitech.com, info@hsenvitoch.com

Websile: www.bsenvitech.com CIN No.: LI74210TG1999PTC032358

SURFACE WATER QUALITY REPORT

**MAY-2021** 



Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### **TEST REPORT**

Name & Address of the Contempor: M/c JNNe Signi Limited

**Уем Rep**ut No.: BSC1/2031/WS-01281

Lah Cade No. . . 2/0923905

Date of Receipt : 15 (15.202)

Haus Date Your Ref.

: 35 45 2021 11 ener Pared 15 (15,2031)

Project Name: Narphaggoch fron & Madganese und Mines

Sample Description: Surface Water Sample

Quantity

: Linux Sample

2 No. a Shi mi Sample (Minis).

. No is full oil Walls mough? gas book to OSG 1 Kb/s 200 ml Sample fre Frend and Book For Michael : Player Brings

Packing fest Required

if An piven below

Date of Registration 15 05,2001 15,05,2031 Pier of commencement of scaling Date of completion of testing 24 05 2021

Sample condition at receipt Sample world as received

Friend (4)

lists of Sampling: 30.05,3974. Lecarion of Sampling, Orehariness auder comSampling Details
Sampling Mediad Procedure: 15 (10) Part 1

General Knorrossages conditions; nk. . Page No. i cl. i

TEST RESULTS

| S.<br>Na | Yest Parameter                   | Leis                  | Tell Michael  | MessiM                            | Linette for Sorcam Water<br>Standards |
|----------|----------------------------------|-----------------------|---|-----------------------------------|---------------------------------------|
| 14       | Calsgr                           | Bazen Hinte, Man      | 19 3005 (Par. 4)  | 10                                | 344                                   |
| ?        | рd                               | 12                    | 18 3025 (Part-11)   | 6.79                              | 6,5 ( ) X 5                           |
| 4        | Lota i Disonlead Solida          | ng/, Max              | i5 3025 (Part-14)   | 90                                | 1500                                  |
| 4        | Chloride (av Cl)                 | 11g/ , Max            | 16 (Q15 (Pan.43)  | 18                                | hell                                  |
| 4        | hur (24 bu)                      | hg/, Max              | 311 ( B of<br>APIIA 23 <sup>rd</sup> Edition 2017                       | 0 21                              |                                       |
| 6        | Adphases his 90%                 | nigh Mar.             | 18 1025 (15m-24)  | 1.9                               | 1/311                                 |
| à.       | High de (as F)                   | mg/l, Max             | 4501-r (1).<br>APTIA 25 <sup>4</sup> 1.do(po. 2017                      | 0.16                              | 15                                    |
| •        | Nursecy (as NUV)                 | mg-1, Max             | 4500 NO, B<br>HV Specimpholometric<br>Secreting Mashed                  | 12                                | 7:1                                   |
| 2        | Cupper (sc. Cur                  | mgl. Mec              | 3111 B of<br>496A 23' Editor, 2017                                      | <u.nb< td=""><td>1,5</td></u.nb<> | 1,5                                   |
| 10.      | Selerium fas. Se)                | mg/l Marc             | 7) 14 H or<br>A"HA 23" Bonon 70"7                                       | <0.0h                             | u,Q\$                                 |
| П        | Zinc (p. Zin)                    | rag/1 Max             | APHA 25th Educat 2015   | піњ                               | 15                                    |
| 12.      | Cuámum Ja- Per                   | ngti Mac              | 311 (B) of<br>APHA 23 <sup>4</sup> Edition 2015                         | <0.040                            | 501                                   |
| 34       | Lead ray Ph)                     | mzil, Wak,            | 71 H U m<br>A2HA 23 <sup>N</sup> Calnot 2017                            | <b>06.01</b>                      | 01                                    |
| н        | Amonic las Ash                   | mg/L Max              | APHA 27th Educin 2011   | 58.0L                             | 0.2                                   |
| : 6      | Cyunide (as CA)                  | mgri Man.             | 45pt CN F. Colorinotes<br>Mottad. APITA 23 <sup>rd</sup> Edison<br>2417 | -ce.frž                           | 20%                                   |
| 16.      | Chinisten (ex Cr. 1)             | np't Max.             | 1111 'F (d)<br>APHA 2N <sup>2</sup> Editio 2017                         | V#.02                             | ous                                   |
| 12.      | Anomer Dangero- (44 MHAS)        | ng/t, Max             | Amea, Kuf (\$1524)  | 40.1                              | I .                                   |
| De.      | Phenolic Compounds (px/1541,/24) | ingf, Max             | 15 9fQ5 (Pers-43)   | <0.001                            | IUNIS                                 |
| r9       | B050 (as (0))                    | mg'                   | IS 9023 (Part-44)   |                                   | 1                                     |
| M.       | Decorbed Oxygon (as Q)           | mg/l, Mar             | 19 3075 (Faxi-74)   | 4.2                               | 6                                     |
| 2        | Oil & Greate                     | mgt, Mai              | 18 JIDA (P)p 59)  | < 1                               | 0.1                                   |
| :2       | Loret Coliform                   | graphy HAttral y Mars | 15-1677   | 130                               | 7000                                  |

Encypteration of results: Nill Deviation from test method. Nill

444 Frei of the Report 444

\*Complaints Register is available at Laboratory.

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hiberated Signatury C.Chindra Mouli ) approximental Scientist

Website | www.bservitech.com CIN No. 1 J74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Contempor - Mys. ASW Steel Limited

Test Report Ve. : BSET 2021/4/5 01262

Lab Code No. 210923405 : 23/05/2021 Ivur Date

: 1 cllpr Daved 15,05,2021 Your Rel

Date of Receipt (13.05.2021)

Date of Registration

Project Name: Paravanposhi Iran & Manganete ere Misso Sample Description: Surface Water Sample

Quaratry : TNo 13.5 Dis Sample

Location of Sampling, Overhericals Downstream

1 N. 4 500 nd Sample (Mosels)

Nic x 300 ad Wide month tiles, bettle for Oldfl. 1 No. 4 250 mil Sample Pre Stentiond Break For Micro

Packing Lett Ragained Plantic Bridges : As given holio

Date of Sampling: \$0.05,2021

Page of commencement of realing

15 07 2021 24.115.240 Date of completion of testing

15/05/2021

Sample condition of recript Found ck

Sample resped as received

Sampling Method/Procedure: 8 3025 Part 1

General Environment conditions: etc. Page Aug 1.511

#### TEST RESULTS

| Si.<br>Nr. | line Parameter                  | Volu                   | Test Melbul   | Monalt       | kantis for Mercus Water<br>Scandards |
|------------|---------------------------------|------------------------|---|--------------|--------------------------------------|
| in         | Usloar                          | Hazen vit. Max.        | IS 1025 (Pan 4  | Iù.          | 200                                  |
| 2.         | hii                             | 9                      | 18 7025 (Pan-11)  | 6 MT         | 0.5 to 4.5                           |
| A          | Total Descript Solids           | mpl, Mac               | PS 3435 (Page 16)   | 114          | 1510                                 |
| a,         | Calcuide par Cut                | high, Mas.             | 15 3025 (Pan 321  | 211          | MPI                                  |
| 1          | Inimiae Pe)                     | mpl. Max.              | 5.1 But<br>APHA 217 Edding 2017   | 11 1/2       | 40                                   |
| n,         | Sulphares (15 SH <sub>e</sub> ) | nig <sup>1</sup> . Maz | 18 (00%) P84-24)  | 4.5          | dfel                                 |
| t.         | Fluoride (as F)                 | nig I, Maa             | #500 F.D.<br>APPIA 25 <sup>4</sup> Januar 2017                                    | 0.19         | l,š                                  |
| K.         | Senirs (as SOal                 | ogol, Mas              | 4500 Wight<br>HV Speringholomine<br>Screening Mothed                              | 4,4          | 50                                   |
| Q          | Спри (в Сп)                     | mg I, Mas.             | APHA 22 <sup>rd</sup> Edition 2005  | V#.02        | - 11                                 |
| ıd.        | Seletrate (as Se)               | mg I, Mrs              | 3[14 g m]<br>APHA 2) <sup>14</sup> Educat 2017                                    | o#k.DI       | 0.55                                 |
| u,         | Zinc (18 Zn)                    | mail, Mas.             | APHA 28 <sup>th</sup> ration 2012   | ₩.05         | 15                                   |
| 12.        | Cudming (in Cit)                | mg I. V14.             | 7111 BIAF<br>APHA 23° Edition 20.7  | <0.003       | · 11,1                               |
| 11.        | Lead (a. Pb)                    | med. Vas               | IIIIII af   | <b>46.01</b> | 0,0                                  |
| 4          | Answer (as As)                  | ng l <sub>e</sub> Man. | APHA 23 <sup>11</sup> direo 20-7<br>3114 Clef<br>APHA 23 <sup>4</sup> 3direo 2017 | 58601        | 02                                   |
| ١          | Cysundo (as (1%)                | mg I. Was              | 4500 CM b. Cohelmetsic<br>Method, APHA 73 <sup>rd</sup> Subject<br>2017           | eq.92        | UCN                                  |
| 16.        | Cheomounitas (fr.*)             | rigit Max              | 3/11 B of<br>APHA 371 Edition 2017  | 41.02        | 0.03                                 |
| 7.         | Anionic Delergence (s. MBAS)    | ang/1 Max.             | Aurex K of IS 13248   | 10.1         | 1                                    |
| ß.         | Phonolic Compounds (551 (0)(0)) | mg I. Masili           | IS 3023 (Pan-41)  | 49.801       | mon4                                 |
| 19         | BOD skilly                      | mg/l                   | 19 3075 (Pan 44)  | 6            | -1                                   |
| 70.        | Possolved Ohygani (as Cy)       | nigh, Min              | 18 )://* (Pan Jej   | 4.1          | 1                                    |
| 21.        | Oil & Gloss:                    | mg <sup>q</sup> , Mas  | 18 (025) (PartyR)   | 41           | 2.1                                  |
| 12         | Listal Chinbert                 | corpor 100 mily Max    | IS 1622   | - FEB 1      | 5000                                 |

Interpretation of Yearts, NR, Deviation from test method, No.

Complaints Register is available at Laboratory.

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C'BAO

Anthorized Signatory
Lf3 Chandra Musli 1
Environmental Scientist

: lab@bsenvilech.com, info@bsenvitech.com

Website : www.bsenvitech.com CIN No. . U74210TG1999PTC032358

End of the Repart



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Clustomen: M/s, JSW Seet Laniced

Test Report Av. + 08F F 2021-WS-01761

Lab Cride No. 2008/9786 : 25.05.3021 Inside Bate

Ourse of Registration

Your Hall : Later Date: 15,05,202)

finis all commencement of bearing

Date of completion of testing

POST 2021

15/35 2021

24/35/2021

hound nic

Date of Receipt 115,03 2021

Project Name: Narayaspiribl Iron & Manganete occ blines Sample Description: Surface Waser Sample Quantity : I No x) I/I in Sample

1 No. a Self-mi Sample (Metals):

I No. a 502 oil Work mouth filess buttle for OAG.

1 No. 3 350 rd Samph Pre Streetend Pouls For Micro-

Pathing : Plastic Rooles Test Required . As given below

Savigle condition at receipt

beingle lesied as received.

Deta of Sampling: 10.05.2021

Location of Sampling: Kone River Du Steram

Sampling Betals
Sampling Method Procedure: 45 3003 Part 1

General Emilionment conditions at . Page No. 1 of 1

#### TEST RESULTS

| e.<br>No. | Ten Parameter                    | Lairs           | Test Method  | Result | Limes for Stream Water<br>Standards |
|-----------|----------------------------------|-----------------|--|--------|-------------------------------------|
| L,        | Cokrir                           | Hazer Comp Max  | 15 (957) (Pgn-4)   | 10     | Vcf)                                |
| 2,        | pb1                              |                 | 5.3625 (Part-11)   | 6.65   | 6.5 to 8.5                          |
| 1.        | Fotal President Solids           | rtp/L Méx       | (5 M25 (Part-16)   | 106    | 1500                                |
| 4.        | (Thioride (as C. )               | ug't Max        | 18 3625 (Pan-32)   | 20     | 6641                                |
| 5,        | Time les l'et                    | mg I, Max.      | 21 (1 B of<br>APHA 231 Mailin 2017                                       | 0.23   | 50                                  |
| 6.        | Sulphates (as SOs)               | mg,1, Max.      | S M24 (Part-24)  | 12     | બંધ                                 |
| :-        | Placetile (as F)                 | ngl, Ma         | 450HF D<br>4FBA 2J* Edwar 2017   | 0.15   | 11                                  |
| 4.        | S trates (as NO?                 | met, Mer        | 4500-NOB<br>UM Specific plotomenia<br>Screening, Adethod                 | Υθ     | 90                                  |
| V.        | Cupper (as Cu)                   | mg t, Mps       | 3111 B pr<br>4094 21" Eden 2217  | <0.02  | 1.5                                 |
| ııı       | Schmium cas Set                  | mg I, Maa       | 4114 ft of<br>A211A 2) <sup>rt</sup> 1:da.nn 3112                        | •1001  | 001                                 |
| l I.      | Zitu (es Ziti                    | mg/, Max        | 21 1 ft of<br>APHA 33* Editor 3017                                       | 0.06   | 15                                  |
| 13        | Cadmin (as Cd)                   | mg I. Max.      | 71 1 U or<br>APIJA 21 <sup>4</sup> Edition 2017                          | <0.003 | 001                                 |
| n.        | , zartiso, Phj                   | ing I, Mas      | 3000 North 600 (400 A 200 )  | 40.61  | 11.1                                |
| 11.       | Ardenes (ad Ast                  | ngel, Max.      | 21 4 C of<br>APITA 33 <sup>4</sup> Edition 2017                          | <0.01  | n 2                                 |
| 15.       | Cyanade (as CN)                  | ingel, Max.     | 4509 CN F. Color morris<br>Method: APHA 21 <sup>st</sup> Isdanen<br>3017 | -0.#2  | 0.35                                |
| Ŀ         | Chameron (19 Ch.)                | Hp"! Max        | JETURAL<br>APIDA JATUTHANIA (ME)   | <0.02  | 0.55                                |
| G.        | Among Delengants (as MRAS)       | engri Max       | Ames, k. of .5 13248   | <0.1   |                                     |
| ij.       | Phenolic Compounds (as CCI (UII) | ng% Mas         | 18 5025 (Part 47)  | -0.401 | 0.005                               |
| 14        | afitt jor tig                    | π¢              | 19 (8025 ) Part-940  | 2      | 1                                   |
| 20.       | Dissolved Crongenius Oyl         | mg/l, Min       | 28 (10% (Part-14)  | 54     | ۵                                   |
| 21.       | Oil & Circuic                    | Tg/I Max        | 15 3125 (fam 9)  | V 6    | Δı                                  |
| 22        | Tetal Celiforn                   | unpo/150mlyMax. | 18.1622  | E 199  | \$100                               |

Interpretation of results: Nil, Deviation from tox method. Nil.

\*\*\* End of the Report \*\*\*

\*Complaints Register is available at Laboratory

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EC'BP

Sufficient Signatory (G Chandra Mrail) Englishmental you ratu

Website (www.bsenvilech.com)

CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Contamer: Min. JSW Stratt.triated Tirst Argent No.: BSET/NO 1/WS-01764

> Lab Code Va 210923625 Haue Date : 25 05.2021

Your Ref : Letter Dated 15 05 2021

Daily of Mescript in 15 4/5/7021 Project Starte: Margagingovin freq & Manegaese ore Mines

Sample Description, Surface Water Sample Quemity: . If No. x5.D. dis Sample

. No. 5, 500 and Sample (Mictaly) 1 No. 5, 500 and Wide mouth Ollow hotale for OSEG

No. a 25b not Sample the Sconload Borne and Migro

Package - Muslic Hutley Cost Required : As gwen house

Date of Registration 15 05 2021 Date of commencement of testage 15:65:2021 Date of eempletion of texting 24.05.2021 Frund no Sample condition at receipt

Sample inited as required

Sampling Details Date of Sampling: 10.44 State Sampling Method/Procedure: IS 1025 Part I

Location of Sampling: Name, River Doveptrogam, (Nata New), Gate No-ID Gesteral Estatement conditions: uk.,

Page Need of 1

#### TENERESPURS

| Sc<br>So. | Test Parameter                        | 1.allq            | Fest Mechad  | Kewili  | Limits for Stream Venter<br>Standards |
|-----------|---------------------------------------|-------------------|--|---------|---------------------------------------|
| -         | Colour                                | Hazon United Max. | 15 M25 (Part 4)  | P       | 590                                   |
| 2         | Ph.                                   |                   | \$ 3626 (Part-11)  | L†I     | 65 85                                 |
| ъ.        | Total Justileal Solids                | ng/L Max.         | 75 3027 (Pzm-16)   | 148     | 1500                                  |
| 1.        | Chloride (as ⊂)                       | mg/l, Mgs         | (S. 609 (Pare-19)  | 25      | 600                                   |
| ١.        | line jus Fej                          | npt, Max          | 21.1 H of<br>APHA 23 <sup>st</sup> Edition 2017            | #.2d    | 50                                    |
| 0,        | Sulphyros (as \$11)                   | mpd. Max          | 15 3025 (Pert-24)  | . 14    | 400                                   |
| 2         | Durride (as F)                        | mgel, Man         | 4500-F D;<br>A0HA 23 <sup>el</sup> Editor 2012             | 4,19    | 1.5                                   |
| X.        | Nutranes (as Ni 2))                   | med, Mar          | 4500 NG, B<br>UM Sockrophotometric<br>Sockrophotometric    | 4.2     | 50                                    |
| n         | Copper yas Cut                        | nigit, Max        | 7111 U cr<br>APHA 23 <sup>M</sup> Editor 20-7              | -01.02  | 5                                     |
| 10.       | Selenium (as Se)                      | mgel, Man         | 11 (4 B of<br>APHA 23 <sup>rd</sup> Exham 2017             | 10.01   | Idly                                  |
| ш         | And (49 Cp)                           | mpt. Max.         | 1111 B of<br>APIIA 23° Edition 2017                        | 4.99    | TS.                                   |
| 12        | Cadarium (as Cd)                      | mgr), Max         | JULE II 61<br>APITA 201 Eduar 2017                         | o#.003  | <b>-</b> 0.1                          |
| II.       | Food his P2)                          | mget, Was         | APHA 25 <sup>st</sup> bettim 2012                          | *0.91   | 2.1                                   |
| H         | Arvaniç ias Asi                       | mgrt, Mas         | 2012 C of<br>APHA 25 thanna 2017                           | चीते।   | 3(2                                   |
| IS.       | Opening (as. (*N)                     | mgril, Was.       | 4500 CN E, Chrongery:<br>Method, APMA 231 Fd float<br>2017 | -0.01   | 0.05                                  |
| 15.       | Dammun fas fil: 4)                    | mg/l, WAC         | 0111 it of<br>APDA 25" Idoped 2017                         | <0.02   | 2.01                                  |
| P.        | Annual Ordergram (48 M (1/15)         | mg/l, Max         | Anrea, Kinl IS 1324E                                       | <0.1    | I                                     |
| 13.       | Phenote Comprised (ex C, HyOL)        | mg/l, Max         | (S. 1023) (Pan 41)   | -91.461 | 0.005                                 |
| 19.       | BOD (as C <sub>2</sub> )              | ingil             | 18 (00 \ (Part-44)   | 4       | 3                                     |
| 74.       | Dissulved Onyzen (as O <sub>2</sub> ) | .mg/ , Min        | 18 (102 % (Part-316)                                       | 51      | 4                                     |
| ŧI.       | 400 80 Greast                         | nagit Max         | IS 1025 (run-39)   | K1      | 4,1                                   |
| n         | Total indirector                      | jmon/100ml (Max.  | .5 1522  | 148     | Swal                                  |

Interpretation of results: Nr. Deval or Point of method, Nill

\*\*\* End of the Report \*\*\*

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Nab@bsenvitech.com. info@bsenvitoch.com

Chandra Mpeli )

CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Castomer Mile, JSW Seed Libidied

Dest Report No. : BSET 2021/WS 01265

Lah Ceda No 21/09/73/50/5 Jame Dane (0.545.262)

Year Ref. : Leuer Dated (5/85/202)

Date of Maceipt 1: (5/05/2021

Date of continuencement of testing

Dare of completion of resump

Date of Repotestion

Project Name: Narnyandoski tron 4. Mangamus ner Mines Sample Description: Surface, W.our Sample

- 1 No. 35 Pillin Sample Quantity

I No. v 500 m. Sample (Motable)

I No. 3 500 ml Wille mouth Glass book for O&G

1 No. 1250 ml Switche 2re Sterilioù Puttle For Mient

Paching i Plastic Bottles Ten Required Cinsigner below

žuani ok Sarante condition of propint

Satuple tested as seccised

Sampling Details

Date of Sempling: 19.45 2421 Location of Sungiling: Issuins Nales, Nale Barmoon Queers, No.5 & 4 5.

Sampling Method/Procedure 19 3027 Pap 1 General Bustrongien candiday: de

Page No. Loft

15 05 2021

15.05.2021

24 05 2021

#### LEST, RESULTS

| 8.<br>No. | Ten Peraintier                | Ualto             | Test Methed  | Mepulli   | Lamilis for Singara Walts<br>Sign@ards |
|-----------|-------------------------------|-------------------|--|-----------|--|
| 91        | Unkan                         | Universities, Max | 5 3623 (Pan-4)   | 10        | 5.0                                    |
| 2,        | μΗ                            |                   | IS 9005 (Part 10)  | 6.79      | 6.5 to 6.5                             |
| 1,        | Foral Disso yed Sidids        | mgd, Mars         | 15 302* (Pen-14)   | DJII      | 1500                                   |
| 4,        | Chloride (as CT)              | mg/L Max          | Is 3025 (met-32)   | - 15      | (AN)                                   |
| 5, .      | icum tes Fet                  | mg/l Max          | ,911 U.n.)<br>APHA 23 <sup>4</sup> Educat (017                 | 0.07      | 20                                     |
| fi.       | Sulphate (no 504)             | mg/L Max          | 19 9075 (Part-74)  | 10        | πW                                     |
| 7+:       | Fluorite 195 Fi               | mpit Max.         | 4590.P D<br>A PSI A 20 <sup>K</sup> Februar 2017               | n3P       | 1,5                                    |
| 5.        | Nitravos las NO, :            | mg/I Mqs,         | 4905 NO. 14<br>F W Specinophorocine<br>Supering Method         | 4.7       | 50                                     |
| щ.        | Unpher (as Clu)               | mg/L Max.         | 3: 11 ft of<br>AFF 4.2)" Edition 2:17                          | KII III J | 15                                     |
| ıń        | Sciencer (15%)                | ngt. Max.         | 1114 B of<br>APHA 23 <sup>M</sup> Editor 2017                  | sium      | ILÚS                                   |
| Ц.,       | Zoid (is Ec)                  | mg/Littler        | 2111 U of<br>A 01/A 20 <sup>M</sup> Edward 2017                | < D.02    | 15                                     |
| 17        | Cadmismiss Co)                | ngo'l Maa         | Cit Is of<br>APRA 21" Fileson 2012                             | 40 Mg     | .01                                    |
| n         | I cad (or Ph)                 | may't Max         | 2110 H of<br>APHA 20 <sup>4</sup> Ization 3017                 | <0.01     | 01                                     |
| ۹.        | Assenie (24 As)               | mpT Min           | 30.14 C of<br>AFJIA 23 <sup>5</sup> Eduan 2017                 | <0.01     | 0.2                                    |
| '5        | Cyanice to CN1                | mg/t klas         | 4590 CN F, Culoremetric<br>Meteral, APRA 73° Education<br>30°7 | <0.03     | 6112                                   |
| ń         | Chromation (as ( 'r ')        | rg/UMes.          | 21 (1 B of<br>APHA 23 <sup>4</sup> Scalar 2017                 | KILIIZ    | 1-115                                  |
| 7-        | Arsonic Determents (as MBAS)  | mp/ Man           | Anges, K or (3 1324k   | *h1       |  |
| 'H        | Phenoic Compounds (as CLF-OH) | ug. Mac           | 18 (025 (Part 41)  | 40.001    | 0.005                                  |
| lii.      | BOD (as the)                  | H <sub>6</sub> /  | IS 3025 (Part-44)  |           | 3                                      |
| 20        | Disorderd Congan (as (1))     | mgrl. Mich        | IS 2025 (Pan-98)   | 4.9       | 4                                      |
| 21.       | Oit & Grouse                  | mpl, Max          | IS 2025 (Part 99)  | ×1        | d.,                                    |
| 22        | T.sal Crithen                 | (mpr/H9ml), Mas   | IN 1622  | ECHO .    | .5100                                  |

Interpretation of results: Nil Oversoon from son method: N. I.

\*\*\* Lod of the Report \*\*\*

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General Signatory Celiandra Mash ) amental Solenille

Website : www.bsenvitech.com

CIN No. #U74210TG1999PTC032358

Telangaria, India

Email

WATER FLOW RATE REPORT

**MAY-2021** 



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: May

Date

: 24.05.2021

#### SURFACE WATER FLOW RATE OF STREAMS

| S.No | Location                                     | Flow rate (Velocity)<br>in Meter/Second |
|------|--|---|
| 1,   | Orahari Nala Up Stream                       | 0.223                                   |
| 2.   | Confluence of Orahari & Karo Nata            | 0.476                                   |
| 3.   | Kasira Nala (Nala between Quarry no-3 & 4)   | 0.187                                   |
| 4.   | Karo River Down Stream (Nala near Gate no-1) | 0.539                                   |

For B.S Envi-Tech (P) Ltd.,

uthorised Signatory

\*Complaints Register is evaluable at Lebryotory.

Websile | www.bsenvitech.com

CIN No. : U74210TG1999PTC032358

GROUND WATER LEVEL REPORT

JUNE-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: June

Date

: 16.06.2021

#### GROUND WATER LEVEL, DEPTH FROM SURFACE

| Ş.No | Location                          | Ground Water Level<br>In Meters |
|------|-----------------------------------|---------------------------------|
| 14   | Dug Well Koira Basti              | 9.98                            |
| 2.   | Dug Well Kasira Basti             | 9.22                            |
| 3.   | Site Services Area (Pizometer 01) | 19.44                           |
| 4,   | Near 650 crusher [Pizometer-02]   | £4.17                           |
| 5.   | Crusher plant area (Pizometer 03) | 35.19                           |

For B.S Envi-Tech (P) Ltd.,

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uthorised Signatory

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Website www.bsenvilech.com

CIN No. #U74210TG1999PTC032358

SURFACE WATER QUALITY REPORT

JUNE-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Contoners, Mrs. 15W Steel Lantard.

Leid Report No.: HSL1 2921/Wy-11/26

Lah Cede No. 11 210871906 . 17,76,2021 Costle Date

Year Ref e betan Dated 00,08-252

Date of Bacope : 19 06 2021

Proposi Manue: Nurayangenal Lees & Manganese are Milapa Sample Description: Surface Water Sample:

Quantity of No. a5 II Las Nample

i Norw 500 pil Sample (Metalia) I Norw 500 pil Wide nouch Glass hutte det (180) UNIO, 4 250 rd Sample Pile Stanliked Builds For News

: Plastic Bontes

Pecking Test Required 3 As given below

Dag of Megacration INSW-2021 09,08,2620 Date of commencement of testing

16,06,2521 Date of completion of testing

Nample condition at receipt trianal ok

Sample tested as received

Dete of Sampling: Ostfo.1921 Location of Sampling: Oraharimala upstream

Sampling Details Sampling Method/Procedure: IS JU25 Part I

General Enrironment anditions; ok .

Page No. Lot L

PEST RESULTS

| X.<br>da.      | Felt Parameter                 | Main             | Test Mathed   | Resil  | Limits for Aircon Water<br>Signification |
|----------------|--------------------------------|------------------|---|--------|--|
| I,             | Colour                         | Hazer Upos, Max. | 15 7025 (Pan -4)  | 19     | 300                                      |
| 7.             | pF                             | 35               | 18/3005 (Part-11)   | 4.71   | 2,310.4.5                                |
| Ze.            | Total Dissolved Solica         | ng-l, Mex        | .5 3025 (But-16)  | ш      | 1500                                     |
| 4              | (Oblinica (as CI)              | mad, Mex.        | ES 3005 (Part 12)   | ΙT     | 1630                                     |
| N <sub>0</sub> | Iren (35 ce)                   | ing LMan.        | MH Buf<br>ASUA 23° Eduino 2012                                      | 0.25   | NI-                                      |
| fe             | Sulphares (as SQu)             | ng'l, Was.       | 18 9024 (Pert-24)   | 9.2    | -IUI                                     |
| i.,            | Plauride (as F1                | mg I, Mas        | AVOIDED,<br>APPA 23° Edition 2017                                   | 6.13   | 1.5                                      |
| t.             | Surries (as NUs)               | rig'l Max        | 4500-NO <sub>3</sub> -B<br>UV Speatrophicametric<br>Securing Method | 34     | 10                                       |
| ι.             | Copper law Cul                 | mgrt, Max        | 711 FB   65<br>APRA 23 A Edition 2017                               | -0.42  | 1.3                                      |
| Ja,            | Selement (#8 Se)               | mg/t Man         | 1114 if cr<br>APID 25° Edding 2017                                  | <0.91  | 0.05                                     |
| П,             | /inclus /r)                    | mi: I Mes        | 110 f B lef<br>APBA 25° Belling 2017                                | 11.44  | 1)                                       |
| 12             | Cadminin (as. Cid)             | mp"l Mai         | 1111 H or<br>AP(IA 23 * Colleg 2017                                 | 49.403 | <d.1< td=""></d.1<>                      |
| 15             | Lead (as Pb)                   | reg t Mas        | AP:1A 23 <sup>rd</sup> Eating 2017                                  | 40.41  | 0.1                                      |
| ы              | Ameny jay As:                  | ng t Mas.        | APHA 23 <sup>rd</sup> Estima 2017                                   | +0.41  | 0,2                                      |
| 15             | Cyanide (ac 1.M)               | rrp't Mas.       | 4905 FN 1. Calentiscus<br>Method APHA 21° Edelor<br>2017            | <0.02  | 0.05                                     |
| lo.            | Chronium res Cr *              | reg/t Mass,      | APITA 25° Edition 2012  | <0.01  | েন্ড                                     |
| 12,            | Actions Detergenty (as WHAS)   | mg't Mak         | Annes, Kioffs (3) dk  | <0.1   | . 1                                      |
| 12             | Plendic Compounds (as CarlyOh) | mg I Mac         | (S. 9023 (Pap=43)   | <0.901 | 0.005                                    |
| 19,            | HOFF (8s C <sub>2</sub> )      | mg/l             | (n. 5026 (Pare 64)  | ,      | J  |
| ĮII            | Pierolycal Okysen (as Oc.      | ogel. Mir        | IS 1025 (Part-1k)   | 4.9    | 4  |
| и.             | Or & Girage                    | oug't Max        | IS 2025 (Part-) 91  | ×1     | п  |
| 12             | Iola Coulorn                   | (mpay/MimilyMas  | 15 1572   | 110    | 5000                                     |

Interpretation of results: Nil, there for marginst herbad, N.I.

\*\*\* End of the Report \*\*\*

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official Signature
Contactor of soil proposed in the contactor of the cont

:: lab@bsenwtech.com, info@bsenvitech.com

Website::www.bsenvitech.com CIN No. 1 U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Castomer : M/s, JSW Soci Limited

Project Name. Name angleichk fruit de Manganete und Massa Sumple Description: Surface Water Sample

: No -SAT to Sample

Test Repret No. : BSF IV212 7WS-01737

Lab Code No 21CK2730A hour Bate 5.1 CH4,2021

Year Bell : Loner Dured 09:05:2021

Date of Receipt 1, 05 Fo 2021

MJ46,3031 Date of Regulation

Dare of earnmencement of terring

05.06 2021

1 No. v 200 nd Sample (Metals) 1 No. v 300 nd Wide moute Glass battle for two G 1 No. is 250 mt Sample Pre Stemment Steady Lor Aligno

14/16/2021 Date of completion of couring

Sample condition at remip!

Fruid ok

Sample rested as received.

Packing Test Maquired

Quantity

: Plastic deather - As given below

Date of Sampling, 04,36,2828 Location of Sompling: Oraliar loads Downstream Sampling Details Sampling Medical Procedure: 3,903 Per 1

Concret Environment conditions of a

Page No: N/1

#### TEST RESULTS

| No. | Ten Parameter                         | Unite            | Test Mothed  | Resett  | Limits for Stream Water<br>Standards |
|-----|---------------------------------------|------------------|--|---------|--------------------------------------|
| I,  | Colour                                | Puzon Unes, Max. | 18 1925 (Pan-4)  | ID.     | Title                                |
| 2,  | ist                                   |                  | 75 9005 (Part 11)  | 4 H2    | 5.5 tu 8.5                           |
| à.  | Loted Deservoir Sestino               | mg I, Nas.       | 15,5025 (Par-In)   | 1,92    | 1500                                 |
| 4   | Chloride (as CI)                      | mel, van         | Ls 3025 (Pan-32)   | 2+      | M00                                  |
| 30  | Iron fas Se;                          | mg I, Vas        | 3111 G of<br>A 58A 23 <sup>4</sup> Bation 261 <sup>3</sup>                 | 0.29    | £n                                   |
| ń   | Sulphnick (arch) (4)                  | mg I. Vax        | 18 3025 (Pan-74)   | 4,0     | 400                                  |
| 2,  | t hoorde (25 f.)                      | mgrt. Max.       | 4 V00-1 (2),<br>A PT A 11° Indinon 2017                                    | €.21    | 1,5                                  |
| ж.  | Variation for NC <sub>1</sub>         | mg/l, Mas        | 1900-90-, II<br>UV Spearspreamer c<br>Second Method                        | 1.7     | >0                                   |
| 0,  | Copper tas Cur                        | ring 1, Nove.    | 11 1 B of<br>APHA 23 Seiten 2017   | 18.80   | .\$                                  |
| 10  | Noticinam (as 84)                     | ng L Max         | JUAN of<br>APHA 23 <sup>4</sup> Station 2011                               | <0.01   | 6,09                                 |
| П   | Zinc tas Zint                         | mg I, Max        | V.1) fl. sf<br>APHA 23 <sup>th</sup> Lighton (8)(3 <sup>th</sup>           | 15.00   | 15                                   |
| 12. | Cadmon (as Cd)                        | ngcl. Mas        | 11.1 B of<br>APHA 25° tentor 2011  | 46,003  | <0.1                                 |
| 13  | cic las Pol                           | mg I. Max        | 2111 Pt of<br>APHA 23 * Edition 2012                                       | <0.91   | All                                  |
| 14. | Apamie (as 66)                        | mgrl, Max        | 4014 (5 ft 14005) 7012   | 41.01   | 0.2                                  |
| ١٤  | Cyanide (as CN)                       | ngil Max         | #\$00 (19 ); Cohermetric<br>Method APITA 23 <sup>rd</sup> Editions<br>2617 | 14.0>   | bus                                  |
| 15  | Chromanic (sector 5)                  | mg I. Max        | 7111 B of<br>APITA 23 <sup>4</sup> Edition 2017                            | <41,62  | D,DS                                 |
| Ľ.  | Anche Peregens (# MBAS)               | rigit Max        | Aanea, Kut IS 11265  | <0.1    |                                      |
| D.  | Pernic Compounds (as Cull (OH)        | mg t Max         | IS 3025 : Pan-43)  | -0).[0] | D 0602                               |
| 15  | 260D (as Os)                          | mg/l             | 18 7025 (Pan 44)   | 6       | 3                                    |
| ZD. | "Newthead Onysen (as O <sub>2</sub> ) | mgl, Mir         | 18 7025 (Pan-90)   | 46      | 4                                    |
| -   | thi & Giror                           | rig'l Mas        | 15 7075 (1984-94)  | -1      | 4,1                                  |
| 22  | Total Coliforn                        | (mpm/100ml);Max. | :5 1622  | 140     | 5000                                 |

Irreprese on of results: Nil, Deviation from sex method: Nil

\*\*\* And at the Neport \*\*\*

'Complaints Register is available at Laboratory

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Telangana, India

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C. Chandra Most )

Email

lab@bsenvitech.com. mfo@bsenviloch.com

Website #www.bserwitech.com CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Test Report No. : BSET-2021/WS-01208 Lab Code No. 2 (017798) 112,96 2021 Issue Date

Your Bell Sever Dated 09/16/2021

Date of Receipt : 69,05,0001

Project Name: Narayanandi Iran & Manyahor out Miller Sample Description: Surface Water Sample Quantity of Monky, Digital Sample

Name & Address of the Castomer: Mrs. 25W Sarr Limited

1 No. 5 500 ml Sattiple (Metaby) 1 No. x 500 ml Wide routh Class battle Sat 0.8 Cl I No. x 250 oil Sample Pic Sterilized Bottle For Micro

Pecking t Plastic Buttles Ten Required a Augiven below

0 v 118, 2021 Pate of Registration Habrid commencement of lessing IPI Chi./II/ I 15/0/2021 Date of completion of serting Sample condicion at receigt Enand nic

haropia seried as regioned

Date of Sampling: 84.46-2421 Lorgered of Sampling: Karo, River Lip Sareset Sampling Details
Sampling Wethork Procedure: 35 3425 Part I General Environment conditions: at. .

Page No. Luft.

#### LEST RESULTS

| ę.<br>Nu.  | Yest Parameter               | ( 401           | Fest Meshed  | Hetali           | Greeks for Streets Water<br>Steedards |
|------------|------------------------------|-----------------|--|------------------|---------------------------------------|
| 1,         | Culem                        | Carer Units Mov | IS 3025 (Pan 4)  | 10               | 500                                   |
| 2,         | p:1                          | 100             | 18 3025 (Pan 11)   | 4.07             | 6,5 to 8.5                            |
| <b>5</b> . | Total Dissolved Solids       | mgs, was        | 18 3025 (Part-15)  | 112              | 1500                                  |
| ۷          | Chloride (gelff)             | ngd. Max.       | IS 1025 (Part-02)  | 16               | non                                   |
| 5          | fron (as Fe)                 | mort Mass       | 3111 Buri<br>Arta 23° tiplion 2017                                     | 9.24             | М                                     |
| ů.         | Nulphase his surp            | mgd, Mas        | ES 3025 (Part 34)  | L5               | 405                                   |
| 4          | cluorate (na FI              | mgd. Max        | 1300-9 (7).<br>APDA 23 <sup>11</sup> Edgi so 2013                      | 6.17             | 1.5                                   |
| В          | Notates has NELO             | mgd Max         | 4505-30 n-4<br>1 V Specingholometry<br>Screening Mathea                | 43               | 5υ                                    |
| 4:         | Copper (18 Co)               | net Max         | 3.12 B of<br>APEA 211 Indian 2011                                      | 108.402          | 6.                                    |
| ij,        | Seienium (as Sa)             | mgr., Max       | V [4 [3 6]<br>4 PPA 73 Politica 2017                                   | 41.01            | 5,05                                  |
| il,        | Zwo (as Xr)                  | mg/s Max        | 3 11 ft of<br>APP-A-22" Nation 7017                                    | 0.84             | 13                                    |
| in.        | Cartenani (gs.1) ()          | ngt Max         | 30 Hz Briof<br>A PHA 2011 Edition 2017                                 | * <b>0. 0</b> 1) | ×01                                   |
| ß          | Lead (as Pb)                 | mg/l Max.       | V [1.19 m)<br>API A 21' (6dg/m2917                                     | ⊴1.61            | 4.1                                   |
| 14         | Appendix ( p. 45)            | mg/l Max        | 3 14 11 of<br>4 85 4 2)* Egipton 2011                                  | <0.01            | 102                                   |
| S          | Pydrice (8) PN)              | ing t Mex       | 4900 CN F. Celorinen 4<br>Method, APHA 25 <sup>rd</sup> Edikon<br>2017 | 431.002          | e lin                                 |
| n,         | Chromium (an Cr. ')          | mg/l, Myv       | 71    B. of<br>4 * 4 / 25 * 1 dewn 291 *                               | -0.4t            | 0,05                                  |
| 1/1        | Americ Uniergram (an MISA S) | mg/L Max        | Artaex, K of IS 12204  | •11.1            | 1                                     |
| 18         | Phenote Compounds (w.C.) (1) | mg/LM/A         | IS 9005 (Part 41)  | <b>√0.001</b>    | 0.055                                 |
| 19         | BOD (44 (b))                 | mg/l            | Is 97% (fight 4f)  | ,                | 1                                     |
| 20,        | Disselved Conygon (as 40,1)  | myl, Min        | 18 805 (Bin-90   | 52               | a                                     |
| 21.        | Lut & Greater                | ng/ Max         | 15 WHAT PO   | 8.1              | d,                                    |
| D.,        | Int/Cologn                   | /mpr/19bmlMax.  | IS:1622  | CH 90            | Sino                                  |

Interpretation of results. Nil. Deviation from test method: Nil.

"" End of the Report """

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Authorized Signatory
TO Chandra Modi )
Environmental 5cu-rain

CIN No. # U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Contonies - Mrs. 15W Steel Limited

Project Name: Marayanpushi Jaon & Manganese ore Alesca

: "No a SILL in Sample 1 No. 8 500 ml Sample (Morals). Test Report No.: 3557,2021/W5-61123

Lab Code No. . . 210827109 Date: Date 3.12.06.2021

Voge Bef : Laner Pared 05 16,21C !

Date of Recorpt 1: 00.64 2021

Date of Registration

09 (46,2021

Date of commencement of pessing

IN 96 707 L 18.08.2021

1 No. 3 YOU mill Winder though Glass by till, for CASIG 1 No. 3 250 mJ Sample Pre Sittinged Hooke For Micro

Date of enaphrases of centing hample condition at receipt

Foundark

Packing Ten Required : As goods below

()wasth

· Марил Вожко

Sample Bereitgeann: Syrfgor Water Sample

Sampling Details

Park of Sampling: 04.04.2021 Location of Sampling: Karo River Demastrcare (Yels Near Cate Ne-b)

Sampling Matterd/Procedure: IS 1824 Fac. 1 General Environment conditions: etc.

Sample seried as received

Preguðan Lendi.

#### TEST RESULTS

| Si.<br>Nn. | Pay Parameter                               | Unio             | Test Method   | Result                              | Behits for Stream Water<br>Standards |  |
|------------|---|------------------|---|-------------------------------------|--------------------------------------|--|
| I,         | Coleur                                      | Hazen eits, Mas, | 19 5004 (Pan-4)   | - 111                               | ,890                                 |  |
| 1,         | pii   | 35               | IS 3025 (Part-11)   | 4.7)                                | 65 ur 4.5                            |  |
| 4          | Lotal Digsphed Sniids                       | mgd. Max.        | 1S 3025 (Part-16  | 194                                 | 1500                                 |  |
| 4.         | Chlorate (as Cl)                            | ng't Mex         | 18 9005 (Pan 32)  | 22                                  | 600                                  |  |
| 1          | ron (se fix)                                | mp t Mas         | 31 F B of<br>AREA 210 Edition 2017                                      | 9.21                                | 50                                   |  |
| P.         | Sulphores (as SOV)                          | трі, Ми          | IS 3525 (Part-24)   | Lb                                  | 400                                  |  |
| is.        | Plact de (as +)                             | mjol. Mac.       | 490-6 D;<br>APHA 2; <sup>rd</sup> Edition 2011                          | <b>+13</b>                          | 13                                   |  |
| Þ.         | Nurseck (an NO <sub>1</sub> )               | mj 1. Max        | ASDO-NO J.B<br>DV Specifyrinisnieth.<br>Surcenna Mathad                 | 4.6                                 | 50                                   |  |
| ş.         | Сороет (за Сс)                              | mp/l Max         | 711) U or<br>APRA 21 <sup>4</sup> Odmor 2017                            | 4. <b>0</b> ,172                    | 1.5                                  |  |
| 10.        | Selenium (as be)                            | myl, Max         | 21.4 u of<br>APaA 23 <sup>4</sup> batton 2017                           | <0.01                               | nas.                                 |  |
| F.         | Zane (as Zr)                                | mg/l, May        | 21:1 0 cf<br>APHA 23 <sup>4</sup> Editor 30 7                           | 0.05                                | 15                                   |  |
| 12.        | Cadhtium (ex. 0 d)                          | mgd, Max         | 91 1 H or<br>APRA 21 <sup>st</sup> Edmor 20-7                           | 54.003                              | 64,                                  |  |
| 15         | Frad his Pb)                                | ngel, Max.       | 21.1 B of<br>APIIA 23 <sup>st</sup> Editor 20.7                         | 691.001                             | 10                                   |  |
| 14         | Amenic (as Au)                              | mgst, Max        | 21 4 (1.5)<br>APHA 33 <sup>M</sup> Busing 2017                          | <a1.b1< td=""><td>0.2</td></a1.b1<> | 0.2                                  |  |
| 15,        | Oyanice (48.4 %)                            | mg-I, Mga        | 4 98 CN L L'algument<br>Medial, 4 19 A 2 7 <sup>4</sup> Littina<br>2017 | 18.80                               | 0.05                                 |  |
| ΙΑ.        | Chromate (as Cr. )                          | mgd, Max.        | 21.1 B of<br>APHA 25 <sup>4</sup> Reits in 2017                         | on.eth                              | 1145                                 |  |
| 12.        | Among Delengents (in MBAS)                  | mg/l, Max        | Antex Kipt K 11248  | 41,6                                | 1                                    |  |
| 18.        | Phenolic Compounds his C <sub>2</sub> H-GED | mgd, Max.        | .5 5025 (Pan-45)  | +0.001                              | 0.205                                |  |
| ri.        | POD (svCyr                                  | րան              | \$ 3425 (Part 44)   | ş                                   | 3                                    |  |
| 20         | Hooderd Dogger (se H))                      | ng4 Ma           | 15 3035 (Pap. 16)   | 5.3                                 | 4                                    |  |
| 21.        | Hill & Hrouse                               | mgri, Max        | 15 3023 (Pan 39)  |                                     | D.I                                  |  |
| 22         | Letal Conform                               | [mps.100ml],Max. | IS:1622   | TERM                                | 5000                                 |  |

Interpretation of results. Nil, Deviation from ten method. Nil.

Win Enthalite Report 305

\*Comptaints Register is available at Laboratory.

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(pandra Muull) mental Sciential

Website I www.bsenvillech.com

CIN No. 3 J74210TG (989PTC032368



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Compiner: Mrs. ISW Steel Limited Test Report No. : BSET 2021/WS-011/0 Late Code No. 200970068

Depart Date (17,66,202)

Your Ref . Lovey Date: 09,66 2021

Project Name - Natasanpathi Isan & Manganese are Mises Sample Desemption: Southern Water Nampto 11 No. 45 ft Line Sample Quantity.

Thrus foll of Sample (Metals) I No. a 500 ml Wide mouth Diges hands for U&C.

1 No. 4 200 ml bemp 6 Pr. Stenlized Soule For Mails

Packing · Plastic British Lest Required : As given heldw

Bate of Receipt 1: 09 01: 2921 09 66,2021 Date of commencement of testing 09.06,2021 162842021 Date of completion of lessing Sample condition at enceipt. humber. Sample tested as secrised

Sampling Details

their of Nampling: 04.86.2823 Leculion of Sampling: Kasina Nata ( Yeals Between Quarry No.1 & 4 a

Sampling Minkod Trecedure, 19 3075 Pan 3

lyenerne Berdroement conditions; ch

Page No. Loft

#### TEST RESULTS

| fi.<br>Na      | Ecol Paramerer                   | 1. eta              | Test Method  | Rrsull       | Lumits for Strengs Walter<br>Standards |  |
|----------------|----------------------------------|---------------------|--|--------------|--|--|
| 1.             | Colour                           | Rocal Inte, Van     | 29 903 9 (Papi-4)  | 10           | )00                                    |  |
| 1              | h.I                              | 22                  | 15 9025 (Ant-11)   | 6.77         | < : In 8 5                             |  |
| 1,             | Local Consilved Schots           | mgil. Mas.          | IS 9005 (Pan-Lei   | 1716         | 1500                                   |  |
| 1.             | € (as C)                         | mg/L Max            | IS 9025 (Pan 32)   | 22           | NE                                     |  |
| ٢.             | Imm (as Fe)                      | right, Mac          | 2151 A of<br>APITA 23° Edition 2027                                  | ÛΙΦ          | NII NII                                |  |
| ٩.             | Natiphales (av SH <sub>1</sub> ) | mg 1. Max.          | 1\$ 107 (Far-24)   | 9.5          | 10}                                    |  |
| 7-             | l'uneide (av l'I                 | mg/I Max            | 4503-5 D;<br>A 68A 23 <sup>4</sup> Edition 2013                      | 02)          | 1.5                                    |  |
| ٠              | Number los NII ji                | ng'i Mac            | 45to-NO <sub>2</sub> -B<br>UV Spectrophotometric<br>Screening Method | 4.5          | 50                                     |  |
| u,             | Coppet (as Cut                   | agM Figer           | HH 4 of<br>A7HA 274 Educa 3912                                       | <b>∞0.02</b> | 1,5                                    |  |
| 10             | Solgman (av Se)                  | rig't Max           | APHA 25° Edition 2012  | <b>40.01</b> | 0.05                                   |  |
| H <sub>i</sub> | Ziec tas Zni                     | mg"t Max            | 1111 B of<br>APHA 23 <sup>rd</sup> Edition 2017                      | < e.irg      | 1:                                     |  |
| 12             | Cadmium (as Cd)                  | mgT Max             | THE H of APHA (5" Adjoint 2012                                       | 40.043       | Ø1                                     |  |
| П              | April (a+ (%)                    | Mg's Max            | 311 - B. of<br>APITA 23 <sup>rd</sup> Edition 3017                   | o#.DL        | 0.1                                    |  |
| 14.            | Anaemo (as Ao)                   | mgA, Mga            | 1[14 (* 6]<br>APITA 23 <sup>4</sup> Edite:n 311?                     | -ce.fit      | 0.0                                    |  |
| ıs,            | Pyande its C91                   | mg), Maz            | 4000100 b, Colormator<br>Method APHA 20" Lighter<br>2012             | ol.02        | 1:115                                  |  |
| 18             | Physician (8 Conf)               | duyl, Maz           | 511. B of<br>APITA 23 <sup>rd</sup> Editor 2010                      | -01.02       | 0.05                                   |  |
| Ę.             | Anone Deergans (a. MBAS)         | righ, Man           | Annex NoCB 1174K   | <0.1         | 1                                      |  |
| N.             | Pheenty Compruints (as C.31,011) | ng-l. Man           | IS 3025 (Part-43)  | ok.841       | 0.005                                  |  |
| 19.            | BOD (ac Gy)                      | mpl                 | IS 3025 (Part-44)  |              |  |  |
| OF.            | Drawalweal Conggern fast Og!     | mg'l Min            | 18 3007 (Part 38)  | 5.1          | 4                                      |  |
| 21.            | Url & Filtrate                   | myd, Mas            | 18 /ICP (Fan JV)   | 71           | ILL.                                   |  |
| ē.,            | [regl Cplingim                   | (mpo: 100m.), oran. | IS n22   | 70           | \$500                                  |  |

Interpretation of results: Not Deviation from test medical, not

\*\*\* Endlefishe Repart \*\*\* "Gamplaints Register is evaluable at Laboratory

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Secunderabad - 500017.

Telangana, India

WATER FLOW RATE REPORT

**JUNE-2021** 



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: June

Date

: 25.06.2021

#### SURFACE WATER FLOW RATE OF STREAMS

| S.No | Location                                     | Flow rate (Velocity)<br>in Meter/Second |
|------|--|---|
| 1,55 | Orahari Nala Up Stream                       | 0.293                                   |
| 2,   | Confluence of Orahari & Karo Nala            | 0.551                                   |
| 3,   | Kasira Nala (Nala between Quarry no-3 & 4)   | 0.212                                   |
| 4.   | Karo River Down Stream (Nala near Gate no-1) | 0.616                                   |

For B.S Envi-Tech (P) Ltd.,

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uthorised Signatory

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Website : www.bsanvitech.com

CIN No. #U74210TG1999PTC032358

GROUND WATER
LEVEL REPORT

JULY-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Client

: M/s. JSW Steel Ltd.

Name of Mines

: Narayanposhi Iron & Manganese Ore Mine

Month

: July

Date

: 30.07.2021

#### GROUND WATER LEVEL, DEPTH FROM SURFACE

| 5.Na | Location                          | Ground Water Level<br>In Meters |
|------|-----------------------------------|---------------------------------|
| 1.   | Dug Well Koira Basti              | 8.25                            |
| 2.   | Dug Well Kasira Basti             | 7.71                            |
| 3.   | Site Services Area (Pizometer-01) | 17.67                           |
| 4.   | Near 650 crusher [Pizometer-02]   | 12.75                           |
| 5.   | Crusher plant area (Pizometer-03) | 33.53                           |

For B.S Envi-Tech (P) Ltd.,

ECH

Anthonised Signatory

Websile ( www.bsenyiloch.com

CIN No. #U74210TG1999PTC032358

## SURFACE RUN OFF ANALYSIS REPORT

JULY-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customor: M/s, JSW Steel United

Text Report Nr. : BSC1-2021/W 5 02/01

Lah Code No. . . 210766909

Issue Date : 07/58/2021 Year Ref.

Date of Regionation

1 certain Dated 3/4/07/2021

Pare of Receipt (12/107/2021)

Project Name: Manayaspooki Iran & Mangantae are Meson Sample Description, purface Water Sample 1 No. 550 Lin Sample

I No. a 500 oil Souple (Metab)

1 No. v 500 ml Wide mouth Glass Featle for O&G

I No. x 250 oil Sample Pre Socillized Boots: For Miero

Packing . Pastic Buttley Test Required : As given bolow

34,67,7001 Date of commencement of Irsting Date of completion of testing DRIGHT 2001 round the Sample conflitten at receipt

bample sepiral as received.

Descripting 36 00,2021

Location of Sampling: When Pie Surface Run off

Sampling Details Sampling Method: Procedure: 15 1025 Part 1

General Environment conditions: uk.,

Page Nuc of L

29,87,2021

| • | 10.5 | Khat | L | 13 |
|---|------|------|---|----|
|   |      |      |   |    |

| S.<br>So.      | Test Faranster                    | l pirs             | Less Menhad   | Respir                             | ij James Ber Keregan Weles<br>Standards |
|----------------|-----------------------------------|--------------------|---|------------------------------------|---|
| L.             | Celeur                            | Hazon Drits, Man.  | IS W23 (Nan-4)  | 5                                  | 100                                     |
|                | th th                             | 88                 | 75 3025 (Pan 11)  | 6AK                                | 651585                                  |
| L.             | Total Suspended Schols            | ngl                | .N 3825-Part-17   | íì.                                | -                                       |
| 4              | Trial Bissolical Solics           | ng/l Mas.          | 18,3075 (Pap. 16)                                       | 44                                 | 1500                                    |
| 5.             | Chloride [25/13]                  | mgrl, Max          | (S 3023 (Part-32)                                       | 6.D                                | ene                                     |
|                | Iron (as Fe)                      | mgrt, Max          | 911 U nl<br>APHA 22' Edawa 2113                         | 41                                 | 50                                      |
| 25             | Sulpages (19 5Oc)                 | mg/t Max.          | (S (907 V (Pprt-24))                                    | 6.B                                | açın                                    |
| <b>X</b> .     | Placetice (as F)                  | mg/L Man.          | 4500-M ().<br>APHA 23° Edition 2007                     | N 14                               | 1.5                                     |
| ۵.             | Serates (in MOJ)                  | meyl. Max.         | 4500-MOr-R<br>CM Securophotometric<br>Securiting Method | 2.1                                | .99                                     |
| ıń             | Соррен (во Пан                    | mg/I Mas.          | 711 ( 3 of<br>APITA 235 Edition 2017                    | <0.02                              | 1.5                                     |
| H <sub>+</sub> | Mangancas do Mili                 | nµ1                | 00000 at<br>APDA 201 14 open 2007                       | - = 112                            | (4)                                     |
| 12)            | Scionum (as Ac)                   | mg/, Max           | APHA 2V <sup>4</sup> Edition 2017                       | <d.ds< td=""><td>0.05</td></d.ds<> | 0.05                                    |
| G.             | Vincius Zn)                       | mp'. Max           | JHT 3 of<br>APHA 281 Edupo 2017                         | 0.02                               | 15                                      |
| ĮŁ,            | Culmum Jas Cita                   | mg/, Max           | 2011/3 of<br>APDA 23" Edition 2017                      | <0.000                             | 461                                     |
| 15,            | "vad (w Ph)                       | mg/. Max           | 1111 Bile:<br>APHA 23° Edition 2017                     | 40.00                              | 0,1                                     |
| 16,            | Arvanic (in As)                   | mg/ , Max          | APHA (2º Edujon 2017                                    | <0.0±                              | 0.7                                     |
| 11.            | Cyanole (1837)                    | nig/. Max.         | Worked APITA 15 <sup>2</sup> Education (2012)           | <0.02                              | 9.05                                    |
| 16             | Chromograf (as 7 % <sup>b</sup> ) | mg/. Max.          | 3111 B of<br>APDA 227 Edmon 2017                        | 411 () 2                           | C-05                                    |
| I P            | Ankeric Delregons (cs. WRAN)      | mg/l, Max          | Ameri Kinf IS 13349                                     | olt. I                             | - 1                                     |
| )ie            | Phonoic Compounds (as Call-Olf)   | mg'. Max           | (S 1025 (P)m.d1)  | বাজা                               | 5,009                                   |
| 21.            | 1,000                             | ng/I               | IS NOZE - Part-Sk                                       | 24                                 |   |
| 22             | 300 to 0,1                        | ngil               | IS 3023 (l'an-44)                                       | 3                                  | ,                                       |
| 21             | Time shoot 11 sygens ray Cyl      | ng t Mar           | 1\$ 102 S (Mai-30)                                      | 5.h                                | d                                       |
| 24             | OH & Grease                       | mga, Max           | IS 2025 (Pan-35)  | ECA                                | 0.                                      |
| 15.            | Empl Californi                    | (mpic 100 nd CM2 s | 1 1801 Bill   | 1 PM                               | 3000                                    |

Interpretation of results (6), Deviating from less method. Not

"Complaints Register is available at Laboratory

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Secunderabad - 500017,

St Ann's Road, Tamaka, Telangana, India



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Addicts of the Contoner: Mrs. 18W Sant Limited

Fruje O Name: Narm-amportal from & Manganear are Mines

Sample Description: Surface Water Sample · I Supeful Las Sample Life a monthly

Location of Sampling, Settling Fond Near Gate No.1

No a 550 of Saugh (Work)

, No. 2, 500 of Words about those bottle for cwell 1 No. 3 250 ml Sampto Pie Sterifored Lamile For Micro-

Pecking : Play of throops

Date of Sampling: 26/17/2024

Test Regulard III As given be no Less Report Ne. (1955-172001 WS 02873) 210766407 Lab Code Na

later Date . 67.04.2021

Your Ref : Lener Gated SAID-2021

Date of Bereign 1250G 2021

Dair of Registration 79.03.262

20 07 27C thate of commencement of feeting

Pure of completion of seeing 46.002021 Sampir condition at recogn Francisco de

Sample tested as received

Sampling Details

Sampling Method Pencedure, 16 2025 Part I

General Environment conditions, uk.,

Page No: of:

| TEXT MAST LUS |  |                    |   |               |                                     |  |  |
|---------------|--|--------------------|---|---------------|-------------------------------------|--|--|
| A<br>Nn       | less Carmenter                         | Ladis              | I est Mathrell  | Result        | Limbs for Scream Water<br>Standards |  |  |
| I.            | Colour                                 | Slaw Cools, Max.   | 15 V025 (Ask-4)   | 5.            | 304                                 |  |  |
| :             | 70                                     | 8                  | Py 1007 (Part 11)   | 041           | In San Way                          |  |  |
| Ç.            | Foral Suspended Solick                 | 9g*                | 18, 9125 - Port-17  | Jo            | :==>                                |  |  |
| 1             | fintal (Daal-frod State)               | 9g J. Mar.         | (S.1025 (Park-16))  | 18            | 15ab                                |  |  |
| S.            | Palwide (2) CH                         | mpl, Max.          | 58 3023 ( mass (2)  | T.5           | nCII                                |  |  |
| le:           | Isimus (re)                            | my-I, Mas          | JPT Biol<br>APSIA 23 15 dus o 2017  | 1112          | şn                                  |  |  |
| 1,            | Sulphyles (as 90%)                     | mg I Was           | (S 5023 (Pan -24)   | 1,3           | 1:30                                |  |  |
| 10            | Director (so f.)                       | Wg I Mac           | 45004-10<br>421.4-21" Inham 2017  | 1117          | 1,5                                 |  |  |
| 4.            | Significant South                      | rig t Max          | 1 Wo-NOV P<br>UM Specifophytemens<br>Science, Messed                        | 1,3           | 50                                  |  |  |
| 12-           | Copper (as Cir)                        | org UMax.          | 71 1 H of<br>APHA 33 4 Jeanna 2017  | an,02         | 1,5                                 |  |  |
| L             | Магранете въ Ми                        | n <sub>p</sub> /I  | ULL Billion<br>APHA 33° Ferrina 2017  | 7 0.1Q        | 1,580                               |  |  |
| 12.           | School as No                           | пр Мих.            | 0.14.0 or<br>APITA 23.4 Edition 2015  | <b>○9.</b> DI | 2015                                |  |  |
| IJ,           | Zine tao 7mt                           | mpl, Mari          | HELBERT<br>APDA / S <sup>2</sup> Ten on 2017                                | 0.112         | 15                                  |  |  |
| 14            | t bilminu - 12 ( f),                   | mg/l, Max          | APHA 281 senten 2017  | <0.049        | -31.1                               |  |  |
| is.           | Lond tay P51                           | mp-I. Marc.        | JHTU AL<br>APHA 27° (00512017   | •4.10         | ń.i                                 |  |  |
| h.            | Americas Ass                           | mg/t Mex.          | APHA 2 V region 200 r   | o#.DL         | 112                                 |  |  |
| 137           | Cyarice (a) CN)                        | ingd, Max          | 4500 C.N. of observative<br>Method, APHA 23 <sup>rd</sup> Paleson<br>No. 17 | val.102       | u 68                                |  |  |
| IN.           | Chromium to Cally                      | mig-I, Mgs         | APPA 7/2 Edition 3012   | eq.92         | 4.05                                |  |  |
| 0             | Annine Noorgons (as MBAN)              | nig I, Van         | Annex Kint IS 13243   | ≺0.I          | 1900                                |  |  |
| 24            | Pharmac Continues (as CCGATO)          | mgd, Max           | 18 (025 (Pan-43)  | 50 (81)       | o <sub>l</sub> ings                 |  |  |
|               | con                                    | mist               | 18 9005 - Part-30   | 3/2           | 7423                                |  |  |
| 22            | 180D - (c10))                          | mgd                | 19 1025 (Pan 44)  | 1             | 1                                   |  |  |
| 21            | Histoland Onlyzen (as O <sub>2</sub> ) | right Son          | IS 2025 (1945-94)   | 5.3           | 4                                   |  |  |
| 24            | Oil & Circure                          | ng   Was           | 18 1025 (Patalog) TE  | CHEL          | 0.1                                 |  |  |
| 25            | Total Cordenii                         | Intendition (1954) | 15.19:  | 100 M         | 5000                                |  |  |

Imaginary in all visits. So, Deviation from Escriptical, Sil-

"Coroplaints Register is available at Laborator C'8 AD

uthorized Signatory Li.Chandra Vinule i **Environmental Scientist** 

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Website 1 www.hserryitech.com

CIN No.: J74210TG1999PTC032358

SURFACE WATER
QUALITY REPORT

JULY-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: MA, JSW Steel Limited

Dest. Region 1 No. : BS ET. 2021/WS-02067

Late Cude No 2118943407

Date of Receipt 1.09 07:2021

Issue Date (1911) 2021 Year Ref. . Lorer Diped 09:01:2021

Freige! Name: Narryanposhi iron & Massances ere Mines Sample Description: Surface Water Simple

Quantity : I No. x5,012o Sample

Location of Sampling: Displacingle postream

I No a Nittim Sample (Merals)

I No. 2 AGI mit Wide mount Glass houte for OEG I No x 250 in Sangit Pit Star lood florie for Mich-

Perking : Maple flooring Int Required

: As group before

49 07 2021 Date of Registration

IN CARRO their of commencement of letting

Date of completion of orders 19/01/2021 Sample condition at receipt Forred als

Sample levied as received

Date of Asimpling: 45 (17,202)

Sampling Details
Sampling McGed-Procedure: IS 1025 Fact (

General Environment conditions: nk .

Page Northern

| 5              |   |                  | 1   | Result       | Lines for Stream West |
|----------------|---|------------------|---|--------------|-----------------------|
| Nu.            | Test Parameter                              | Malls            | Ten Method  | BESIDE       | Steedard              |
| I.             | Come  | Hazer Dans, Max  | IS 2025 (Pan-4)   | 1ů           | 500                   |
| 2              | μΗ  |                  | 15 Mid 5 (Pan -11)  | 6.69         | 45 Wh5                |
| S <sub>i</sub> | Foral Suspended Solids                      | mpl              | ES 3025- PMIC-17  | .la          | 144                   |
| 4              | Trital Disserved Sotials                    | mpil, Mak.       | 15 (025 (0)(6-16)   | 116          | 1500                  |
| ٤              | CHondo (as Cit                              | nigA, Man        | 15 3035 (Pan-92)  | 20           | Allı                  |
| 6,             | hongay ter                                  | mpl. Mas.        | 31117177<br>APHA 27 <sup>12</sup> Edgain 3012                             | 0.74         | មា                    |
| A.             | Supliero (as 50a)                           | nigit, Mar       | 15 JU25 (Pan-24)  | b.e          | GH-                   |
| 4.             | Hummle ray (%)                              | mg/Lk(z)         | 4590 (10).<br>A PICA 23 <sup>N</sup> 1-da on 2013                         | 0.14         | 15                    |
| 9.             | Silmin (as NO <sub>d</sub> )                | mp/t Max         | 4500 NO, B<br>1 N Spectrophotomental<br>Screening Method                  | 4.6          | sn                    |
| Ιυ             | Cupper (se U))                              | ng't Mac         | 2017 8 of<br>APPIA 23 f Fillion 2017                                      | <0.002       | .3                    |
| H.             | Manganese as Min                            | ng'              | APHA 23 <sup>rd</sup> Edition 2015  | 5 9.00       | 1 2                   |
| 12             | Splannin (ge Se)                            | Op/UMes          | 21.4 B CC<br>APHA 23  | < KUI        | 9,05                  |
| 14.            | Zinc tas Zn;                                | mp/l, Mga        | APHA 23° Edition 2015   | 4.04         | 16                    |
| H              | Codimon (as Cid)                            | olyf, Mis.       | A111 H A1<br>A111A 22 A Edition 2017                                      | <uu></uu>    | 401                   |
| 15.            | Load yas Phi                                | mg/l, Mgs        | APITA 21° Educa 2013  | <b>48.01</b> | ñ i                   |
| :0             | Arong In Au                                 | mpd, Max         | 5114 C of<br>APHA 23 <sup>rd</sup> Edition 2011                           | 46.01        | c;                    |
| 3.             | Cyanida (as CN)                             | nig-l, Mas       | 4500 CN B. 4 Vika metric<br>Method, APHA 23 <sup>rd</sup> Edition<br>2017 | 19.82        | 0.05                  |
| ŏ              | Chiprilanogas Cr *1                         | nigi, Mas        | 3111 B of<br>41004 212 Juliana 2512                                       | 49,82        | 0.25                  |
| 9.             | Aniana Delegans (as MUAS)                   | nga. yas         | Anaca   6 of 15 17744   | ×11.1        |                       |
| 3C             | Phonolic Compounds (as C <sub>4</sub> H-OH) | mgt, Mari        | 15 3025 (Parti-43)  | <0.001       | e ms                  |
| 91             | 000   | ngel             | 18:3025 Part-of   | 16           | GHI .                 |
| 22             | BDD (as O <sub>1</sub> )                    | ng:              | 15 3025 [Part-44]   | 4            | 3                     |
| 23             | Dissolved this gen (as Os)                  | r-g't Min        | 15,0005 (Part 34)   | 54           | 4                     |
| 24.            | Cil & Crose                                 | ingil, Mak       | IS 3025 (Pers-10)   | 77 N         | 111                   |
| 25.            | Total Soliton                               | Import00mit Ross | 15.1622   | 130          | .5000                 |

Integridation of results 50, Devangs from real perhad. No.

\*Complaints Register is available of Leberatory.

End of the Report

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Telongana, India



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Lusinger: Mrs. 48W Steel Lambed

Test Report No.: BSET-2021-WS-40064

1 sh Cade No. 2, 0141707 Invest Date : 19,62,2021

Your Rel : Letter David IN IC 210

Date of Metelph 1: 01.07, 707

Date of Repotration

Pergeti Name: Narayanpeahl Jeon & Massance ore Meter Sample Description: Surface Water Sample

Quantity of the less family

1 No. a 500 oil Sample (Molein)

I Nous you mi wide noting Glass bride for Caki-

1 No. 8 750 ml 48 upto Pro Stenlared Runte Los Micro

Packing : Phylin, Hydriga Tool Required : As given believe Liste at commencement at leating PH/03/2013 F Date of completion of leating 1900 02021

Sample condition or receipt Found of

Sample usuled as cerrised.

Date of Sampling: 05/07/2021

Sampling Details
Stampling Method:Procedure: (S 3025 Part.)

Location of Sampling: Orahamagic Browningsp. Cotered Enricement conditions ak . Page No. 1 of 1

09.03 (300)

| N.<br>Nik | Test Parameter                  | Dam              | den Mackard  | Restal         | Lipury for Stream Waser<br>Standards |
|-----------|---------------------------------|------------------|--|----------------|--------------------------------------|
| I.        | Foor                            | Hazzn Units, Max | IS 2025 (Part 4)   | 10             | 700-                                 |
| 2         | h.I                             | 23               | 4 3023 (Pan 1 3  | 6.87           | p.\$0; 4.5                           |
| L         | Lotal Suspended Solids          | mg/l             | S 3025- Part-11  | -16            | 1 <del>- 2</del> -                   |
| d         | Lors Himselved Schols           | mg/l Max         | (8.0023705m P.)  | 149            | 500                                  |
| <_        | Obcode as (0)                   | mg/l Max         | (S-m23) (Set-92)   | 25             | 100                                  |
| e,        | Pot (4-10)                      | mg/l Mas         | A P114 00° Edding 2017                                   | 0.74           | 111                                  |
| 2.        | Subhatov tax 50m                | ngot Mas         | 13 (02) (Serve)  | 10             | 4141                                 |
| х,        | Historiale (as I')              | ngel Mac         | 4500-111,<br>a PPA 217 Pologa 7012                       | 0.22           | 1,5                                  |
| 9,        | Surgestas Nitta                 | ngil Mas         | 4500-501y-0<br>JV Spartiplinaring by<br>Sena ung Method  | 4.1            | 90                                   |
| ıu.       | Copper (as C) 1                 | mgrl, 6124       | 3.1 B of<br>APHA 23 <sup>rd</sup> Filtern 2013           | <0.02          | 13                                   |
| H.        | Wangarese to Vir                | mgri             | APHA 2011 dinas 2012                                     | • <b>0.8</b> 2 | 14                                   |
| D.        | Selection (as Se)               | mg:1 blus        | 3 14 B of<br>APEA 215 Filtum 2017                        | <0.00          | 91.15                                |
| D.        | Zimni (gelični                  | mg/L Max         | 3-11-0-31<br>APDA 27" Edgion 3012                        | 4.16           | 15                                   |
| ja,       | Capr montes Cat                 | mg/L Alus        | N. L. e. of<br>APHa 2 <sup>col</sup> Fatama 2017         | <0.069         | - 11,1                               |
| 15        | cod (as Ph)                     | mg/LMax          | /1 1 H of<br>APHA 21 <sup>17</sup> Edgmp 3012            | 4 P FIL        | n <sub>e</sub> j :                   |
| is.       | Atomic (2) As (                 | myt Mac          | V 14 L 5l<br>APHA 21 <sup>th</sup> Pilopa 2012           | -4k.01         | 0.2                                  |
| 124       | Cyanize Jay 1000                | popul klas       | 45Att N.F. Communic<br>Maissel, APPA 71" (dilion<br>2017 | 49.82          | 0,45                                 |
| ı.        | Library (a) 17°°;               | mg/l Max         | 9111 pt or<br>401-4-205 Patron 2017                      | 500.002        | 0.05                                 |
| H,        | Anons DeterminastitusS)         | mp ( Max         | Amea Koffa Bush  | જાતા           | I                                    |
| Χį        | Physiol. Compagado (p. C.9.000) | rigit Max.       | 19 V005 (Page 45)  | 40 (IG)        | 0.005                                |
| 21        | COD                             | mp1              | 18 m2 s + 7arc-53  | el             | ERF                                  |
| 27.       | 180.0 (25.0)-1                  | mg/l             | 15 9005 (Part 14)  | 5              | ,                                    |
| 1.        | Dienkal Oxymnic (c)             | met Mp           | 19 50% [Pan+1X]  | 4.9            |                                      |
| 14        | Oil & Orease                    | при Мах          | [5 5025   501.15]  | - 1            | <b>1</b> /1                          |
| 5         | Inatt's term                    | impr (Our) (Mas. | 18:1622  | CATO           | VIIC                                 |

Interpretation of results (No. Device you form restingthank that

Numberized Sensory To Chandra Manta i Entirunmental Sciences

"Complaints Register is available at Laborator Ciga D

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End of the Report

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: lab@bsenvilech.com, info@bsenvitech.com Email

Website | www.bsenvitech.com

CiN No #11/4210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: Mrs. 48W Stoot Lambed

Test Report No. : RSE1, 2021/WS-02064

Lah Chache 210643502 : 14/11/2021

Issue Bate Yeur Ref.

: Lenez Dated 09 07 2021

Dare of Receipt 1, 09,03,2021

Projett Name. Nameyanpeels Imm & Manggarge pre Métes Sumple Description: Surface Water Sample Quantity : 1 No. 55 Q Lits Sample

Lecation of Sampling: Kern-river Leavener

1 No. 4 200 ml Source (Motals)

1 No. 4 500 nil Wide reputh Glass heete for HACE

1 Nat 4 252 in Sample Pie Steelined Britis Bry Might

Packing Test Required

... Абділен беле

Dete of Registration Date of commentances of testing

49 C ( 262) 09.01.2021

19.41.2021

Bak of completion of lighting Sample cundition at receipt

F-11112 114

Sample reveal us received

Date of Sampling, 45,47,2421

Sampling Details

Sampling Method/Procedure, IN 9625 Part 1

Gracial barirosment conditions: ak .

Page Net Lul II

TEST RESULTS

| Si. | Pear Parameter                  | Luite              | Ten Meiling   | Resett        | Lúmita für Stream Water<br>Standards |
|-----|---------------------------------|--------------------|---|---------------|--------------------------------------|
| I,  | Unico                           | Szem Hairs, Vga,   | IS 1035 (Pet 4)   | 16            | 3141                                 |
| 2_  | 21                              | 8                  | 1S 1075 (15m-115  | 1.65          | P < PH & Y                           |
| 5   | Total Superated which           | mg:1               | IS:2025- Pan-11   | 14            | #                                    |
| d.  | long (Depoled Sp. dy            | mg/l, Mas          | 15 1025 (Part - In)   | 128           | 1501-                                |
| 1   | Chlunde tao Cit                 | ngol, Mar.         | IS 4025 (Part-22)   | 11            | 600                                  |
| ú,  | Ton (schr)                      | mg/l, Vas          | 4111 ft of<br>AP:1A / 3 <sup>rd</sup> 54mon (2017                       | 0.88          | 50                                   |
| ī,  | Sulphates (av SH <sub>B</sub> ) | med. Man           | 19 5025 (Fan -24)   | 31            | тH                                   |
| k,  | Lounde (881)                    | mg", Max           | Aftition D.<br>APTIA 23 <sup>11</sup> Edition 2013                      | 0.14          | LY:                                  |
| 9   | Number (18 N.O.)                | myl, Vas           | Hytio-Morris<br>OM Specification moint<br>Screening, Method             | 1.9           | <b>3</b> 11                          |
| ш   | Copper dis Cut                  | mg I, Vtas         | 71 1 U a)<br>AP 1A 23 <sup>4</sup> Tampi 2017                           | <0.02         | 1.2                                  |
| L   | Mangareur 19 Ma                 | mel                | 2111 Bliof<br>APHA 39 <sup>4</sup> Balikar 2017                         | < 0.02        | 124                                  |
| .2  | Seletium tas Se                 | mg.t. Max.         | HIA IT of<br>APHA 25 <sup>1</sup> Educa 3017                            | < IL () II    | 0.05                                 |
| n.  | Ziar jas enj                    | mg-l, Mare         | 2011 Broff<br>APHA 23 <sup>rd</sup> addition 2511                       | 4.02          | 5                                    |
| ٠٩, | Cadmium (as Cult                | ng LMax.           | 10 (19 A)<br>APHA 2X 1 dinon 2017                                       | ~0.000        | (2)                                  |
| 15) | Lord (a* Ph)                    | mg. I Mars         | ATTER of<br>APIDA 2V <sup>2</sup> Juliana 2017                          | 4HDI          | Δı                                   |
| Ui. | Arsenie Las Asy                 | mg I. Max.         | 1114 (1 of<br>Alftin 2214 Edicon 2017                                   | * B.141       | 6.2                                  |
| 70  | Cyanide (as CN)                 | Mg I Max           | 4500 (74 F. Calcronatic<br>Mathod, APHA 23 <sup>th</sup> Edward<br>2017 | *9.02         | 974                                  |
| IŅ. | Chrymann (as ( r <sup>b</sup> ) | пу СМыс.           | 3111 B 52<br>APPA 21 <sup>4</sup> Edition 2017                          | -93.83        | nes                                  |
| l/s | Abotic Delengans (as MBAS)      | right, Max         | Ansex K of S [374K  | • 11.1        | 1                                    |
| 29  | Phanoie Compounds (as C.H.OE)   | regit Max          | IS 3025 (Part 4 V)  | <b>44.011</b> | 0.767                                |
| 21, | COD                             | ngi                | 18:3025 Fart 58   | 61            | SHEC                                 |
| 32. | BOD (a; U;)                     | ngi                | 5 Vo25 (mm-44)  | 4             | 1                                    |
| 13. | Desirived Oxygen (as 10y)       | mg*l, Min          | S 3021 (Pap. 16)  | 54            | 1                                    |
| 24  | On & Groupe                     | mg I, Man          | 15 4005 (Pan-39)  |               | 6,1                                  |
| 11  | Tuzi Californi                  | (rope, 100m r.Max) | 15:16:2   | TECA          | 5000                                 |

\*Complaints Register is available at Laborator C BAD

Square Signatury Engineenmental Scientific

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CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name A Address of the Customer: MA, ISW Steel Limited

Test Report No. : B5 f.T/202 (74/8-60)06

fasts Contac Nac

Your Bell . Detter David 49,07 2021

19,02 2021

Date of Receipt : 09.07.2021

Bacque Blogle

Present Years, Nersyangoshi Iron & Magganese are Milect

Sample Description: Surface Water Sample of No. 45.0 Lin. Sample Quantity

No. a. 980 ml Sample (Metall).

I No. 2 300 ml Wide mouth Glass hords for O.&G.

I No a 230 mil Sangle Pie Smoloed Boxle For Micro

Packing · Mastic Borres Toric Required a As goon holes.

Date of Registration OF 67 2021 Dare of commencement of testing 09.01,2021

Date of completion of upping Page 2021

Sample candition at receipt Found alc

Sample remed as received.

Sampling Details
Sampling Method/Procedure: IS 1075 but 1

Clear of Sympling: US-97 (102)
Lizeative of Sympleng: Kern river three purease ( Nata Near gate Null) Georgal Environment conditions: al.,

Page No Lond

TEST RESULTS.

| S.<br>Nu. | Tot Parameter                          | Enlis             | Tep Method   | Results     | Luttin für Strößen Water<br>Standunds |
|-----------|--|-------------------|--|-------------|---------------------------------------|
| t.        | 1.shur                                 | Hazen Dans Max    | IS 9025 (Pen-4)  | ıů.         | Son                                   |
| 2.        | pH:                                    | 2                 | 18 3025 (150-11)   | 6.71        | HILIKS                                |
| š.        | Toral Suspended Solids                 | mg-l              | IS.2025- Pan-17  | 41          | ***                                   |
| 4,        | Total Davelved Solids                  | mgd, Max.         | 08 3025 (19m-18)   | 146         | 55u                                   |
| 5         | Officed (as C.)                        | ngd, War          | 15 31/25 (Part-32)   | 26          | 600                                   |
| 6.        | tion, jus. Fe;                         | mg/l. Max.        | 9 H H of<br>A 5 H A 3 i <sup>N</sup> 54man 2017            | 0.22        | 65                                    |
| i.        | Sulphanis (as 900)                     | mg/l, Mas         | IS 1025 (Part-24)  | 24          | 400                                   |
| 8         | Huoride (α) Γ)                         | nigit, May        | 4500 F (3,<br>APITA 23 <sup>rd</sup> Edition 2017          | <b>±.17</b> | 1)                                    |
| ę.        | Altratector, Nff <sub>3</sub> :        | mg-l, Max         | dyon No. H<br>UV Specirophysometric<br>Screening Metrial   | 5.1         | 40                                    |
| lu        | Copper on City                         | ng l, Mes.        | 1111 H pr<br>49:14:27 Edwign 2013                          | <0.02       | 1.5                                   |
| D.        | Margarese as Mi                        | mg-1              | 21 (1 ft of<br>AP:(A 23 <sup>-4</sup> ), define 2017       | 5.0.49      | - 100                                 |
| 12.       | Salrmani (b.; (4))                     | ingel, Max.       | 1)14 (For<br>APRIA 23 <sup>M</sup> Fullion 2017            | -Q.DI       | 0.25                                  |
| 19.       | Zinc (as Zin)                          | nigit, Was        | 11 1 ft of<br>APRA 23° Editor (017                         | 0.84        | 15                                    |
| Įd,       | Cadmism (a) Cdi                        | ngal, Vas.        | 1111 H of<br>4P1A 33 * Editor 3011                         | <0.003      | -11                                   |
| 15        | Load to Pb)                            | ng I, Var         | APCIA 23 <sup>rd</sup> Colling 2013                        | -21.81      | ш                                     |
| líc.      | Ammega 44                              | mge I. Mass       | 3114 C of<br>APITA 33                                      | e0, p)      | 11,2                                  |
| 67.       | Ovanide las CN1                        | me I, Man         | JS05-CN E. Columnettic<br>Method APHA 73 * Fulrium<br>2017 | -0.32       | 0.05                                  |
| jā.       | Chronium to Fr <sup>®</sup> 1          | ing I, Mas        | APHA 232 Edition 2017                                      | <0.07       | nas                                   |
| 16.       | Amount Deoregan's (as MUAS)            | ing L. Max        | Anne Kiol IS 1024k   | ₹0.1        | 1                                     |
| 201       | Pleno is Compounds (as C,H;Ott)        | mg I, Mas         | IS 1025 dansa Y  | ol.801      | n ons                                 |
| 21,       | <>>0<br><                              | mg/l              | 15.3025 Pan 59   | 40          | ( <del>) (</del> ()                   |
| 22.       | HuS iso O/I                            | m <sub>6</sub> /1 | 18 1025 Pan-441  | 5           | 1                                     |
| 22.       | Described (Paygen (as H <sub>g</sub> ) | ngel, Mir         | 15 3025 (Part 38)  | 52          | 4                                     |
| 20        | O la desse                             | ng'i Max          | IS 1025 (Part-19)  | CAT         | 01                                    |
| 25.       | Imprile(Liste)                         | (mpn/190ml)/Max   | 15 1622 (4)  | E POLICE    | \$000                                 |

\*Complaints Register is available at Laboratory.

4" Hoor, 'AMITY VILLE', 12-13-1270/71/73, St. Ann's Road, Tarnaka,

Secunderabad - 500017. Telangana, India.

End of the Report

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CIN No. #U74210TG1998PTC032358

C'BAO Environmental Sciences



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Cuptomer : AlA, \$5W Steel Limited

Test Report No. : DSE, 7202 (7WS-02066)

Late Code the Tricks Mark

Inspectibility 11910/12021 YOUR BALL : Letter Dated 09,01,2021

Project Name: Aurgyanpeshi Irus & Mangagese are Mines

Sample Description: Surface Water Sample : 1 No. x5.0 Day Sample

T No. a Stiff not Sumply (Mirlaty)

. No a 500 of Wise much Clays notice for OKCI

Il Noya 250 mi Sample the Steepherd Bridg Lee Micto

Pedder : Player Burley Cost Required z As grain helds Date of Receipt : 05.07,2021 Date of Resistration 09.66212112.1 there of commencement of screing 01.97 2031 their of completine of crysing 19 97 7071

Shaple condition at accept Sample levied as reveled

Sampling Details
Sampling Method/Procedure: (3-9), v (bit 1-)
General Enveronment conditions ink ,
procedure properties

Date of Secupling: 16:47.2821 Location of Sampling: Kevira Nale ( Near between Quarry No. 1 & 4 )

Page Section?

Found ak

| LEST RESULTS |                                |                       |  |                                   |                                      |  |
|--------------|--------------------------------|-----------------------|--|-----------------------------------|--------------------------------------|--|
| S.<br>No.    | Tex Feranscler                 | f.mals                | Ten Method   | Herall                            | Limits for Stream Water<br>Standards |  |
| I,           | Color                          | Hazon Union, Maxie    | 12 3023 (Pen-4)  | 10                                | Vári                                 |  |
| 2            | рН                             | #1                    | Is 3025 (15m-11)   | 6.58                              | 6.5 k-K-5                            |  |
| I.           | Total Surpresented Schools     | mg/l                  | IS.3025- Pan-17  | 50                                |                                      |  |
| 4            | Fotal Dissolved Solids         | mg/, Mex              | 15 3025 (Mps-16)   | 164                               | 1910                                 |  |
| 5            | Calenda (as C))                | mgA, Max.             | 15 3025 (Part-32)  | 14                                | 500                                  |  |
| 5            | hun (as se)                    | mg/l. Max             | 0.00 0.60<br>APDA 75° Sappes 2017  | P.E6                              | \$11                                 |  |
| 2            | Sulpture (pr 90%)              | mgt, Max              | 15 3025 (Part-34)  | 12                                | 100                                  |  |
| я            | Fuorite (us.7)                 | mg/l, Mus.            | 4580 (1.0)<br>API4A 20° Rida on 2012                                     | 0.19                              | 15                                   |  |
| 9            | Meates (as 90a)                | TBH Max               | 4500 NU <sub>2</sub> B  1 V Spectrophotemetric Superling Method          | 4.8                               | 511                                  |  |
| in.          | Copper (as Luci                | Total Mass            | JITT9 or<br>APPIA 30° Fortur 30.7  | <u0.2< td=""><td>1.5</td></u0.2<> | 1.5                                  |  |
| i,           | Warganese & Mn                 | mg/l                  | 1111 Blief<br>APIIA 23 <sup>4</sup> Editing 2017                         | 4.002                             | Take 1                               |  |
| 13           | Se unium run Se)               | mg/I Mas              | APITA 23 <sup>th</sup> Edman 2017  | <00.00                            | 0.05                                 |  |
| 2,           | Zinc to Zni                    | ngT Mas               | APRIA 33 <sup>rd</sup> Satistica 2017                                    | 0 <b>0.0</b> 2                    | 14                                   |  |
| H,           | Cadmium (ex Cal)               | ng/t Max.             | 1[11]9 a]<br>APHA 23 <sup>3</sup> Edition 2017                           | -cuind                            | *0.5                                 |  |
| 4            | Frac (p. Ph)                   | mg/1 Max              | 711 O of<br>APHA 2 VA ABHA   | ⇔#.DL                             | 11.1                                 |  |
| 14.          | Amenic (ne As)                 | ng/L Max              | JHAC et<br>APHA 23 <sup>st</sup> Edition 2017                            | <00 HI                            | 11.2                                 |  |
| 1            | L'panire (as CN)               | mpā. Maz.             | 4500 CN E. Colorimetrio<br>Method, APHA 23 <sup>rd</sup> Edition<br>2017 | 100.02                            | 0.05                                 |  |
| 14.          | Continum (as Cr <sup>2</sup> ) | migl, Max             | 3010 B of<br>APIJn 212 Edition 2017                                      | 49.97                             | 4.55                                 |  |
| ч            | Assente Detergerts (sa MSAS)   | mgd, Max              | Aneta K pl 15 17748  | *0.1                              | 1                                    |  |
| a.           | Photosic Computado no CaHiOH   | mgl, Mer              | IS 3025 (Part-41)  | <0.001                            | 4,005                                |  |
| 21.          | 0.00                           | niel                  | 15:3025 Pan 58   | 36                                |                                      |  |
| 2.           | HOD (as G <sub>2</sub> )       | mgt                   | IS 3025 (Fart-44)  | 1                                 | 1                                    |  |
| Э.           | Described Oxygen (no Oy)       | n <sub>b</sub> /L Min | 19 3025 (Part 34)  | 77 1                              |                                      |  |
| ļq           | Oil & Oldase                   | mg/l Mas              | IS 3025 (Part-39)  | EAST                              | "1                                   |  |
| 5            | Total Conform                  | :mpn/100nil).Max.     | IS:1622  | We Co                             | 9506                                 |  |

Interpretation of results: Nil. Deviation from up) matrol: Vi-

\*Complaints Register is available at Laboratory

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Authorized Signatory (Chandra Modi) Environmental Sciential

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Telangena, India

Email

CIN No. 1074210TG1999PTC032358

# WATER FLOW RATE REPORT

JULY-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Client : M/s. JSW Steel Ltd.

Name of Mines : Narayanposhi Iron & Manganese Ore Mine

Month : July

Date : 31.07.2021

#### SURFACE WATER FLOW RATE OF STREAMS

| 8.No | Location                                     | Flow rate (Velocity)<br>in Meter/Second |
|------|--|---|
| 1.   | Orahari Nala Up Stream                       | 0.426                                   |
| 2.   | Confluence of Orahari & Karo Nala            | 0.789                                   |
| 3.   | Kasira Nala (Nala between Quarry no-3 & 4)   | 0.397                                   |
| 4.   | Karo River Down Stream (Nala near Gate no-1) | 0.841                                   |

For B.S Envi-Tech (P) Ltd.,

Authorised Signatory

Website www.bsenvitech.com
CIN No : U74210TG\*999PTC032358

GROUND WATER
LEVEL REPORT

AUGUST-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: August

Date

: 27.08.2021

#### GROUND WATER LEVEL, DEPTH FROM SURFACE

| 8.No           | Location                          | Ground Water Level<br>In Meters |
|----------------|-----------------------------------|---------------------------------|
| l <sub>e</sub> | Dug Well Koira Basti              | 7.91                            |
| 2.             | Dug Well Kasira Başti             | 7.49                            |
| 3.             | Site Services Area (Pizometer-01) | 17.32                           |
| 4.             | Near 650 crusher (Pizometer-02)   | 12.45                           |
| 5.             | Crusher plant area (Pizometer-03) | 32.77                           |

For B.S Envi-Tech (P) Ltd.,

Phone : +91 40 49783062 / 27016806 Fax : +91 40 49783063 Email : lab@bsenvilech.com, info@bsenvitech.com

Authorised Signatory

\*Complaints Register is evailable at Laboratory.

Website : www.bsenvitech.com

CIN No. #U74210TG1999PTC032358

GROUND WATER
QUALITY REPORT

AUGUST-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: Mrs. ISW Steel Limited

Test Report No. : BSRT/2021/WS-03622

1.ab Code No.

: 210687808

Issue Date

(28.08,2021

Your Ref

: Lotter Dated 16 08 2021

Project Name: Narayanposhi Iron & Manganese ote Mines Sample Description: Ground Water Sample:

Qty.

Packing

# 1 No. x 2.01 his Sample

I No. x 500 ml Sample(Metals).

LNO x 259 mf Sample (Microbiology).

: Plastic Botrle & Pro-Stonfized Hotele

Lest Required: As given below.

Sample tested as received

Date of Registration

Date of Receipt 1: 16 (8, 2021)

Date of completion of testing

Sample condition at receipt

Dute of commencement of resting

Sampling Details

Date of Sampling: 12,08,2021

Location of Sampling: Dug Well Koira Basic

Sampling Method/Procedure: IS 1075 Part I

General Environment conditions: (%

Page Not Loft?

16.08.2021

17/08/2021

28.08 2021

Found ok

#### TEST RESULTS

| 5.              |                                       |        |  |           | Requirement as per<br>IS 10500:2012 |   |
|-----------------|---------------------------------------|--------|--|-----------|-------------------------------------|---|
| No.             | Test Parameter                        | Linits | Test Method  | Result    | Acceptable<br>limits                | Permissible limits<br>in absence of<br>alternative source |
| $I_{\sigma};$   | Odour                                 | ¥ .    | IS 3025 -Part-1  | Agrecable | Agrecable                           | Agrecable   |
| 2.              | Calaur                                | Hazen  | IS 3025 -Part-4  | <.5       | 5                                   | 15  |
| 3.              | рП                                    | *      | FS:3025- Part-11   | 6.69      | 5.5-8.5                             | No Relaxation   |
| 4.              | Turbidity                             | 7171   | 15:3025 -Pan-10  | <1.       | I                                   | 1   |
| 5.              | Total Hardness as CaCO,               | mgl    | 18:3025 - Pag-21   | 64        | 200                                 | 600   |
| 6,              | from as l'e                           | ring/1 | 3111 B of<br>APIFA 21 <sup>st</sup> Edition 2017                       | 0.08      | 1.0                                 | No Relaxation   |
| Э.              | Chilecides as CI                      | mgl    | 15.3025 -Part-32   | 42        | 250                                 | 1400  |
| Х.              | Total Dissolved Solids (a,105°C)      | lign   | IS. 3025 + Part-16   | 166       | 300                                 | 2000  |
| ٥,              | Calcium as Ca                         | اعما   | IS 3025- Part-40   | 20        | 75                                  | 200   |
| ID <sub>0</sub> | Magnesium as Mg                       | ingil  | IS 3023 -Part-46   | 3.4       | .40                                 | 100   |
| Ή               | Sulphate as SO <sub>4</sub>           | ing/l  | IS:3023 -Pgrt-24   | 27        | 200                                 | 400   |
| 12              | Nitrate as NOs                        | mgd    | 45(0)-NO <sub>V</sub> H UV<br>Spectraphotometric<br>Substanting Method | 15        | 45                                  | No Relaxation   |
| I i             | Fluoride as F                         | mg/l   | 4500-F D;<br>APHA 25 <sup>th</sup> Edition 2017                        | 0.36      | ı                                   | 1.5   |
| 14              | Total Alkalinity as CaCO <sub>1</sub> | mg/l   | 18(3025 -Pan-23  | 30        | 200                                 | 600   |

Interpretation of results. Nil., Deviation from lest method, Nil.

Authorized Signatory (G.Chandra Mouli ) Environmental Scientist

\*Complaints Register is available at Laboratory.

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Phone 9491 40 49783062 / 27H168B6 Fax : +\$1 40 49783663 Email ∭lab@bsenviloch.com, in/a@bsenvitent.com.



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: Wis, JSW Steel Limited

Test Report No. : BSI/1720211WS 183622

Lah Code No.

+ 210687808

Issue Date

: 28 08.2023

Your Ref

: Ferler Dated 16 08 2021

Project Name: Nurayapposhi Iron & Manganese oce Mines

Date of Receipt : 16.3%,2021

Oty

Sample Description: Ground Water Sample

a. I. No. x 2.0 Lirs Sample

1 No. x 500 ml Sample(Mctals)

I No x 250 mil Sample (Microbiology)

Packing.

: Pfastic Bottle & Pre-Stenhaed Bottle

Test Required: As given holow-

16.0N 2021 Date of Registration 17,08,2021 firste of commencement of testing Date of completion of testing 28,08,2021 Sample condition at receipt Fraund ok

Sample tested as received

Sampling Details

Date of Sampling: 12.08 2021

Location of Sampling: Ong Well Kona Bash

Sampling Method/Procedure: 18,3025 Part 1. General Environment conditions: Ok.

Page No: 2 of 2

#### TEST RESULTS

| s.              |                      |             |   |         | Requirement as per<br>IS 10500:2012 |   |
|-----------------|----------------------|-------------|---|---------|-------------------------------------|---|
| 14              | Test Parameter       | Daids       | Test blethod  | Hesull  | Acceptable<br>finits                | Permissible timics<br>In absence of<br>alternative source |
| 15.             | Boron as R           | ngd         | 4500-B B.<br>Curcumin Method,<br>APHA 23" Edition 2017  | < 0.10  | 0.5                                 | 2.4   |
| 15.             | Alian muzicas Al     | mgil        | 1500 Al B Erichionic<br>Cyan ne Rinathod                | < 0.02  | 0.123                               | 0.2   |
| 178             | Copper as Cu         | ពម្ភា       | 3111 B or<br>APHA 21 <sup>51</sup> Edition 2017         | < 0.02  | 0.65                                | 1.5   |
| IX.             | Manganese as Min     | ing/l       | 3111 B of<br>APHA 21 <sup>11</sup> Edition 2017         | < 0.02  | 0.1                                 | 0.3   |
| 10              | Solonium as So       | ing/l       | 3914 C of<br>APHA 2012 Edition 2012                     | < 0.01  | 0.01                                | No Relaxation   |
| 20              | Zine as Zn           | rug/1       | 3112 <b>B</b> of<br>APIIA 24 <sup>14</sup> Edition 2017 | < 0.02  | 5                                   | 15  |
| ZI <sub>E</sub> | Cadmium as Cd        | mg/l        | 3111 Clof<br>APHA 23 <sup>rd</sup> Edition 2017         | < 0.003 | 0.003                               | No Relucation   |
| 12,             | Load as Ph           | ngi         | 3111 C of<br>APIIA 23" Filmon 2011                      | < 0.01  | anı                                 | No Relaxation   |
| 13.             | Meicury as Flg       | ngd         | 31.12 Blad<br>APHA 23° Edition 2017                     | < 0.001 | 0.091                               | No Relaxation   |
| 24              | Tetal Arsenie 14 As  | mg/l        | 31.14 C of<br>AP/1A 23 <sup>rd</sup> Edition 2017       | < 0.01  | (1.01                               | 0.05  |
| 25              | Tetal Chromoin as Cr | ngl         | 31 T Cal<br>APEIA 23 <sup>st</sup> Editions 2017        | < 0.02  | 0.05                                | No Relaxation   |
| 26              | Tetal Californs      | 1:FU/100ap1 | IS: 1622 – 1981   | Absent  |                                     | *   |

Interpretation of results, N.J. Deviation from test method, N.I.

Authorized Signatury f.G.Chandra Mouli J Environmental Scientist

so Fiel of the Reported

"Compleiols Register is available at cabinitating

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CIN No. #U74210TG1999PTC032358

Website : www.hsegvilect.com



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: M/s. JSW Steel Limited

Test Report No. : BSE 1/2021/WS-03623

Lab Code No. 1.210687708

Issue Date 4.38,08 2021

Your Ref

: Letter Date# 16 OR 2021

Project Vaine: Narayanposhi Iron & Mangaovsc ore Mines

Date of Receipt is \$6,08,2021

Sample Descriptions Ground Water Sample

Q1y

: I No. x 2 ft Ltrk Sample

I No. v. 500 ml. Santale(Metals).

1 No x 250 ml Simple (Wigrobjology).

Packing

: Plastic Borro & Pre-Steralized Bottle

Lest Required : As given balow

16.08.2021 Date of Registration 17 08 2021 Date of commencement of resting 28.08.2021 Date of completion of testing Sample condition at receipt Found ok

Sample tested as received

Sampling Details

Date of Sampling: 12,08,2021

Location of Sampling: Dag Well Kasaya Sasti

Sampling Method/Procedure: IS 1025 Part 1. General Environment conditions: Ok

Puge Nn: 1 of 2

#### TEST RESULTS

| S.       |   |       |  |           | Requirement as per<br>IS 16500:2012 |   |
|----------|---|-------|--|-----------|-------------------------------------|---|
| Na.      | Test Parameter                                | Units | Test Method  | Result    | Acceptable<br>Mmits                 | Permissible limits<br>in absence of<br>alternative source |
| £        | Oikiir  | #     | 15:3925 -Part-5  | Agreeable | Agreeable                           | Agreeable   |
| 2        | Colour  | Hazen | 15:1025 (Part-4  | < 5       | 5                                   | 15  |
| ì        | pH  | 75    | IS 3025- Part-11                                       | 6.R4      | 6.5-8.5                             | No Relaxation   |
| 4        | Turbulay                                      | STU   | 15 3025 -Parr-10                                       | <1        | 1                                   | 3   |
| 5        | Total Hundriess as CaCO.                      | mg/l  | 18 3029 -Part-21                                       | 90        | 200                                 | 600   |
| 6.       | Iron as Fe                                    | mg/l  | 3111 Bud<br>APHA 23° Edition 2017                      | 0.07      | 10                                  | No Relaxation   |
| 7.       | Clifforeles as CT                             | me/I  | 18,3025 (Part) 32                                      | 58        | 353                                 | 1800  |
| 8.       | Total Dissolved Solids Self(S <sup>o</sup> C) | mg/I  | 15:3025 - Part-16                                      | 264       | 500                                 | 2000  |
| 9,       | Calcium as Ca                                 | nsg/I | 18:3025- Part-40                                       | 32        | 75                                  | 200   |
| Ю        | Magnesium us Mg                               | mg/l  | 15:3025 -Part-46                                       | 2.4       | 50                                  | 1/10  |
| 11.      | Sulphate as SO <sub>4</sub>                   | Ingl  | IS:1075 -Pan-24  | 39        | 2100                                | 406   |
| 12       | Nitrate as NO <sub>3</sub>                    | mig/I | 4509-NO B UV<br>Speatrophrepmetric<br>Screening Method | 20        | 45                                  | No Relaxation   |
| $D_{ij}$ | Fluonde as F                                  | mg/   | 4500-F D;<br>APHA 23 <sup>rd</sup> Edition 2017        | 0.42      | 1                                   | 15  |
| 14       | Total Alkalimiy as CaCO,                      | mg/i  | IS 3025 -Parr-23                                       | 64        | 200                                 | 606   |

Interpretation of results: Nal. Deviation from less method. Nal.

(G.Chandra Mouli) **Environmental Scientist** 

"Complaints Register is available at Laboratory,

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Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### TEST REPORT

Name & Address of the Customer: M/s, JSW Steel Limited

Test Report No. : BSI/T/2021/WS/03623

Lab Code No.

: 210687208

Issue Date

: 28 (84,2021)

Your Ref.

: Lener Daied 16:08:2021

Project Name: Narayanpushi Izon & Manganese ore Minus

Date of Receipt : 16.08.2025

Sample Description: Ground Water Sample

I No. s 2 0 Lits Sample

I No. v 500 ml Samplet Metals)

1 No x 250 ml Sample (Microbiology).

Pucking.

: Plastic Bottlo & Pre-Stori ized Bettle

Fest Required : As given boxow

Date of Registration 16.08.2021 Date of commencement of testing 17.08 2021 28.08 202 t Date of completion of testing Sample condition at receipt Found ak

Sample tested as received

Sampling Details

Date of Samplings \$2,08,2021

Location of Sampling: Dug Well Kasira Basti

Sampling Method/Procedure: 18 3025 Part 1

General Environment conditions: Ok.

Page No: 2 of 2

#### TEST RESULTS

| 4:        |                      |                |   |         |                      | roment as pec<br>10500:2012                               |
|-----------|----------------------|----------------|---|---------|----------------------|---|
| S.<br>Nik | Test Purameter       | l.n/cy         | Test Method   | Result  | Acceptable<br>limits | Permissible limits<br>in absence of<br>alternative source |
| 15.       | Pairion as Li        | mpil           | 4500-B B<br>Cureumin Method.<br>APHA 22 <sup>M</sup> Edition 2017 | < 0.10  | 9.5                  | 2.4   |
| 15        | Aluminium as Al      | ing/I          | 55(8) At Bill- Emeliroine<br>Cyanine 8 method                     | < 41.02 | 0.03                 | 0.7   |
| 17,       | Copper as Cu         | ing/l          | 3111 B of<br>A211A 33" Edition 2042                               | < 0.92  | 0,05                 | 1.3   |
| 18.       | Munganese as Mn      | mg/l           | 3111 B of<br>APSIA 33" Edition 2011                               | < 0.02  | 01                   | 0.3   |
| 19.       | Scientim as Se       | mg/l           | 3114 C of<br>APPIA 23" Edition 3817                               | < 0.01  | 0.01                 | No Relacation   |
| 20        | Zinc as Zn           | முழி           | 3) 10 B of<br>AP21A 23° (blitton 2017)                            | < 0.02  | 5                    | 15  |
| 217       | Cadminum sa Cd       | ng I           | 3111 C of<br>APata 23" Edition 2017                               | < 0.003 | 0.003                | No Relaxation   |
| 22.       | Lead as Pb           | nigil          | 3111 C of<br>APHA 23 <sup>rd</sup> Edition 2017                   | < 0.01  | 10,01                | No Relaxation   |
| 23,       | Mercury as Hg        | g( <u>§</u> /I | 31 2 B of<br>APHA 23 <sup>9</sup> Edition 2017                    | < 0.001 | 0.001                | Na Relaxation   |
| 24.       | Torot Aneme as As    | mgl            | 2174 Col<br>APITA 23 <sup>2</sup> Tabitum 2017                    | < 0.01  | 0.01                 | 0.05  |
| 25.       | Total Chromium as Cr | ngl            | 3101 C of<br>APHA 23 <sup>rd</sup> Edmon 2017                     | < 0.02  | 0.05                 | No Relaxation   |
| 24.       | Total Coldornis      | CFL/F80ir1     | IS 1622 1991  | Absent  | 215                  | 5:  |

Interpretation of results: N.I. Deviation from test method, N.I.

Adthorized Signatory CG.Chandra Moull ) Environmental Scientist

so End of the Reportso

\*Complaints Register is available at Laboratory.

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Website www.bsenvitech.com CIN No. 12 U74210TG1999PTC032058



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: M/s. JSW Steel Limited

Test Report No. : BSET/2021.WS-03624

Lah Code No.

: 210687608

Isrue Date

: 2X,08 2021

Your Ref

: Letter Dated 16,08 2021

Project Name: Narayanposhi Iron & Manganose oto Mines

Date of Receipt (16,08,2021)

Qly.

Sample Description: Ground Water Sample

1 1 No. x 2.lt Litts Sample

I No. x 500 ml Sample (Metals).

1 No x 250 ml Sample (Microbiology).

Packing

: Plast o Bettle & Pre-Sterilized Bottle

Test Required : As given below

16,08,2021 Date of Registration 17 08 2021 Date of commencement of testing 28.08.2021 Date of completion of testing Sample condition at receipt Found ok

Sample tested us received

Sampling Details

Date of Sampling: 12,08,2021.

Luxation of Sumpling: Site Services Area (Pezerneter - (II))

Sampling Method/Procedure: IS 3025 Part 1.

General Environment conditions: Ok-

Page Not 1 ul 2

#### TEST RESULTS

| S.  | Test Parumeter                       |        |  |           | Requirement as per<br>45 (0500:2012 |   |  |
|-----|--------------------------------------|--------|--|-----------|-------------------------------------|---|--|
| ۱». |                                      | Units  | Test Method  | Result    | Acceptable<br>limits                | Permitsitle limits<br>in absence of<br>alternative source |  |
| t,  | Odour                                | -      | 15/3025 -Part-5  | Agreeable | Agrosable                           | Agreeable   |  |
| 1,  | Colour                               | Hazer. | IS 3025 -Part-4  | < 5       | 5                                   | 15  |  |
| 3,  | pHI                                  | ++     | IS 3025 - Parr-11  | 6.77      | 6.5-8.5                             | No Relaxation   |  |
| 1   | Terbalay                             | VIII   | IS 3025 (Part-10   | <1.       | 1                                   | 5   |  |
| 5.  | Total Hardness as CaCO,              | mg/l   | 18:3025 -Part-21   | 76        | 240                                 | 630   |  |
| íς  | Iron as Fe                           | ng-1   | 3111 Blof<br>APHA 21 <sup>st</sup> Edition 2017                      | 0.08      | 1.0                                 | No Relaxation   |  |
| 7-  | Chlorides as CI                      | mg-I   | 18, 9025 -Part/32  | 64        | 250                                 | 1000  |  |
| 8   | Total Onsolved Solids #8105°C        | nigit  | 18.3825 (Part-16   | 252       | 500                                 | 2000  |  |
| V.  | Cateign as Ca                        | mg/l   | 15:3625- Part-40   | 24        | -6                                  | 200   |  |
| 10  | Mugnesium as Mg                      | mg/l   | 18:1025 -Part-46   | 3.9       | 441                                 | 100   |  |
| П., | Sulphate as SO <sub>c</sub>          | mg/L   | 18:1025 -Part-74   | 27        | 200                                 | 400   |  |
| 12  | Natesto as NO <sub>1</sub>           | ing/l  | 1500-NO <sub>3</sub> -B-UV<br>Spectrophotometric<br>Screening Method | 24        | 45                                  | No Relaxation   |  |
| 13, | Pluoride as Γ'                       | ng/l   | 4500-F (t),<br>APHA 2.1% Edition 2017                                | 0.41      | I                                   | 1.5   |  |
| 14. | Total Alkabinty as CzCO <sub>1</sub> | mg/l   | 15:3025 -Pan-23  | 50        | 200                                 | 600   |  |

Interpretation of results: No. Deviation from test method, No.

Authorized Signatury (G.Chandre Mouli) **Environmental Scientist** 

\*Complaints Register a available at Lagranatory.

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Website I www bservitisch com

CIN No. @U74210TG 1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Customer: M/r. JSW Steel Limited

Test Report No. : BSET72021/W5-02624

Lab Code No.

: 210087MIX

Issue Date

 $\pm 28.08.2021$ 

Your Ref.

t Letter Dated (6.08-2021)

Project Name: Naruyanposhi from & Mangapese ore Mines

Sample Description: Ground Water Sample

Qty

: 1 No. x 2.0 t its Sample

1 No. + 500 of SamplerMetals)

I No.x 250 mi Sample (Microbiology)

Packing

. Plastic Boitle & Pre-Sterrlized Boitle

Test Required: As given below

Date of Registration 1648.2921

Date of completion of testing 2F 08.2921

Sample condition at receipt Found of.

Sample tested as received.

Date of Receipt : 16.08.2021

Sampling Details

Date of Sampling: 12.08 202:

Location of Sampling: She Services Area ( Pizometer - 01 )

Sampling Method/Procedure: IS-E(25 Part I General Environment conditions: Ok

Page Not 2 of 2

#### TEST RESULTS

| 5.  |                      |             |   |         | Requirement as per<br>15, 10500:2012 |   |  |
|-----|----------------------|-------------|---|---------|--------------------------------------|---|--|
| No. | Test Parameter       | Tintis      | Test Melhod   | Hesult  | Acceptable<br>limits                 | Permissible limits<br>in absence of<br>alternative source |  |
| 15, | Horon as B           | ma:         | 45/9-B B<br>Coreanin Method<br>APHA 23 Edition 2017 | < 0.141 | 0,5                                  | 2.4   |  |
| 16. | Aluminium as Al      | म्मूरी      | J500 ALB - Enchroine<br>Cyanine 2 methrs            | < 0.02  | 0.03                                 | 0.2   |  |
| 170 | Copper as Cu         | ша,         | 3111 B of<br>49:14 23 <sup>th</sup> Edition 2017    | < 0.02  | 0.05                                 | 1.5   |  |
| 18, | Manganese as Mn      | mgl         | 3111 B of<br>APrIA 23 <sup>rd</sup> I dition 301.1  | < 0.02  | 0,1                                  | 0.3   |  |
| 120 | Selen um as Se       | mg.         | 3114 (16)<br>APSIA 23 <sup>rd</sup> Edition 2017    | < 0.01  | 0.01                                 | No Relaxation   |  |
| 20. | Zinc as Zn           | ng'         | 3111 B of<br>APSIA 33 <sup>th</sup> Edition 2017    | < 0.02  | 5                                    | 15  |  |
| 21. | Cadmium as Od        | nig/        | 3111 Cloff<br>APMA 23 <sup>rd</sup> Edition 2017    | < 0.003 | 0.003                                | No Relayation   |  |
| 23# | Load as Ph           | অঞ্         | 3111 C of<br>APELA 23 <sup>11</sup> Lebtron 2011    | < 0.01  | 0.01                                 | No Rolassion  |  |
| 23. | Mercuty as He        | uità,       | 3112 B of<br>APELA 23 <sup>rd</sup> Edition 2017    | < 0.001 | 0.001                                | Na Relaxation   |  |
| 24. | Total Arsenic as As  | mg/         | 3114 C of<br>APMA 23 <sup>rd</sup> Edition 2417     | < 0.01  | 0.01                                 | 0.05  |  |
| 250 | Tetal Chromium as Co | ng/         | 3111 C of<br>APrIA 23 <sup>th</sup> Edition 30.7    | < 0.02  | 0.05                                 | Na Relaxation   |  |
| 26. | Tetal Coliforns      | CT1./100m.t | IS 1622 1981  | Absent  |                                      | 8   |  |

Interpretation of results. Not Deviation from test method, Not

Authorized Signatory
(G.Chandra Youll)
Environmental Scientist

or Lind of the Reported

\*Complaints Register is awarable at Laboratory.

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Website : www.bservitech.com

CIN No # U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: Mrs. JSW Steel Limited

Test Report No.: BSET/2021 WS-03625

Lab Cude No. : 210px750x

Issue Date

: 28.08.2021

Your Ref.

: Letter Dated 16 08:2021

Project Name: Narayanposhi from & Manganese ore Mines.

Date of Receipt : 16.08.2021

Date of completion of testing

Date of commencement of testing

Sample Description: Ground Water Sample

: TNo 3/2/01 by Sample

I. No. x 500 mf Sampler Metals):

UNA x 250 ml Sample (Microbiology)

Packing. Plastic Bottle & Pre-Standized Bottle Test Required : As given he now

Sample condition at receipt

Date of Registration

28,08,2021 Found ek

16.08.2021

17 (8,292)

Sumple tested as received

Sampling Details

Date of Sampling: 12 08 2021

Location of Sampling: Near 650 Crusher (Pszemeter - 82.)

Sampling Method/Procedure: 18 3/125 Part 1

General Environment conditions: Ok-

Page No: 1 of 2

#### TEST RESULTS

| Α,              | Tost Parameter                        |       |  |           | Requirement as per<br>IS 10500:2012 |   |
|-----------------|---------------------------------------|-------|--|-----------|-------------------------------------|---|
| No.             |                                       | Units | Test Method  | Result    | Acceptable<br>limits                | Permissible limits<br>in absence of<br>alternative source |
| 1.              | Odcur                                 |       | IS 3025 -Part-5  | Agreeable | Agrecable                           | Agrecable   |
| Z.              | Cofour                                | Bazen | 19 3025 -Pum-4   | < 5       | 3                                   | . 3   |
| 1.              | וזק                                   | **    | 18/3025-Pan-11   | 6.71      | 6.5-8.5                             | No Relaxation   |
| 4.              | Turhidity                             | NIU   | 48 3025 -Pan+10  | <1        | 1                                   | 5   |
| 5.              | Total Harrings as CaCO <sub>1</sub>   | ரதா   | t8.3025 -Part-21   | 58        | 200                                 | 600   |
| 6.              | Iron 45 Fc                            | mgʻl  | 1111 Braf<br>APHA 23 <sup>rd</sup> Edition 2017          | 0.07      | 10                                  | No Relaxation   |
| Je              | Chlorides as CI                       | ngt   | 15:3025 -Part-32   | 50        | 250                                 | 1000  |
| S.              | Total Dissolved Solids to 105°C       | rig/l | 18:3025 - Part-16  | 254       | 500                                 | 2000  |
| 9.              | Calcium as Ca                         | mg/l  | 18: 9025 - Part-40                                       | 20        | 75                                  | 200   |
| IG.             | Magnesium as Mg                       | ing/l | 18:3025 -Part-46   | 1.9       | 30                                  | IDA   |
| H <sub>20</sub> | Sulphare as SO <sub>4</sub>           | ngl   | 15:3025 -Pan-24  | 38        | 200                                 | 400   |
| 12.             | Nitrate as NO <sub>3</sub>            | ng I  | 4500 NO. B UV<br>Specificphotometric<br>Screening Method | 25        | -15                                 | No Relaxation   |
| 130             | Fluoride as F                         | ng t  | 4509-F D.<br>APHA 23 <sup>rd</sup> Edition 2017          | 0.4h      | 1                                   | 1.5   |
| 14.             | Total Alkalininy as CuCO <sub>1</sub> | ugl   | 18.0025 -Pan-23  | 64        | 2001                                | 600   |

Interpretation of results. Nill, Deviation from text medical. Nill.

Authorized Signatory (G.Chandra Mouli ) Environmental Scientist

\*Complaints Register is available at Laboratory.

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CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: Mis. JSW Steel Limited Test Report No. : BSET/2021/WS 03625 Lab Corte No. 1.2[0887808]

> Issue Date : 28.08.2021

Date of Registration

Your Ref. (Terier Daied 16,08 2021)

Date of commencement of testing

Date of completion of testing

Sample condition at receipt

Sample tested as received.

Project Name. Natayanposhi Iron & Manganese ore Mines Date of Receipt : 16.08.2021

Nample Description: Ground Water Sample : I No a 2.0 Lits Sample

1 No. x 500 ml Sample(Metals)

UNO 5-250 and Nample (Microbiology)

: Plastic Dattle & Pre-Sterilized Bonto

Packing Lest Required : As given below

Sampling Details

Date of Sampling: 12:08:2021 Location of Sampling: New fi50 Crusher ( Pizometer - 02 ) Sampling Method/Procedure: 18 3025 Part. General Environment conditions: Ok

Page Not 2 of 2

16.08 2021

17.08/2021

28,08 2021

Found ok

#### TEST RESULTS

| Α,   |                      |           |  | Kesult  | Requirement as per<br>IS 10500:2012 |   |
|------|----------------------|-----------|--|---------|-------------------------------------|---|
| No.  | Test Parameter       | Units     | Test Method  |         | Acceptable limits                   | Permissible limits<br>in absence of<br>alternative source |
| 15;  | Isuron as B          | пд.       | 45(0.0 B)<br>Curcumin Method.<br>APITA 23 <sup>rd</sup> Edition 2017 | < 0.10  | 9.5                                 | 24  |
| 16.  | Aluminium as Al      | nig       | 3500 Al B Enchroine<br>Cyanisc R method                              | < 0,02  | 0.03                                | 0.2   |
| 12   | Copper as Cu         | nigr:     | 3111 B of<br>APHA 23 <sup>th</sup> Edjinon 2017                      | < 0.02  | 0.05                                | 1.5   |
| 18.  | Manganese as Mir     | mg/I      | 3111 B of<br>APHA 231 Johnson 2017                                   | < 0.02  | 0.t                                 | 0.3   |
| 195  | Sclenum as Se        | nig/I     | 31, 4 C of<br>APHA 2 <sup>co</sup> Edition 2017                      | < 0.01  | 0.01                                | No Relaxation   |
| 241. | Zinc as Zn           | ingl      | 3111 Blof<br>APHA 21 <sup>th</sup> (alman 2017)                      | < 0.02  | 5                                   | 15  |
| 11.  | Codnition as Cd      | mg/l      | 3111 C of<br>APHA 23 <sup>9</sup> Editor 2017                        | < 0.003 | 0.003                               | No Relaxation   |
| 22.  | Load as Pb           | mg/l      | APHA 22 <sup>11</sup> Edition 2017                                   | < 0.01  | 0.01                                | No Relaxation   |
| 23.  | Mercury as Hg        | ing/l     | 3112 Blof<br>APHA Zi <sup>ra</sup> Edition 2017                      | < 0.001 | 9/00/1                              | No Relaxation   |
| 24   | Total Arsent, as As  | luēji     | 3114 C or<br>APRIA 21 <sup>st</sup> Cdmon 2013                       | < 0.01  | 13-0                                | 0.05  |
| 25.  | Total Chromnum as Cr | ing/I     | 3111 Clof<br>APHA 21 <sup>th</sup> Editjop 2013                      | < 0.02  | 0.05                                | No Relixation   |
| 26   | Cotal Celifornis     | CFU/100ml | IS: 1622   1981  | Absent  |                                     | 馬   |

Interpretation of results. Nil, Deviation from test method, Nil.

Authorized Signatory (GChandra Mouli ) Environmental Scientist

or End of the Reporter

"Complaints Register's available at Laboratory.

āmail

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CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: Mrs. JSW Steet Lamited

Test Report No. : BSE1/2021/WS-03426

5 28,08 2021

Lab Code No. 1210687408

Issue Date

Your Ref

: Letter Dated 16 08 2021

Project Name: Narayanposhi Iron & Manganese ore Mines

Dare of Receipt : 16,08 2021

Sample Description: Ground Water Sample

: I No. x 2.0 Lins Sample

1 No. x 300 ml Sample(Metals)

I. Nn x 250 ml Sample (Microbiology)

Packleg : Plastic Hottle & Pre-Sterilized Bottle

Test Required: As given below:

Date of Registration. 16.08.2021 17.09.2021 Date of commencement of testing 28.08.2921 Date of completion of testing Sample condition at receipt Feund 6k

Sample tested as received

Sampling Details

Date of Sampling: 12,08,2021

Location of Sampling: Crosher Plant Area | Prescrictor - 03 |

Sampling Method/Procedure: 18 1025 Part 1 General Environment conditions: Ok

Page Not 1 of 2

#### TEST RESULTS

| S.  |                                       |        |   |           | Requirement as per<br>15 10500:2012 |   |  |
|-----|---------------------------------------|--------|---|-----------|-------------------------------------|---|--|
| No. | Lost Parameter                        | Unite  | Test Method   | Result    | Acceptable fimits                   | Permissible limits<br>in absence of<br>alternative source |  |
| ļ,  | Осон                                  | 775    | 18:3025 -Pan-5  | Agreeable | Agreeable                           | Agreeable   |  |
| 2,  | Colou-                                | Hazen  | 15:3025 -Pan-4  | < 5       | 5                                   | 15  |  |
| 3,  | pH                                    | *      | 18 3025- Purt-11  | 6.85      | 6.5-8.5                             | No Relaxation   |  |
| 4.  | Turbidity                             | NTIJ   | 18-3025 - Part-10                                       | <1        | L                                   | .3  |  |
| 5.  | Total Hardness as CaCO,               | mgd    | 1S 3025 - Part-21                                       | 76        | 260                                 | 600   |  |
| fi; | from as the                           | mgd    | 3111 B of<br>APHA 23" Edition 2017                      | 0.09      | 1.0                                 | No Relaxation   |  |
| 2.  | Chlorines as C1                       | itig/l | 18:3025 (Part-32)                                       | 62        | 250                                 | 1000  |  |
| 8   | Total Dissolved Solids pri05000       | ing/I  | IS: 3025 - Part-16                                      | 23/6      | 500                                 | 2003  |  |
| ٧,  | Calcium ds Ca                         | ing/l  | 18:3023- Part-40  | 24        | 75                                  | 290   |  |
| 10. | Magnestoni as Mg                      | mg/l   | 15:3023 -Part-46  | 3.9       | .441                                | 130   |  |
| Ц   | Sulphate 28 SO <sub>3</sub>           | mg/l   | 15;3125 -Pan-24   | 41        | 200                                 | 400   |  |
| 12. | Nitrate 14 NO.                        | mg/l   | 4500 NO, B OV<br>Spectropholometric<br>Secretary Method | 2#        | 45                                  | No Relaxation   |  |
| 135 | Fluorade as F                         | mg/I   | 4500-H D.<br>API (A 23 <sup>rd</sup> Edition 2017       | 0.49      | Т.                                  | 15  |  |
| 14. | Total Afkalinity as CaCO <sub>1</sub> | Inja/1 | 15.0025 -Pan-23   | 68        | 200                                 | 500   |  |

Interpretation of results. Nill, Deviation frenitest method: Nill.

Authorized Signatury (-G.Chandra Mouli) Environmental Scientist

\*Complaints Register is available at Luboratory

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Website ( www.bsenvitechicom) CIN No. 3 U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: Mrs. JSW Steel Limited

Test Report No.: BSET/2021 WS-03626

Lab Unde No.

± 210687408

base Date

: 28.08.2021

Your Ner-

3 Lener Dated 16 08,2021.

Project Name: Narayanposhi Iron & Manganese ore Mines.

Date of Receipt : 16.03.2021

Sample Description: Ground Warer Sample

: I No. x 2.0 Ltrs Sample

1 No. x 500 mt Sample(Motals).

1 No x 250 inf Sample (Microbiology).

Pucking.

: Plastic Bottle & Pre-Sterifized Bottle

Test Required : As given below

Date of Registration 16.68.2021 17,08,2021 Date of commencement of testing Dare of completion of testing 28 68,2021 Sample condition at receipt. Found ak

Sample lested as received

Sampling Details

Date of Sampling: 12,08,2021

Location of Sampling: Crasher Plant Area ( P. complet - 0.) )

Sampling Method/Procedure: 15 3025 Fan 1

General Environment conditions: Ok-

Page No. 2 of 2

#### TEST RESULTS.

| <b>S.</b> | Test Parameter        |           |  |         | Requirement as per<br>(5.10500:2012 |  |  |
|-----------|-----------------------|-----------|--|---------|-------------------------------------|--|--|
| Nik.      |                       | Units     | Test Method  | Result  | Acceptable<br>limits                | Permisallyle lamits In absence of alternative source |  |
| 15.       | Buron as fi           | mgl       | 4500-B-9<br>Cureumin Method,<br>APHA 23 <sup>11</sup> Edition 2017 | < 0.10  | 1) 5                                | 2.4  |  |
| 16.       | A'aminium as Al       | mg/l      | 3500 A4B - Emchrome<br>Cyanine B method                            | < 0.02  | 0.03                                | 0.2  |  |
| 17.       | Cupper as Cu          | mg/l      | 3111 B of<br>A*01A 23° Edition 2012                                | < 0.02  | 0,05                                | 1.2  |  |
| 18.       | Минульем и Мп         | mg/l      | 3111 Blof<br>AddA 30° Lifton 2012                                  | < 0.02  | 9.1                                 | 0.3  |  |
| 19.       | Selenium as Se        | mg/.      | 31.14 C of<br>AP31A 23 <sup>th</sup> Edition 2017                  | < 0.01  | 0.01                                | No Relaxation  |  |
| 20        | Zing as Zij           | mg/l      | 3111 B of<br>AP2IA 23 <sup>th</sup> Edition 2012                   | < 40.02 | 3                                   | 15   |  |
| 212       | Cadmium as Cd         | ing/I     | 31.11 C of<br>APSIA 33° Edinso 2017                                | < 0.003 | 0.003                               | No Relaxation  |  |
| 22.       | Lead as Pb            | mg/l      | MILL Coll<br>APHA 23 <sup>th</sup> Edition 2007                    | < 0.01  | 0.01                                | No Relaxation  |  |
| 23,       | Mercury as Fig        | mg/I      | 31 2 B of<br>APHA 23 <sup>st</sup> Edition 2017                    | < 0.001 | 0.001                               | No Relacanon   |  |
| 24,       | Total Arsenie as As   | mg/l      | 2114-0 at<br>APITA 23 <sup>4</sup> Infinem 2012                    | < 0.01  | 0.01                                | 9-05   |  |
| 25,5      | Tutal Chrismium 13 Cr | mg/I      | 2111 C of<br>APHA 23 <sup>11</sup> Edition 2011                    | < 0.02  | 0.05                                | No Relaxation  |  |
| 26.       | Total Conforms        | CFD/100ml | 18: 1s77 = 1981  | Absent  | - 20                                | (A)  |  |

Interpretation of results. Not. Dectation from test method, Not

Authorized Signatory G.Chandra Voull Environmental Scientist

so End of the Report-4

10 cmplaints Register is available at Laboratary.

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Website : www.bsanvitech.com

CIN No. #U74210TG1959PTC032358

SURFACE RUN OFF ANALYSIS REPORT

AUGUST-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Names & Address of the Continuous : May JAW steel Cityaged

Total Report No. 5 884 - 2021/WS-03619

Lath Cinde 74a 710648116 Issue Dete . 04,04,0031

Date of throeight: 23,03,2021

. Letter Oated 22 04 2021

Project Name: Prarayanjonal Pros & Mangatons ove Milles

Sample Description: Sar Loc Water Sample

of No. +5,0 tim Sample

1 No. 2 500 nd Sample (March)

This a Miximil Wide moon Glass bonk for D&G

LAM 8 250 ml Nample Pig Stenlard Boille For More-

Parking Lest Kerjured : Phone Disulter

: As green brine

Date of Registration

COUNTY

Date of commencement of testing

Sample irried to received

0A.0E.200

Date of completion of testing

71 dk 2021

Samule condition at receipt

(-wind nit

Sannling Details

Date of Sampling: 15,06,2021 Location of Sampling: Macs Pac Section Req 481 Sampling Method Procedure: 15, 9023 Part

Graceal Emrironment conditions aik .

Page New Lot 1

TRACTICALITY

| Si. | Few l'arameter                 | Loss             | Feu Meihnd  | Résult                       | Limits for Steeam Water<br>Stehdards |
|-----|--------------------------------|------------------|---|------------------------------|--------------------------------------|
| t.  | Cisnur                         | Azron Page Mary  | IS 1005 (Parti-4)   |                              | 700                                  |
| 4   | μ1.                            | 8                | 18 905 (Par 11)   | 6.47                         | A.Snik.s                             |
| N.  | Total suspended Folids         | ing1             | IS 2005- Port-13  | 16                           | 1346                                 |
| c   | Tinal, b second Solute         | ing'i, Mas       | 18 1025 (Per 16)  | B44                          | 15:41                                |
| 5_  | Pitride (RRV)                  | erg'l Max.       | IS 2025 (Par. (12)  | 7.5                          | 500                                  |
| 6   | Journal (v)                    | ng't Max         | 30 (0 B o)<br>APP 14 211 February 2017                    | 0.09                         | <u></u>                              |
| 1   | Supposers (as \$10)            | ng Max           | (6.3525 (Pair-24)   | h 2                          | 400)                                 |
| A,  | Filtrands (av II)              | 15g 1, 55g X     | 4590-110.<br>A PHA 3 1 <sup>th</sup> 1ghoor 3017          | 0.11                         | 1,5                                  |
| 9,  | Nemico (as NU) q               | mgd, Vas         | 4500 NO. P.<br>UV Speciaphologica<br>Successor facilist   | 2.5                          | 41                                   |
| H,  | Comparças Coj                  | og I. Ster       | 21 01 H of<br>APRA 301 Ballot 20 7                        | <0.02                        | 13.                                  |
| H.  | Matgridese Switch              | ingil            | 91.1 H of<br>AP 1A . 3 <sup>a</sup> : como (0.7           | 4.40117                      |                                      |
| ı:  | No enium Res 9/1               | ng L Van         | 21 AB of<br>APHA 23 * rddicar 2015                        | ≪kûn                         | 0.05                                 |
| 15  | Zina jas Zin.                  | ing J. Vak.      | 91 1 1 21<br>APSIA 25 <sup>th</sup> Pgujar 2017           | <b>9.00</b>                  | 15                                   |
| I÷. | Phánnan (as Cz)                | mg l. Man        | 21 1 Hr of<br>APPLA 23 <sup>2</sup> Ection 2017           | <ul> <li>Addubles</li> </ul> | यान                                  |
| :5  | Coal (is the                   | ng LWas          | 31 111 of<br>APHA 27" (400%) 2017                         | -40.01                       | 11.1                                 |
| le. | Action (as As)                 | ing I Nas.       | 71, 41° of<br>APHA 23° ration 2017                        | <0.01                        | 22                                   |
| Ľ.  | Cyande tas (N)                 | mg I Mas         | 4500 CN E. Lobermeter<br>Mathet APIDA 21th Indian<br>2017 | or.e2                        | nes                                  |
| Lt. | Chroman (as Cr. 1)             | ing Lates        | APHA 30° Literation A223                                  | -11.92                       | 0.05                                 |
| 14  | An artic Helengens (go NJHAS)  | reg CMax         | 400A K of IS 17249  | <0.L                         |                                      |
| 20  | Planeba Compounds (as Collada) | mp I Ma          | 18 1074 (15 m 4 f)  | es NIT                       | q/ps                                 |
| 21. | 100                            | ng'i             | 18.7025 Part 54   | 23                           | 1941                                 |
| E.  | 19 (12 ps/4) (1)               | u* ı             | 18 HC5 (Pyc 44)   | 4                            | 3                                    |
| 14. | Posober (hypexize o))          | mg/1, Man        | 15 3025 (Part-35)   | 55                           | a                                    |
| Į4. | Off A Crowd                    | mg I, Mgs,       | 18 3029 (128-39)  | <1                           | 0.1                                  |
| 23; | 1 sql Coldicin                 | (age, 100m), Max | IS tolk   | ECHO                         | \$000                                |

Integrabilism of monty. Not Deviation fram (4) (right d. Not

\*Complaints Register is available at Laboratory.

Anthorned Mgsalury (G.Chandra Mrwill ) Escophimental Actionisa

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lab@bsenvitech.com, info@bsenviloch.com Website www.bsonvitech.com CIN No.

D742101G1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Notice & Addices of the Continuer: Also 1996 Sirel Langued

Test Report No. 1 HSF1/2021/WS 03600

34.0% 2021

Lab Cote 39 21th SIMBS

Leave Mair VIAME HAT

: Laret Dated 21.76,2021

Date of Receipt : 21/94/2021

Project Nume: Nursyampinki Iran & Manganese ere Mine-Sample Resonption: Surface Wwee Number

Quantity

of No. +5.01 in Sample

I No. a 500 mt Sample (Messa).

This is fille into the demonstration of the Miles of Miles and Miles of the Miles o

Parking

Oper of NameHog 14,09,2021

: Physic Haules

23/06/202 Hace of Registrating 25,06272 Date of commencement of finding Dare of completion of seeting 11 98 2525

Nampir ciachtean at regapt Sample tested in received

Tett Required

a Avignen seline

Location of Sampling: Setting Foud Near Cate No.2

Sannling Details

Aumpling Michael Procedure 15,7425 Pag 1 General Environment conditions: ok .

Petit Fee, 1 of 1

Funnt ok

#### DEST RESULTS

| 5.<br>Vii. | Bayl Parameter                 | Units             | Test Method  | Henull                               | Limets for Stream Water<br>Standards |
|------------|--------------------------------|-------------------|--|--------------------------------------|--------------------------------------|
| L          | Colum                          | Hazar Opis, Max.  | (5.3005 (Fig., 4)  | 3                                    | 431                                  |
| 1,         | ph                             | 8                 | 882156H)   | 0.04                                 | 165 k K3                             |
| 1,         | Trial Superided Solds High     |                   | 5 3025 - Part 17   | 18                                   | 120                                  |
| 4.         | Finlant Crisico voca Sport dis | mp I. Van         | S 3073 (Pym 14)  | V2                                   | 1500                                 |
| 3/1        | Chloride (as U)                | mg I, Mars        | 18 3023 (Part-32)  | K S                                  | 600                                  |
| 6,         | hur (as (%)                    | ng-t Mar          | HELLIGH<br>APPIA 2 <sup>PP</sup> Cd (par 2017            | 0.11                                 | Su                                   |
| 2.         | Substatus (as 90.)             | ng L Vas          | 18 7035 (Part-24)  | 7.3                                  | иМ                                   |
| 6.         | Huorido (20 Γ)                 | mg I Mas          | 450×1 f);<br>APHA 35° 1 dings 7513                       | 0.16                                 | .5                                   |
| u,         | Samuelas 804                   | rip's Max         | Ownershap<br>DV Spearephopogene<br>Science Metho:        | 1.0                                  | ŚII                                  |
| .5         | Copper(as Ch)                  | n p UMax          | 1111 9 or<br>APHA 231 134m/ 2411                         | <0.02                                | 1,3                                  |
| I I        | Мендателя за Ми                | np/I              | 1011 A.of<br>APHA 28° tastion 2017                       | o (0,02                              |                                      |
| (2,        | Selemian (cs Se)               | righ Max          | 5114 Bilgr<br>APRA 201 94mo# 2017                        | S U III                              | 0.07                                 |
| Ų,         | Zinc as Zin                    | repl. Max         | APHA 200 Editor 2017                                     | 0.03                                 | 15                                   |
| 14         | Papmjon (as od)                | aipd. Max         | 0111/3 eff<br>APHA 22° 50-not 2017                       | <u.ve <="" td=""><td>-11</td></u.ve> | -11                                  |
| N.         | Load (as Po)                   | mgd, Max          | 3 1 11 or<br>490A 9° 5dolar 2017                         | 48.0L                                | u,r                                  |
| le.        | Arrente (28 A))                | mid. Max.         | 3 11 C of<br>API'A 22' edition 2017                      | 5 <b>0</b> .III                      | 0.2                                  |
| (2)        | Pyanos to PS                   | mgd, Max          | 450 CN F. Coheimenia<br>Methad, APHA 23 f Seatur<br>2017 | • <b>•</b> 112                       | 0.05                                 |
| IS.        | Charmin to Coll;               | nigh, Mis_        | 3. H B of<br>A20A 20° Filmen 2017                        | 40.07                                | 11/05                                |
| 9.         | Anuna (Iucqonsias VIIAS)       | ng I. Var         | Aprilia, Not 18 (324)                                    | <0.∎                                 | 1                                    |
| žii.       | Plane's Comments save (1950)   | nig-t, V(s)       | 3/80% [Bal41]  | <0.061                               | 4,003                                |
| 21         | :YDD                           | me-l              | 15,1023 Part 56  | #1                                   | -                                    |
| 22.        | eto a to                       | 102-1             | 8 909 [56 44]  | 5                                    | 11                                   |
| 23,        | Dissolved Oxygen (as Ox)       | eg - Min          | \$ 9725 (59) 341   | 5.4                                  | 4                                    |
| 14.        | Off & Course                   | mg t Max          | 4 6 24 Page 94 p   | 41                                   | 61                                   |
| 25,        | Torgit (196ppp g               | Soon (10m) (Var.) | '51623   | - TO V                               | 530                                  |

Interpretation of results. Nil, they more tremugal method: Nil.

\*Complaints Register is available at Laboratory.

(G.Chanifra Music) Experimental Scientist

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Website I www.bsenvilectr.com CIN No. : U74210TG1999P1C032358

SURFACE WATER
QUALITY REPORT

AUGUST-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Consumer : 2004, JSW Steel Limeral

Fert Report Mac : BSF F:2021:WS-01501

Eah Cude Ne 110099905 Issue Date 3.25016-2503

Your Bet

: Loor Decd 15/48/2121

Project Name: Naras-amposta from & Mangarets are Mine-

Numble Description: Surface Water Scrip of Quantity

3.1 No. 35.0 Los Sample

I No. 4 300 nd Sample (Metaly)

T.N. in Settlers, Works result to his bond; For Object T.N. in Settlers Works Stratized Death T. v. Marty

Patking Test Regulted : Plake thoses

As years beginn

Date of Receipt 17 0\* 2931 Date of Registration

12.04.2020

18.08.2023 Date of commencement infreshing

Date of sampletion of testing 25.08 203 .

Nample conficien as neceipe Sample board as presided

Page of Sanipling: 69 uk 2020

Location of Sampling: Orabarinate opotrosm

Sampling Details

Sampling Method/Procedure 16 3975 Pan I

Control Englishment conditions, sh

Page Sin, Co. 1.

Aound ok

|                 |                                 | 1151              | RESULTS   |                                      |                                      |
|-----------------|---------------------------------|-------------------|---|--------------------------------------|--------------------------------------|
| S.<br>Sa.       | 1en Farnmetr                    | Lalis             | fee Matters   | Ketali                               | Limits for Stream Water<br>Suggiants |
| 1.              | 1.6)40                          | Pagentina-, May   | 14 (035 Pan 4)  | 14                                   | 100                                  |
| 4.              | til                             |                   | 3 9026 (rail 11)  | No.                                  | 7. Kort 2.2                          |
| J,              | Ioral Nespenced Soluls          | and               | N 9725, Part. 7   | 34                                   | -                                    |
| 4               | lotal Deselved Solids           | ingd, Max         | S 3028 (0500-08)  | 6.15                                 | 1500                                 |
| S.              | Chamak pas CP;                  | mgd, Mas.         | . 6.7025 (Pan 33)   | 25                                   | 6.0                                  |
| 6,              | Isotojas Peji                   | mgd, Max          | APHA 21' Tithor 2012  | -1.18                                | 36                                   |
| 7               | Sulphons (gc 40g)               | ngr. da           | 19 0025 (Part 24)   | 9.8                                  | 400                                  |
| κ,              | Ehronk (as b)                   | mgrt, Max         | A500-1 D;<br>A6HA 13 <sup>4</sup> Edition 2017                          | 4.15                                 | 1,5                                  |
| ų.              | Sulfates (av SO <sub>1</sub> )  | ng i Mac          | 45/HoSCipel<br>LV Spreituphytometric<br>Scirence Method                 | 4.8                                  | 51                                   |
| 12.             | Copper (25 C))                  | ingst Man         | 501 Blot<br>8808 201 odukir 2012  | -01,07                               | L3                                   |
| 1.              | Manzantoe as Min                | mg/l              | 3.1 B of<br>Artha 22° Educin 2012                                       | < 0.03                               | 1943                                 |
| 12              | Schooling (ge Ye)               | ny t Mas          | 5 (4.0 of<br>APDA 23° 1 dayon 2011                                      | -বাঞা                                | нис                                  |
| IJ,             | Zinctas Zot                     | mg/L2dax          | API API of API                      | 0.40,5                               | .5                                   |
| ч               | Community (4s Cd)               | right Max         | APDA 77 <sup>12</sup> Edition 2017                                      | <0.007                               | - 301                                |
| 15.             | Ladius (N                       | ±μ/, Mak          | APDA 20" Little on 2017   | -071                                 | 0.1                                  |
| D.              | Arsenic as his                  | ng Max            | 3 14 U of<br>API A 20 Februar 2017                                      | -tuu1                                | 0.2                                  |
| r)              | Cyanide (as CN)                 | ng, Max           | 4520 CN E. communición<br>Method, APRA 21 <sup>st</sup> Littors<br>2017 | <iiii1< td=""><td>0.05</td></iiii1<> | 0.05                                 |
| IS,             | Clesorani (a. Ce <sup>2</sup> ) | mg/ , ktax        | APICA 23 <sup>rd</sup> Estima 2012                                      | \$1002                               | n.o.s                                |
| 111             | Amone Ociecye in Cas MBAN       | me". Max          | April 6 (715-1734)  | ok.i                                 | T.                                   |
| gn <sub>e</sub> | Pherola: Compounds [as: 0:0001] | mg/, May          | Is So/S (Panists)   | 411 MIII                             | nans                                 |
| 1.              | cup                             | nig l             | IS 1025 - Part 53   | 40                                   | -                                    |
| 22.             | BOD (80 C))                     | one I             | IS 500 y (Pan 10)   | 4                                    | ·                                    |
| , C             | Disvrised Osypan (as Os)        | n pr. Pgm         | 15, 902.5 (Part -4R)  | 5.2                                  | 1                                    |
| 1,              | Coll of Conses                  | High , Max        | 18, 9123 (Pan. 39)  | <1                                   | Q.I                                  |
| 1               | Total CobS par                  | impa (Emil; Max.) | 15 11 20  | 17 L7                                | 5000                                 |

Inverses an of results; Nil. Deviation from test crafted, 3rd

\*Complaints Register is available at Loadragory

Signatory ( C.Chayata Monti ) Environmental Scientisi

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Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### TEST REPORT

Name & Address of the Contourer MA. 1996 Stept Elpaket

Test Report No. 1 HSPT-20011W 5-03302

± 2848,2021

Lab Cade No. 1, 210895808

Deves Base Voter Hell

(1 km r Due; 1) 78, 2020

Date of Recyipt 1: 10/4-2001

Project Name: Narsysapishi Irea & Manganese ort Misco Sample Decouption: Souther Water Sample

Location of Sampling: Disabprovals, (Manystrego.)

Quantity

of No. a Sill Contrample

1 Mays 300 ml Simple (Moule)

1 No. 3 Stell pil Wide insigh Glass por circhites.

2 Nat 5 19th rd Simple Pre Steel (See Boulz for Mone)

Parting : Parg/ Panjes Levil Hequired ....; As given below

12,05,0621 thate of Registration.

16,05,0021 But at summanament of sesting

Date of completion of testing 25.04.0021

Sample enadicing at receipt Sample letted as accorded

Date of Samplage 09 (0.201)

Sampling Details

Sempling Method@racedore 15 V25 Pan 1 General Essiranment condicions, ab

Paste No. 1971

Count of

#### DESCRIPTION

| Š.,            | Test Phrameter                 | 4 oils            | Ten. Wellind  | Heyall          | (amila jar Sepapan Wale)<br>Standards |
|----------------|--------------------------------|-------------------|---|-----------------|---------------------------------------|
| L.             | Cater                          | Proces Gross, Man | IS 4005 (Part 4)  | 15              | <b>W</b> 0                            |
| 2              | ıll                            | 3                 | (\$ 1025 (Par 11)   | N.71            | 44.193                                |
| ×              | Total Suspended Article        | 7k                | 15 2075 Page 17   | 54              | e                                     |
| 4              | oral Despited North            | ne t. Vag         | 38 809 (Bar 19)   | 162             | icen                                  |
| N.             | Choice to 1 II                 | ngd, Van          | 15 9105 (1524) Q (  | .39             | zalli                                 |
| Ju.            | Angs vi                        | ngd Mas           | M11 Rec<br>A11A2 (11 one) 2017  | 0.24            | 50                                    |
| :              | Sulphates (as SCL)             | mgrt, Man         | 15 3025 (154)-241   | 12              | 400                                   |
| F <sub>i</sub> | "Touride (as E)                | ngd Max           | 4500-ji D<br>449-4-23 <sup>0</sup> 1 (440)-2013                       | 0.20            | US.                                   |
| 4              | Supplies as SOci               | mg t Max          | ###C-NOp10<br>. V Spectrophilorization<br>Spectrop, Mathem            | 61              | <b>NII</b>                            |
| ĮF.            | Copper tas Can                 | ng/l Max          | 30 H   15 of<br>A PEA 21 <sup>8</sup> Inflation 2012                  | *(J- <b>4</b> ? | F2                                    |
| 1 +            | Manyare-rist Mr                | mp <sup>r</sup> l | 9111 B of<br>4 PbA 2)** Pilman 2017                                   | ~ 0.02          | 5+4                                   |
| Ľ,             | Selencum (24 Ser               | irgi Max          | 21 HATE OF<br>A 44A 324 Dodge 2017                                    | -al #           | njes                                  |
| 13.            | /inc (5×/n)                    | mp t Max          | 1111 11 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1                               | 0.544           | 3                                     |
| 14             | Cadmun (as vid)                | ngT Mas           | 3111 B of<br>A210 221 fall in 2017                                    | 44,000          | <0.1                                  |
| 15.            | Tradita-PNI                    | ag UMax           | 71 H. H. St.<br>A 5 HA 2 11 Fig. or 2017                              | HUH             | 31                                    |
| 16.            | Assertic (as Au)               | ing/LNtax         | 21 (4 C. a)<br>A : 4A 23 <sup>d</sup> 1 d for 2012                    | ન્યામા          | 0.2                                   |
| 17             | Cyarule (as i 3c)              | mpt Max           | 49801 K.L. Cubinments<br>We had AP1A 21 <sup>8</sup> Final or<br>2017 | -alul?          | 0,05                                  |
| X.             | Charlenn (45 th)               | 11gft Mac         | 0.10.0 ct<br>A.90A 25" 1 (mar 20.7                                    | -mu!            | 0.25                                  |
| A.             | Aut, inc Doorgene (as Mil/AN)  | mg t, Mix         | Arnes, Kierris (2048)   | 40.1            |                                       |
| 20.            | Parpath, Compandes (45 C.H.DH) | r pr. Max         | 14 0025 (Pan 41)  | 41.Hit          | 4,00%                                 |
| 21,            | Cur                            | n <sub>k</sub> r  | A 3025 - ran 58   | 46              | 2 20                                  |
| ν,             | Hoth (as O <sub>3</sub> )      | Lit.              | 19 7035 (Pan 31)  | ,               | 1                                     |
| 24             | Davidsol Phygraeta Coh         | ing I Min         | (S. 603 (Pan. 18)   | 51              | 4                                     |
| 24             | () & Gitano                    | nigh, Max         | 18 2025 (Pap 20)  | *1              | - 0                                   |
| 29.            | etal Coliform                  | (ppn 10trat), Max | 25.11(2)  | 796 × 5         | S EN SIKH                             |

Interpretation of results. Not Deviation form test method, N.I.

\*Complaints Register is available at Leb (rapity)

(C)Chandra Mouli ) Excitosporgesis Scientist

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Website www.bsenvilech.com CIN No.

-D74210TG1999P1CIB2358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Physpaper 1 Mer. JSW Steel Limited

Test Report No. ; 081 (2021/W8 0.00)

120,08,0631

Lah Chide Na 11.7 Hotel 1989

Dance Date Your Ref

: Letter Gated 12 H4 2021

Date of Recorpt 1: 13:05:2021

Project Name: Nersyappeshi Irun & Marganese ore Mines Sumple Description, Suitasa: Whier Sample

Quantifi-

LinuxStill LinuxSample

1 No. 5 With 1 Sports (Metals

T No. 5 500 ml Wide doubt was mille for Wikin T No. 5 750 ml Sample Pile Sombook Actile For Micros

Packing

· Mastic Ponks

Irei Erguired 1 A signed helder

24.08.7071 Date of Regotratein m.08 2021 Name of complete mean of severing

35.0% 2031 thair of completion of symmy Smitgle condition of receipt Learned ada

Spengio tesard us necelved.

Date of Sampling: 149.86 2821

Sampling Details
Sampling Method-Procedure: 18 309 year 1

Page Sec Lot

General Engineering and craditions: ob .

Lacation of Sampling: Kare river I paircon

#### TEST RESULTS

| S.<br>Nik | Pest Parameter                   | ( =±.,             | Test Mathish  | Result  | Jumits for Serven Wester<br>Standards |
|-----------|----------------------------------|--------------------|---|---------|---------------------------------------|
| 1,        | r'e'an                           | Inazon Carite Mass | to (995 (15m-4)   | 79      | 360                                   |
| -         | р1.                              |                    | 15 1025 (Part-10)                                       | 6.61    | 6,5 (5.8.5                            |
| L.        | Intal Suspended Some             | mpl                | 18 90/3 Pin 17  | 46      | - 111                                 |
| 4.        | Time Provided Sel.23             | migit Max.         | 15 3025 (Part-18)                                       | 124     | LAIII                                 |
| :         | Litherica (Li)                   | लाहुन, अंदर        | DC 31/05 (1965-17)                                      | 21      | 1691                                  |
|           | Imprigs (c)                      | cort, Max          | 21 01 B of<br>APRA 25 * action 2017                     | 1.24    | 70                                    |
| 'n.       | Sulpanes (as SO <sub>2</sub> )   | ing l, klas        | 15 992) (Bio-2-1)                                       | 14      | 4411                                  |
| ч         | Prioride (as F)                  | ng I, Vin          | 4500-1-10.<br>A PHA 23 <sup>rd</sup> Februar 2017       | 0.55    | l <sub>D</sub>                        |
| 9,        | Norther fas NOS                  | ingd Min           | 4900-NCs-B<br>CV Spaceophilometric<br>Scientific Method | 5.2     | :0                                    |
| 10        | Cotpetites (fla)                 | ing'l, Wari        | To HELL<br>APLACE AND A SECOND                          | <0.01   | LS                                    |
| H,        | Wanganing ak Alm                 | ng.                | 70 T B 57<br>APPIA 23 <sup>2</sup> T d Cor 2012         | < 11112 | 2441                                  |
| U.        | Section (1856)                   | mg/L Man           | 914 Stot<br>APSIX 23° Labor 2013                        | *0.01   | 0,05                                  |
| 14        | Zinz (se Zin)                    | rg1 rate           | 2111 d k 0<br>APHA 23 <sup>1</sup> Color 2012           | 0.02    | 19                                    |
| H         | Cadmors (as (N)                  | ng t Vas           | APHA 75° 1 punt 2017                                    | south)  | · d, i                                |
| 15        | Urac (ck Ph)                     | rig I .K.is.       | APHA 231 status 2017                                    | <0.01   | IC.                                   |
| r.        | Americ (av As)                   | ng ( Vas           | APHA 2Nº 1 color 2017                                   | -11111  | 107                                   |
|           | I yanish tas I Ni                | ng t Mac           | AMICOCO, Prioringen;<br>Mobile, APID 274 Platon<br>2013 | 4B IIZ  | ψμs                                   |
| 0         | Lancon um tas Cp <sup>1</sup> a  | mg . Mac           | API-API I I I I I I I I I I I I I I I I I I             | <0.02   | 4,14                                  |
| ıs.       | An mile Baxingvate - as MILAST   | eigh, Max          | Amex RoftS 1940   | VU.II   | 1                                     |
| 20        | Phonal circonposeds (as Cat /OL) | mg I. Max          | IS 3025 (Part-41)                                       | <0.001  | 1,00%                                 |
| 1.        | 700                              | np.                | 18 1023 - Pap-5K  | A2      | -                                     |
| 92        | 80007as Cot                      | nig/               | 18 7828 (Part-44)                                       | 4       | 3                                     |
| 1         | Dissilant Gergen (as 14)         | rpt Ma             | 15 1705 (Pun 35)  | 4.6     | 4                                     |
| 14        | Od X Glass                       | ng I, Maa          | 5.333 (Part 91)   | *1      | 101                                   |
| 3,        | I-latt at krit                   | price DESURMAN     | 18 162°   | MED     | H A Same                              |

Marphotation of socialty. Not Device our four trial method: Not

"Complaints Register is availante at Linbardtory

Cuttorized Signatory ( G.Chandra Medii ) Emirosopratal Scientist

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Website www.hschyiledh.com CIN No. : U74210TG1999P FCf(32358)



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Costomor - Mrs. JSW Steel Limited

Jew Repair No.: BSFT 2021;WS-03504

Fall-Cede No. 1, 2006/9805 Ittue Date ± 20.06-0021

Lour McF : Lengt Could in 50k2021

Project Aume: Marmyungeshi Iron & Marmyunascure Mines

Sample Detempton: Surface Water Sample Quantity

: I Smin 5 bit its Sapple

1 Nov. 200 to Sample (Meteo).

1 No. 5 300 of Wide mouth Class Sente for HAG

UNIVERSITY Sample ProStern and Bands for Major

Paciting Lest Required

Plant Office

11 As 2000 Series

Date of Receipt 117,04,2021 Date of Registration

16.0E\_2021 Date of commencement of recorg

22 (0) 2021 Pate of campleting of testing

Sample condition at receigt haume rak

Sample Install in recover

Sampling Details Date of Sampling: 49 Ht.2021

Sampling Methyd-Procedure, 18 2025 Part I

Location of Sampling: Karo river Bowlet warn (Sala Scar gate No.1) General Environment conditions of a Page Notice of J.

#### TEST BUSDILLS

| %.<br>74e  | Test Parameter                       | I sun                | Trat Method   | Result        | Liméta for Stateam Water<br>Statulands |
|------------|--------------------------------------|----------------------|---|---------------|--|
| I.         | Orlan                                | Harm Japa Mass       | 18 2025 (Part 4)  | 15            | Ш                                      |
| 2_         | r.l                                  | - 6                  | 15, 9025 (Pan / 1)  | 676           | *.5 m X 5                              |
| ì.,        | Tutal Suspended Sollate              | +μ'                  | 14 3025 Parts 2   | 5×            | (9)                                    |
| T          | Total Chesolacid Schilds             | mg1, Mas             | 13 JU/A (Pap-16)  | 162           | 1500                                   |
| S.         | CMode in Ca                          | mp/I Mes             | 15 3025 (Pant-32)   | 30            | 0G0                                    |
| 6.         | Ironigs I/J                          | mg.1, \dea           | 5211 Plat<br>61914 (1111 top4 2017  | 4,17          | *11                                    |
| e.         | Suphetes (as 80)                     | ng I. Van            | IS 3003 (Pse) (24)  | 16            | 41H1                                   |
|            | Digmide (a) 1                        | ing I. Max           | 49811 D;<br>APPA 2 JT 1 de ch (013  | 0,19          | .5                                     |
| <i>:</i> . | Seamer pe 80,5                       | ng'i May             | 6400 NO. je<br>v Spec teplodatenia<br>Successing Mathad                   | 5.9           | 511                                    |
| Ш          | Companiassio,                        | mp I Man             | 7110 B   F<br>APRA 35° I.d For 2017                                       | <0,02         | 7.4                                    |
| u.         | Muginier in Mn                       | 1,64.e               | 11 1 H of<br>AftitA 23 <sup>st</sup> feeting 70-7                         | 4: II () 3    | 1947                                   |
| Ż          | Selection (a) Sec                    | ringer, Max.         | 10'4 Hoof<br>APUA 28' Dinor 2017  | <0.01         | 697                                    |
| 2,         | Aint (as You                         | nigit, Max           | The test of APPIA 23° London 20°7   | 1(11)         | 15                                     |
| 11         | Cadhinan da Cdi                      | o pd. Max.           | 713 F. et<br>APPIA 23 <sup>1</sup> - Jihon 2017                           | <0.000        | 01                                     |
| 5          | Load Jac PhS                         | ngd, Mis             | 20110 a)<br>2012 20 <sup>1</sup> (julga 2017                              | 5,0,00        | ful                                    |
| Ps.        | Appendito 651                        | ng I. Mas            | APHA 2011 of their 2015   | 98.01         | ηD                                     |
|            | C panish (a) 178]                    | mgd, Was             | 4500 CN P. Cuka metine<br>Method, APHA 22 <sup>rd</sup> Filli win<br>2017 | 60.02         | U/U<                                   |
| 14_        | : homeoro (as Cr.*)                  | ngd Mas              | APIA 37 Library 2017  | ×II.02        | II/II*                                 |
| 19_        | Actuals, Delengores Lts, MHAN)       | ing t Max            | No. 8, 515 (1248)   | < <b>0.</b> 1 | 1                                      |
| 20         | Physiological Compounds (as Coll-Or) | mpt Max              | S 5024 (Park 45)  | 6/1.HI1       | 5000                                   |
| ij.        | Vuo                                  | ng/l                 | 15 8925 Feet (5)  | 48            | : (310)                                |
| 12         | 900 03 07                            | np/I                 | S 600 V P in day  | ŗ             |  |
| i.         | Prosectived Oxygen pay (i); (        | mg L Mm              | 15 7025 - Part-161  | 4.L           | 1                                      |
| 4          | thick Grove                          | mg-I, Mgs            | 18 JU25 (Part 14)   |               | H,T                                    |
|            | Tural Cultiform                      | 1 apre 100 mlt. Max. | 10152   | EGH AL        | 30H-                                   |

the prost of of early Mil Decision frames method No.

\*Complaints Register is evaluable at Laboratory

Anghorited Signature (C. Chundra Moull ) Environmental Scientist

4" Floor, 'AMITY VILLE' 12-13-1270/71/73, St Ann's Road, Tarnaka, Secunderabad - 900017 Telangana, India

**№ 1.40** 497830627 27016806 Гах +91 40 49783063 ab@bshivitech.com, info@bsenvilech.com Email

Website www.bsenvitech.com CIN No.

J74210TG1999PTC032458



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Additions of the Contourer: Mis 15W Steel Limited

Test Report No.: B56:1-2021/WS-03505

1.74 (8.3021)

Lindle Costle No. 2 0699300

Victor Hell Lond Dated 1878,202 Date of Recognition 5,05,000 (

Input Bleer

Propert Name: Marayanprah, Iron & Alasgagere ore Mine-

Sample Description, SubSide Water Sample Quantity

. I. No., G.D. Dry Same of

1 May 2 300 ml Sample (May 3)

Location of Sampling: Kantra Valley Near het need Quarry No. 3 & 4 )

UNION WITH WIND TRAIN GROWN SOFT FOR CICK G 1 No. a 230 and Sample 2nd secology Bonds for Malini

Packing a Panna line te c Test Required in Assignment by law Date of Peglatteties

17.05.0021 Trans. 2020

Financi ro.

Built of commences and leading

25 IN JOSE Date of completion of tarting

Nample condition at receipt Sample lasted as persived

Sampling Details
Surspäng Method-Procedure: IS 2025 %. 1 Date of Sampling: 03.64.2021

General Environment conditions ak .

Page Not Lot L

| No.  | FOM Papameter                           | Loss                   | Ten Melhod   | Result   | Hmits for Streets Water<br>Standards |
|------|---|------------------------|--|----------|--------------------------------------|
|      | L sepur                                 | dates Offic Max        | (6.3025 (PSC4)   | 10       | 100                                  |
| Ġ.   | μl·                                     |                        | 18 7/09 (1%= 11)   | 668      | 8,5 m 9.5                            |
| S.   | For all suspended Socials               | mg/l                   | (\$ 4075, Part-17  | 13       | nee                                  |
| 4,   | Trival Dissertman Society               | mg t Max.              | In West (No. 16)   | 154      | 1900                                 |
| Ç.   | COLords (co.CD)                         | irg t Max.             | (S 4025 (+m+32)  | Zu       | effit.                               |
| 6,   | hndəts)                                 | hp.Mh.                 | 1111 III at<br>APIDA 23 College a 2513   | P 12     | <b>4</b> )                           |
|      | Sulphates (a. 50%)                      | mpt, Mo                | IS M35 (rail-24)   | 14       | 450                                  |
| b,   | nuceide (au / )                         | ngd, Mar               | 450K-1-10,<br>APDA 21 <sup>M</sup> 166-54 2017   | P. 16    | I <sub>1</sub> Y                     |
|      | Virance in CMI(1)                       | og I. Vas              | igratism pr<br>CV Specimpar cimerou<br>Screening Method  | 5.4      | u)                                   |
| H.   | Copper (18 Co)                          | one I, Man             | 51-1-9-00<br>6-207-1200-1203   | r#.82    | 1,5                                  |
| ΕÏ.  | Mangareso ay Mo                         | nışıl                  | APHA 28 <sup>th</sup> retion 2013  | - 11 07  | Tali:                                |
| 12   | Reference (as Set                       | nod Vas                | 3034 Bliof<br>A Pri 6 271 Johnson 2017   | 40.01    | u,as                                 |
| 15.  | Aug (ay Ze)                             | mg I, V 54             | APLATE APLACE AP | × 0.5%   | 4                                    |
| 4    | Cappings (A)                            | ng I, Mas              | 51i ( B) of<br>A Plot 23 <sup>1</sup> Edition 251 <sup>3</sup>   | o5.#43   | - 5.1                                |
| Ŋ,   | , ead (as Ph)                           | mg Listas              | 40 111 of<br>A 204 20 <sup>4</sup> dates (2012)  | *11.91   | 0,1                                  |
| l:•  | Miscocias As)                           | ngel Max               | 3.14 ft of<br>Aztra 221 Adition 2017   | 5000     | 0.2                                  |
| 14   | Upande (as ( N)                         | ing E Max              | 4500 CN ty Calcernation<br>Method (APMA) 2 <sup>rd</sup> Life and<br>2017  | чин      | 1005                                 |
| la,  | Communication (1)                       | ng LMas                | PLIT BLOC<br>APIDA / IX Editions / III 7   | - 01113  | ous                                  |
| N.   | Agonic Triogens (vs MBAS)               | ing t Max              | Armes, K. of 0S 13248  | <0.1     | (E)                                  |
| 20   | Pheno in Chimp surely (as C) II CIII)   | mg I Max               | (5.3025 (Pact 4.6)   | *11 OHIJ | IORes                                |
| 21,  | /ron                                    | n <sub>b</sub> :       | 5 0025 Fam 59  | 2.0      | 10#                                  |
| 27.  | HCD (as II).                            | n <sub>l</sub> .       | (N. 1475 124m 14)  | 1        |                                      |
| (A.) | Dissolved (Logger) has O <sub>2</sub> ) | ny I Vin               | 18 N/S (rae -18)   | 4.7      | 1                                    |
| 21   | On a Come                               | mp I. Man              | 05 10725 (KAN 700)   | 41       | v.i                                  |
| ×    | AL Coliforn                             | (mpre fetterit), Mare, | 18 di22  | ECHE     | Steps                                |

Interpretation of results. Not they also from that method in I

\*Complaints Register is available at Laboratory.

d Signature (Schandra 11mill ) Carried mental Scientist

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Email Inh@lisonvitorh.com info@bsenvitech.com Website www.bservitech.com

GIN No. #U74210TG1999PTCC32358

# WATER FLOW RATE REPORT

AUGUST-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: August

Date

: 30.08.2021

#### SURFACE WATER FLOW RATE OF STREAMS

| S.No | Location                                     | Flow rate (Velocity)<br>in Meter/Second |
|------|--|---|
| 1.   | Orahari Nala Up Stream                       | 0.495                                   |
| 2.   | Confluence of Orahart & Karo Nala            | 0.867                                   |
| 3.   | Kasira Nala (Nala between Quarry no-3 & 4)   | 0.444                                   |
| 4,   | Karo River Down Stream (Nala near Gate no-1) | 0.912                                   |

For B.9 Envi-Tech (P) Ltd.,

Phone :: +91 40 49780062 / 27016806 Fax : +91 40 49783063

ab@bsenyilech.com, info@bsenvitech.com

Authorised Signatory

\*Complaints Register is available at Laboratory.

Website Ewww.bsenvitech.com

CIN No. EU74210TG1999PTC032358

GROUND WATER LEVEL REPORT

SEPTEMBER-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: September

Date

: 15.09.2021

#### GROUND WATER LEVEL, DEPTH FROM SURFACE

| S.No | Location                          | Ground Water Level<br>In Meters |
|------|-----------------------------------|---------------------------------|
| 192  | Dug Well Koira Basti              | 7.06                            |
| 2    | Dug Well Kasira Başti             | 6.71                            |
| 3    | Site Services Area (Pizometer-01) | 16.85                           |
| 4,   | Near 650 crusher (Pizometer-02)   | 12.08                           |
| 5.   | Crusher plant area (Pizometer-03) | 32.12                           |

For B.S Envi-Tech (P) Ltd.,

uthorised Signatory

'Complaints Register is available at Leberstory.

Telangana, India

SURFACE RUN OFF ANALYSIS REPORT

SEPTEMBER-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022.

#### TEST REPORT

Name & Address of the Castomer : Mos. Jank Sprit Campled

Lest Repair No. 1 [13] 12[02] 17005 117020

Light Civile Na 710058009 Fratic Date : 00 00 3021

hample seried as recoved

Your Hef

is a affect flated 75.0 kg/31

Project Name: Narayanpashi Iron & Manganese are Mines Sample Description: Surface Water Sample

: TNica Stitus Sample Quantity

Uscation of Sampling: Most Paracrare Ran off

1 No. 4 900 ml Sangle (Mosala) 1 No. 4 900 ml Sangle (Mosala) 1 No. 4 900 ml Wide indust Glass builte for Oach

USE, a 250 off Sample Pre-Stendard Boundary Micro-

Packing

Date of Seniovers: 21,45,2021

Trst Required As given below

Dise of Receipt 11: CM 2021. Date of Regotration 23.08.0031 Date of commencepaged of copping NUMBER Date of completion of testing \$6,190,7021 Sample vendelien al receipt Loand ak

Sampling Details

Sampling Method/Procedure, 15 3075 Port I

General Environment conditions ak ,

Page No. 1 of 1

|                |  | 1881                | RESULTS  |                  |                                      |
|----------------|--|---------------------|--|------------------|--------------------------------------|
| 5.<br>No.      | Lev Paramuer                           | Units               | Jew Medical  | Result           | Limits für Streum Water<br>Standurds |
| Ç.             | Copul                                  | Hazarthus, Mis-     | 18 mgs (Papas  | 5                | 950                                  |
| 2              | pli                                    | ¥/r                 | 15 1025 (Pint-11)  | 6.75             | 6.5 (2.8.3)                          |
| Ļ.             | Futal Segment Solids                   | myl                 | 18 9033 Pap - 7  | 211              |                                      |
| I.             | Turn Orwanet; Sangs                    | npl, Mgs            | .5 3025 (Part-15)  | 45               | i 500                                |
| ١.             | Cilo de las Cit                        | npl. Mar            | × 002 (Part 52)  | 1.1              | 1900                                 |
| ۵.             | hotplas ()                             | mpt, Max            | APID Ford<br>APIDA 23° Leman 2010  | £.12             | 20                                   |
| 1              | Sulphotes (a) St. ()                   | rigel, Max          | (S XC2) (Part-21)  | 4.4              | 103                                  |
| х.             | Digwords (ex.P)                        | ingd Vas            | 4 V(tel. D)<br>APPLA 21° Edg on 2012                                     | 4.20             | 1.5                                  |
| 9.             | Money (as SOci                         | m <sub>16</sub> Max | 1300 NO, B<br>107 Specifophin name<br>Servering, Matthe                  | 1.9              | í,                                   |
| H <sub>a</sub> | Copper (as Cir.)                       | ng: M/X             | 11 11 3 17<br>MPDA 25 - Patient 2017                                     | 40.92            | 1,5                                  |
| +              | Magazet ge Mi                          | mb,                 | 11.11 ft 18<br>APLAN 2.8° Edition 2015                                   | < 0.01           | (897)                                |
| 12             | Scheman to Se,                         | mp/ , Max.          | 11.4.2 of<br>A44.4.28° (dipo. 2013                                       | 2010             | 958                                  |
| D.             | Emples (e)                             | nig/L, Mas          | 3111 A of<br>4.015 A 2.9% (action 2013)                                  | n,q <sub>3</sub> | В                                    |
| 14             | Cadminia v Cd:                         | mpd, Max.           | 611 1 19 or<br>A Pri (A 23% i data et 2013                               | ell-MII          | IU.                                  |
| 13             | Cod (as Po)                            | myst, stor          | 3.11B nt<br>300A2C (Janes) 250   | <0.01            | 9,1                                  |
| 16             | American //w/                          | mo May              | 3-14 C of<br>4 PhA 201 Educar 3517                                       | 40.0 <b>4</b>    | 2.2                                  |
| 17             | Chamat (# 175)                         | mel, Vas.           | 4200 CN b, ticks metric<br>Motival, APHA 28 <sup>2</sup> lide or<br>2017 | <0.02            | nn<                                  |
| 6.             | Chorno (1/4s Cr 5)                     | man, fews           | Mill It of<br>APDA 201 Eduar 200   | <0.02            | u ns                                 |
| ×              | National Description (as MINA's)       | og: Max             | Advert R of 15 17218   | <0.1             | ı                                    |
| 2.             | Physiologicologic endal (as 5 .11,011) | mg/ May             | 15 90g N (vigits In)   | riont            | HILLY                                |
|                | con:                                   | uê,                 | 18 3628 - Call 88  | 15               | 1944                                 |
| 7              | 400 (a) (%)                            | ale.                | (S 102) 7Pan 44;   |                  | 3                                    |
| 1.             | Describe   Heyget (as (1))             | ngel, Min           | Is 102: cent-18)   | 5.1              | +                                    |
| λL             | Cri. & Grosse                          | nigh, Max           | 15 3 ()5 (15(6.37)   | - 11             | 9.1                                  |
| .5             | Seg Coldani                            | Lingra (90mil), Max | N 199  | 00               | 5900                                 |

Interpretation of reads. But they after regardest method: Nil.

"Complaints Register is available or Laboratory C'BAO Environmental Sciencer end of the Report +91 40 49783062 / 27016806 Fax : 191 40 49783063 Phone

G,Chandra Abrull 1

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lab@bsenvitech.com, info@bsenvitech.com CIN No. # J74210TG1999PTC032358

Telangana India



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Cospanies: Mis. JSW Steel Louises.

Best Report No. (1851-19001/WS-03931

Each Cede No. 2 1657/019

Fung Dary 50.09.2 (2)

Date of Regulation

Yest Ref. Time Dated 35 (9.202)

Date of Receipt 1, 25,05,0001

Project Name: Narayanposhi Iron & Manganese ore Mites Sample Description, Splace Water Strepto

Quinters I No. of P. Ins Sample

T No. 5.590 mt Samble (r-Actaly) T Social Stitlent Wide month Glass bastle for CAC

I No. x 230 m. Sample Pre Stanford Battle For Micro

Packing : P.23tic BorAss Tirst Mequivot. in two smiledess Dase of continentation of testing PERMIT 32.09.2021

Date of completion of resings Sample candition at receipt Sound ak

Sample tested as received

Blate of Sampling: 28.09 2021

Location of Namphag: Setting fond Myan Date No.2

Sampling Details
Sampling Details
Sampling Details
Sampling Details
Sampling Details

General Environment candidates of a

Page Aug Land

21.04.3031

#### DESCRISCION

| Sc.<br>No. | Test Parameter                  | N.nits            | Lest Shethod   | Result  | Linuts for Stream Visited<br>Standards |
|------------|---------------------------------|-------------------|--|---------|--|
| li i       | Colure                          | Hazer, Units May  | 3/3025 (Part 4)                                      | •       | 503                                    |
| 1          | pi <sup>r</sup>                 | £8                | 18 1079 (Part 11)                                    | 6 70    | KS to: 5.5                             |
| 1.         | To all Superified softes        | nışıl             | IN 2023 - Poet 12                                    | 25      | i man                                  |
| J          | Tinal Displaced Sofids          | oupl, May         | (N 9729 (Park 16)                                    | 40      | 1500                                   |
| ٢.         | Orlande las CC                  | mpl, Max          | (\$ 3025 ( doi: 20 )                                 | 5.1     | 216                                    |
| 6.         | lummas her                      | inga, May         | 2011 it of<br>APITA 23 <sup>4</sup> Column 2015      | II.le   | ¢(1)                                   |
| 7          | Salpinació das Mon              | .ng/l. Mas.       | IS 3025 (Sart-54)                                    | 6.5     | 200                                    |
| ×.         | EmmanasEl                       | ingl, May         | 49Hol D<br>APt 4.23° Infects 2013                    | 0.56    | 1,5                                    |
| n          | Nizolo, (as Milj)               | myst, Was         | 4904-NOpls<br>Philographicanian<br>Schooling Method  | ķ.)     | 0                                      |
| ĮF.        | Capper (as La)                  | mgi, Min          | 31 (1 i) 55<br>419(4.2)                              | 41(112  | 1.5                                    |
| r i        | Managerous Mic                  | nat               | 7111 [F 5]<br>APIA 27" Edwor 2011                    | ~ £.02  | 1 <del>71</del> 01                     |
| 12,        | Selement (18 Sel                | mgil. Mas         | 11 (4 H of<br>4 H A 28° Latina 2017                  | <0.0∎   | - 315                                  |
| D.         | Airc (as Air)                   | med, Mar          | 2111 U of<br>A hit A 211 Indian 2017                 | ын      | 15                                     |
| н          | Cadmon (as (3)                  | mgt. Mas          | APIA 21" LJ nor 2011"                                | <0.003  | ıL:                                    |
| la.        | contras (1)                     | mgd, Was          | 2001 H 57<br>4 M A 27 ft billion 2012                | APIH.   | п                                      |
| I&         | Asserticitas As)                | rryc), Adan       | 7117 C 19<br>A311A 2 15 1 J nov 2011                 | ep.na   | 0,2                                    |
| 12:00      | Cyanode las 6N1                 | agi Ma            | 450° CN F. Compressor<br>7465 (ALA 27° F3166<br>2017 | - 0.112 | 0,55                                   |
| 12.        | Clemmin (as viri)               | med felas         | 21   1 B   et<br>Ai:Ha: 25°   Latino 2017            | - 0 112 | 0,05                                   |
| Pi.        | Autoria Delegans, as MISAS)     | ng t Max          | Aspes, K cl 15, 11248                                | <0.1    | 1                                      |
| A          | Phendia Compounts (54 Cellatit) | ngt Max           | 15 3025 (Piot-15)                                    | <0.001  | 0.00 5                                 |
| z I        | cop                             | 15 14 1           | IS 3027 Pap 98                                       | äs      | (20)                                   |
| 27         | 0000 ps 0 g                     | <b>ጥ</b> ሬ I      | is anyongawaj  | 3       | 1                                      |
| ž.         | Prosolines Oxygon to \$1/1      | mgl, Slar         | 18 2025 (Pan 48)                                     | 5.1     | I                                      |
| 24.        | Of & Cope                       | ηρ', Μας          | is anyonawahi  | ≺1      | ñ,i                                    |
| 15         | Tand Caldinin                   | prijo/150ml (Max. | IS 1623  | ECA V   | 1901                                   |

Interpretation of results: Not. Deviation from tea. neithed N.

"Complaints Register is available at Labourtory

atteried Signatory Life handra Moull 1

St. Ann's Road, Tamaka,

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Telangana, India

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SURFACE WATER QUALITY REPORT

SEPTEMBER-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name & Address of the Castomen: NA, JSW Steel Lineard

Trat Report No. : HALT 2021;WS-02913.

210658203 Lab Code An

Issue Date Your Helf

: Force Dwied Photo 2021

11/20/2021

Bate of Receipt 1: 09 09 2021

Project Auffer: Auf ayanpuste fron & Mangatese ore Mines

Nemple Dozempeen: Nariaca Water Sample Cyanauty.

: I Pour Salt Lov sorrigio

J. Nic. y 300 of Sample (Mento)

No. 5 Yeard Wide mouth files houte for CON-

I No. 3 250 of Sample Pic Significed, Inc. of or Micro-

Packets Test Required Place Builts

As prohibitor

Location of Santyling: Urahamatale systems

Oute of Registration

hs 20 3h21

I restd of

thate of commendement of testing

10.09.2021

there at completion of resump Sample modulum of remint

15.09.2021

Sample to bod as received

Date of Sampling, 07/49 2021

Sampling Details

Sampling Method/Pracedure: IS CONPan 1

General Environment conditions of a

Page Aug., of I

|           |                                      | HAT               | RESULTS  |                         |                                      |
|-----------|--------------------------------------|-------------------|--|-------------------------|--------------------------------------|
| N.<br>No. | Text Parameter                       | 1-nis             | Teo Method   | Result                  | Limits for Strong Vente<br>Standards |
| L:        | Colon                                | Haga Lais, Mas    | 18 3.25 (Pan=1)  | 111                     | 107                                  |
| 2.        | pl                                   | 2.50              | IS 1005 (Part 11)  | 4.82                    | 6519.55                              |
|           | Tetal Singuished Schub               | mil               | 15 (02% Paris (2)  | .78                     | -                                    |
| 1         | Lingt Dispolyer Salvis               | ingil, Marc       | IS 1005 (Page 16)  | 115                     | 150G                                 |
| ١.        | Chinde po Ch                         | ingl, Max.        | 18 m24 (-Sec.10)   | 211                     | 800                                  |
| h,        | costs O                              | right, Max.       | 30 (1.8 of<br>APEA 2011 Julius 2011                      | il hs                   | 50                                   |
|           | Sulprides ray 50 o                   | mayl, Max         | 18 1674 (Person)   | V.Z                     | 1111-                                |
| 3         | Chonde (1917)                        | mail, Man         | PSONE D<br>APTIA 2011 datas 2017                         | 11.511                  | . 2                                  |
| 1         | Nitration as NCIs)                   | mgd, Mys          | 4506-80 q-B<br>1 V sgeenighnismente<br>Security Method   | + 6                     | 50                                   |
| 16        | Copia Ds Cr)                         | year, Man         | APID 2011 three 2-12                                     | *() 43                  | 1.5                                  |
| ٦.        | Mangguese as Min                     | ingl              | 1, 11 Relation 2012<br>ARITA 201 Edition 2012            | ~ 0.02                  | 744                                  |
| ij.       | Selement (as be)                     | med Max.          | APRA 14 H of<br>APRA 15 Filliam 2013                     | <0,81                   | ius                                  |
| 'n,       | Zactican                             | ingit, Man        | 3.17.18 of<br>APITA 27.2 Edition 2013                    | म कर्ड                  | 5                                    |
| 1         | Caconing toy Cd:                     | .ned, Max.        | 3.1 Winf<br>APITA 2711 diren 2013                        | ol,ful)                 | <01                                  |
| <         | Load (as 1%)                         | med, Man          | 3.11.9 of<br>ABDA 201 Falcien 2013                       | 0141                    | 5.1                                  |
| 6         | Arrena dis As i                      | med, Max.         | JULIC of<br>APIIA 277 Lidoca 2011                        | चाउन                    | 102                                  |
| 4         | Cyanide (as I'N)                     | Jugit, Max.       | 1991 CMF, Uchronenic<br>Method, APITA 2772 Educa<br>2012 | e0.12                   | 0.04                                 |
| ß,        | Chammin (25 C) <sup>29</sup>         | ingit, klas       | APRA 221 Edition 2013                                    | -03.52                  | 0.04                                 |
| -0        | An once Detergents (as MBAS)         | ngel, Max         | America of Nation  | <0.L                    | 1                                    |
| )n        | Phonoc Company's 728 (CHAO)          | inga, Max.        | IS 1025 (Egg) 41)  | oly001                  | 0,004                                |
| 21.       | COL                                  | ingl              | 18,0025 Pag 98   | 45                      | 144.5                                |
| D.        | 900 (a <sub>2</sub> O <sub>2</sub> : | m <sub>F</sub> 1  | IS 1075 (Port-44)  | 5                       | )                                    |
| 23.       | (42 ye inggyal a lightest)           | ng/LVm            | 15 7025 (Part 5E)  | 5.5                     | 1                                    |
| Į L       | Cal & chesse                         | mart. Max         | (\$ 1075 (7.6-37)  | <1                      | D.I                                  |
| 25        | Tenten ben                           | [mpr: likani',Max | 3 829  | EON                     | 5000                                 |
|           |                                      | - L               | 1/5/   | The same of the same of | A                                    |

Interprepation of results. Six, Designor Francisco method. No.

\*Compounts Register is available of Laborators

Environmental Sciences 

need Signatory

(C.Chiedra Word)

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Eggal

; iah@lisenvitech.com. info@bsenvitech.com

Website www.bservitech.com CIN No. 3 U74210TG 1998F/TCC32358

(U)



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Name of Address of the Postemer : NAS 35% Sirel Lamined

Test Report No.: BMT1,0071-008 (68014)

Lab Code No. 1, 2308/9099 Board Date 11/20/202

Your Bel-- Lanix Tened 09.09.202

Battle of Bosoge (3000) 2021

Progest Name Nacayangushi Iron & Manganese see Mines

Sample Description: Surface Wider Sample Quantity of Name Albin Sample

1 No. x 500 ed Sample (Metals).

I No is 500 rel Wide mouth Olaw table for O&O

1 No. 7 250 ml Sample the Significant Bottle  $\Gamma_{\rm eff}$  of the

Parking. : Pladir 199des Lest Required at Anguero below Date of Registration OF (9.262) 10.09(2):2 Hags of commencement of lealing. 1209-202 lisk of completen of bybas

Sample condition at receipt Sample terrol princetored

Date of Speepling: 117 (9,302)

Location of Namping: Orahan-sala Box pareas-

Sampling Details

Sampling Mathed-Precedure: IS 3015 Part I

Ligagraf Envarenment misdimore, ak.,

Page No. 3 of 1

Lambak

#### DESTINESULUS

| Yo. | Test Parameter                 | Units             | Test Mathod   | Result      |                   |
|-----|--------------------------------|-------------------|---|-------------|-------------------|
| 1   | Dilesii                        | Hazen Linda, Mass | 15 2625 (Part 1)  | 13.         | 700               |
| 2   | p11                            | 71                | 18 99(4 (Fam - 1)   | A,89        | 4,4 m 8,5         |
| Ļ,  | Tiva Suipendat Sin ds          | ngt               | 14 4525 - Aut (17   | 64          | 100               |
| L.  | Teen (Superficed Solut)        | rigil, Max.       | 15 1085 (781-36)  | 175         | 180               |
| ١.  | Chloride fas C1:               | egt Mac           | LS 3025 (Avt.32)  | 21          | ep:               |
| ч   | Inn civia,                     | myd, Max.         | 111] 9 St<br>APHA 25°1 depair 50.1                                      | 0.37        | Vii               |
| 4   | Sulphates (as 90%)             | irjel, Max        | (s 928 ( om/le)   | I+          | 2p.               |
| 4   | Thorotope 13                   | argel, texts,     | 4900-F D<br>APITA 201 lbd (cur 2017                                     | 6.28        | 1,1               |
| 4   | Norages (es. NO <sub>1</sub> ) | mg/l, Mas         | 4500-NOi3<br>U.V Spectrophytometric<br>Screening, Method                | 9.0         | 51.               |
| IU. | Chapter of Pali                | med, east         | 37 15 Blof<br>6 40 A 237 Edit on 2512                                   | eacus.      | 338               |
| 16. | Manusanc-c so Mic              | m21               | 5 to Blind<br>4 4 14 205 tale on 2012                                   | 4.02        | =                 |
| Pag | Seletion (as Set               | mgd, Max          | Milain of<br>APHA 211 Indexes 2017                                      | MOII        | 5,04              |
| 15. | Ziro tas Za)                   | myd, Mas          | SIDE of<br>Addition 2011 down 2011                                      | 4.04        | 15                |
| 14  | Cirlm art (w.CJ)               | mgd Mgc           | 3-17-B of<br>40% 20% tables 2.17  | -пие        | -0,1              |
| IV. | Tradicas fit                   | anyd, Mac         | A PriA 22 Title of<br>A PriA 22 Title on 2012                           | did∎        | 41                |
| IA. | Asserte (18, As)               | myst, Max.        | 3.11 C of<br>41996 23 <sup>th</sup> Inform 2.12                         | altille     | 92                |
| i s | Lyonice (as 4.5)               | angl Mes          | 4900 (N.F. 1969) ment<br>Megned, APPIA 73 <sup>10</sup> bili or<br>2017 | <0.45       | Aus               |
| 14  | Chairean (as Cr <sup>2</sup> ) | mpt Max           | 3 17 18 64<br>A 20 (4, 21° 1 direm 2017                                 | 40.42       | Aus               |
| ŀ   | Aconoc Date: 2013/145/309ASt   | ngd, Mys          | Annes, KuffS (3398)   | 79.1        | -                 |
| Si, | Plends Pargoods (psf/H0)       | .ngd, Mas         | IS 1025 (Pan 41)  | + f) (H) (I | 0.005             |
|     | 100                            | ny I              | 15:1025 - Part-51   | 55          | : <del>XE</del> S |
| 22_ | acodeort                       | ing.1             | 15 103* (1547-44)   | ,           | 1                 |
| 27  | Disarbed Owneriges Og          | Agel Mar          | 15-3023 (Part-36)   | 5.1         | -4                |
| 21. | Dit & Growe                    | ng , Wis          | (S 102* (94n-35)  | 5.1         | 0:                |
| 75  | Small Cultisen                 | Lagre DEmby May   | N 1837  | C.135       | 5.40              |

Integroating of coalts. Not Devotor Coordes method Not

\*Complaints Register is available at Laurence

Ema L

G. Chandra Mouti 1 revernmental Scientist

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Telangana India

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Website , www.bschv-lech.com

QIN No. + (J74210TG 1999PTC032358)



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#### **TEST REPORT**

Name & Address of the Customer 1 MS, ASW Steel Langues

Test Report No. : BSF 1252 (AdSJ:1014

their of commencement of testing

Date of completion of review

Specific replied as monitoral

Lieb Clode No. 3109398599

layer Date

17,082,0021 : Letter Dated 09 the 2021

(ligion) Receipt : 09/65/2021.

Date of Hegistrauen

Project Name: Naragonaposta Lean & Mangantse see Militer Sample Description Surface Water Sample Quantity 1 No. 34 P. Jin Sample

Lorasson of Sampling: Iware river I gatream

1 No. v William Sample (Mein si-

LiNear 500 and West memoral Glass health for CASC

156 A 200 in Namble Pre Supliced Bullle For Visio

**Packing** 

: Pagin, Bottley

List Required CAS given helds

Date of Numpling: 05,09,2021

Sample conditions or recogn

Sampling Details
Sampling Virthod/Precoduse: IS 3727 Pan 1

General Knywonment conditions: ak .

Page No. 1 of 1

119.001.20121

16.04.3021

17,09,2021

Loomtox

#### DISTRIBUTES.

| Si.  | Tost Parameter                 | t nils                             | Test Method   | Revold  | Limies for Stream Vaguer<br>Standards |
|------|--------------------------------|------------------------------------|---|---------|---------------------------------------|
|      | Colear                         | Hizzh Erns, Mas <sub>s</sub>       | IS 1025 (Pan 4)   | 111     | 300                                   |
|      | 211                            | 73                                 | 13 2025 (Pan 41)  | 649     | Adroad                                |
|      | Last Suspended Suitela         | ngt                                | 18 9025- Part 11  | 91      | 8336                                  |
| :    | Tata Disabled SA(d)            | mgd, Max                           | 15 2025 (Pan - A)                                       | 128     | [SIEI                                 |
| ;    | Chlorida Jac (3)               | mgd, Max                           | Li 7025 (Part 32)                                       | 15      | £01:                                  |
| 6    | hun (as Fe)                    | Mg/l. May                          | 36 H (9 a)<br>APHA 25 <sup>4</sup> (Junea 2007          | 9.21    | 511                                   |
| ١.   | Sulphans (as 90%)              | mel, Mes                           | [5]/023 (Ppn-24)  | ы       | 1111-                                 |
| ×    | Plannik ya. 81                 | myd, Man                           | 4500-1-10,<br>APHA 33 <sup>4</sup> Editor 2017          | 0.20    | 1,5                                   |
| 9    | Number pri Nic a               | mga, Max                           | 4500-NOV-B<br>HV Sycgrephiasonchia<br>Seterning Edebied | 5.1     | Ç,                                    |
| ĮΩ,  | Copear - se Cit;               | mp <sup>r</sup> , M <sub>r</sub> v | N F B of<br>APHA 22° Edition 2017                       | on.02   | 1 5                                   |
| ıı.  | Margarese as Mr                | mk.                                | 8 T. B. of<br>APITA 29 <sup>rd</sup> Squiso API         | < 4/115 | 200                                   |
| 12   | Selenion Jas Se:               | ingl, Max.                         | VITE of<br>API A2P Educa 2017                           | <0.01   | CSh                                   |
| I.I. | Zins tas Zint                  | engil, Max                         | APHA 201 Leging 2013                                    | 0.03    | -14                                   |
| 1-1  | Cadmini as Cd;                 | right Max.                         | APHA 78 <sup>2</sup> Lating 2007                        | ×n.003  | II, r                                 |
| 15.  | Load (as Flo                   | right Mass                         | APITA 25" Libror 2011                                   | <0.01   | υ.                                    |
| 16   | Areyon, Im. As'                | mg/L/Was                           | 151 C of<br>API A 25 <sup>4</sup> Estima 2017           | ritati  | 4,2                                   |
| rs.  | Cyanaderes (15)                | ingel, Max                         | ANCIPATION ministers Moreal APAIA 21* of hist 2017      | <## 41  | 504                                   |
| IK.  | Choramo (as CY <sup>18</sup> ) | mgd, Was,                          | 1011 3 PM<br>APHA 2011 Latinat 2017                     | <0.43   | bid?                                  |
| 9.   | Amortic Centry and Jac MBAN    | ութմ, Կես                          | Auras, K ed 15 17248                                    | *II I   |                                       |
| 20   | Prenety Comprands (as C E-0H)  | righ, Mas                          | 5 (C)5 (PMC 11)   | <0.001  | 11,405                                |
| 71.  | רסי                            | myl                                | 15 100 S - 15e4-01                                      | 33      | 181                                   |
| 22.  | 10.1 (case)(c)                 | niel                               | In 9025 (Part-4 I)                                      | 5       | 1                                     |
| ž L  | Disselved Oxygen (15 Oy.       | ng I, Min                          | 18 3025 (Part-14)                                       | 5.9     | I                                     |
| :4,  | Bill & Greec                   | mgl. Mes                           | (5.3025 (Part-39)                                       | 41      | C.I                                   |
| 35.  | Total Cubberr                  | puper FORMU, Max                   | 1514.9  | THOU    | 5000                                  |

Interpretation of results: Nil, Deviation from not method. Nil.

Trymplants Register is available at Laborators

(G.Ghandes Mreit) Environmental Scientist 4" Floor, 'AMITY VILLE', 12-13-1270/71/73, ... u.nRhangend +94-40 49783062 +27016806 Fax +91-40 49783063

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Secunderabad - 500017 Telangana, India

Wabsite : www.l)::enviredn.com CIN No. : U74210TG1999P1CIB2358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Name & Address of the Customer: New 25th Siggl Limited

Test Report No. 1 056 1/209 (cws-01916)

Lab Code No. 11 (31065/60)A

lone Date : 12 19 2021 Your Hel

: Letter Dated CV 09 2021

Project Name: Narsysagoshi Iran & Masganese are Mises

Sample Ome ription: Serface Water Sample Committees. 3 I No. 854 Ltts Sample 1 No. 4 500 nd Sample (Mesalt)

No. a 500 ml Wide mouth (Gass bettle for O&G 1 No. 4 250 mt Sample Pre Stenhaed Bottle For Michi-

Paghing : Plance Butter Len Kidnjud HAS prediction

Date of Receipt 1: 09.19.2021 IF 09, 202 . 10,04,2021 Date of compressioness of testing. 1410.2021 ligity of completion of scaling Firand ok Sample condition at accrega

Sample coved as received

Sampling Details
Superpling Method/Procedure: 15 3025 Part 1
General Revisement conditions at.,

Date of Sampling: 17 09.2028 Location of Sampling. Know river thornwises at Note New gare No.15

Page Vo; Lof.

#### FEST RESULTS

| X<br>Nn. | Best Parametro                  | l sits            | Test Method   | Recula   | Limes for Stream Water<br>Standards |  |  |
|----------|---------------------------------|-------------------|---|----------|-------------------------------------|--|--|
| L        | Color                           | Harris Linds, Man | (5 102) (Pm 4)  | 15       | 'Air                                |  |  |
| 1.       | plf                             | (8)               | 18 J0(2 ((Se-11)  | 6.83     | Nove 1.5                            |  |  |
| ı,       | Total Suscended Solids          | mp/l              | 18 2025- Pag-17   | 111      | mit.                                |  |  |
| 4.       | Local Flour continueds          | mgi, Mu           | 19 JUSS (19ct-16)   | 150      | 150)                                |  |  |
| 5        | Chloride (es CII                | injul, Mar        | IS 1025 (Part-32)   | 25       | 600                                 |  |  |
|          | cametel                         | mg/l, Was         | 3 10 B of<br>APHA 23 <sup>st</sup> Diatron 2017                     | R.29     | SII SII                             |  |  |
| ١,       | Sinjehace: (as 80%)             | mpl. Mac.         | 18 JUQA (Part-24)   | 22       | 140                                 |  |  |
|          | dwords (as A)                   | mg/l, Stee,       | 4500-F D<br>A:91A 23 <sup>rd</sup> (altern 2117                     | 0.23     | r,                                  |  |  |
| 6.       | Nuraces pas NG <sub>M</sub>     | mgil, Mar         | 1905-NO <sub>1</sub> -B<br>HV Spering-halamania<br>Spiraniag Method | 5.1      | 20                                  |  |  |
| ic.      | Copper (as Col                  | mg/l, Max         | 7511 Brid<br>AFHA 23 <sup>rd</sup> Falcon 2013                      | ×0.42    | 1.5                                 |  |  |
| II.      | Mangaress as Ma                 | mg I              | HITE of<br>APIDA 25" (dition 241)                                   | < DJI    | #E1                                 |  |  |
| 12:      | Seleman (of Se)                 | me/t, Mgs.        | 2114 B of<br>APHA 23° Edition 2117                                  | e11,6)   | 0.08                                |  |  |
| 12.      | 5 at (% 7n)                     | mgd, Mas          | J111 Bio)<br>APITA 25 <sup>2</sup> Edition 2013                     | 0.03     | P                                   |  |  |
| щ        | Cadmium yas Cit:                | mpl. Mas.         | 1111 Binf<br>APHA 25 <sup>rd</sup> (Jahlen 2017                     | 50,003   | -ful                                |  |  |
| 14.      | , end (as Ph)                   | mpl, Max.         | 31113 of<br>A2(A 294 Edition 2013                                   | -0.61    | 10.1                                |  |  |
| ls,      | Aramic 'es Asi                  | .ngl, Max.        | HTM C of<br>SHIA 25° Laying 2011                                    | -03.0L   | 0.7                                 |  |  |
| 17.      | Cyanide (as CN)                 | 11(A), Max.       | 490-00 L. Calgorinas<br>Mercel, APITA 257 i dum<br>2017             | ×0.02    | 4,04                                |  |  |
| 15.      | (fromigm (gs (') *)             | ngā, Maz,         | 713 FB of<br>APLIA 394 Edition 2013                                 | -0.02    | (36)                                |  |  |
| 12       | Animic Delegants (is MBAS)      | med, Mes          | Annes Kadis 3348  | <0.1     | ı                                   |  |  |
| 2.4      | Phenolic Compounds, DK C(H)(CH) | ng', Max          | 15 3C25 (Pan-47)  | c() ()@1 | 0,005                               |  |  |
| 21.      | (30)                            | mg1               | [5: 0:25 - Pgn-16   | 50       | See S                               |  |  |
| 7.       | HOD (as 11 <sub>1</sub> )       | лы.               | IS 5025 (Pm)-440  | 4        | ,                                   |  |  |
| 22       | Dissolved Daygon (as Co)        | mgd, Afra         | IS 3025 (Pan. JB)   | 5,0      | 4                                   |  |  |
| 21       | Oli A. Crease                   | may, Max          | 15 3025 (min. 19)   | <1       | Q i                                 |  |  |
| 75       | Total Coliform                  | (mps/jotinj/,Mag  | IS 1622   | TEON     | 5000                                |  |  |

Interpretation of results. Ail, Deviators from test method. A l.

\*Complaints Register is available at Laboratory

Authorized Signatory
( G.C fooders Madil )

Egyptophicatal Sceness

St. Ann's Road, Tamaka,

Secunderabad - 500017. Telangana, Indiá

Website: www.bserratech.com CIN No : U74210TG1999PTC032358

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

Narter & Address of the Customer: Må. 18W Steel Limited

Led Report Vol. 1985 (2007) WS 10/917

Ligh Code No. 19865X Bri Botic Date 117,59,3031

Your Ref

a Lease Hittel (19,175,702)

Date of Receipt 11/10/02/2021

Peujest Names: Narayanpashi Iron A. Slanganow are Mines

Sample Description: Satisfact Water Satisfact Outsettly : 1800-039 Lins Sample

1 No. a 500 of Sample (Metab).

1 No. 3 400 Will Wide most! Glass bettle Sa O&C. I No. 3 250 of Sanode Pre Stenliged Hotels for More:

Packing : Plant Bailey Test Required | As given below Date of Registration (bc/4, 87):

Date of emmoragement of register (box 200)

Date of correlation of Senting (1909, 200)

Supple condition of receipt Loand of

Sample Iraled as pereived

Date of Sampling: 07.16.2021

Location of Sampling: Karara Nata ( Near between Ougery No. 5 & 4)

Sampling Details
Sampling Method/Procedure: IN 2025 (Sept.)
1 General Environment conditions: ok.

Page Nucl. of L

#### DESIGNATIONS

| S,<br>Nac | Lest l'éranisièr              | tinits.                | Loui Methraj  | Result                                      | Licitity for Stocare Wrote<br>Statelands |  |
|-----------|-------------------------------|------------------------|---|---|--|--|
| 1.        | Color                         | Lawer Drain, Make      | [37,5025 (Panis)] [10]  |   | 300                                      |  |
| 2         | 141                           | ±8                     | 18 7025 (Part-1 )   | 6.80  | 0,5 >: E,5                               |  |
|           | etal Samenard salities        | 11/41                  | 18 July Pyn 13  | 40  | 5+6                                      |  |
| •         | "Ctal Dissolver Schille       | mg/l, Max.             | IS 102 s (Part-Tay  | 125   | 1500                                     |  |
| 4         | Chentelas Cla                 | mel, Mas.              | (8.0025705t 52)   | 25  | NO.                                      |  |
| (         | type as he                    | መረብ 744s               | A PSA 21" Listing 2rd I   | 0.20  | 50                                       |  |
| 1         | Suphara (as SD)               | Mg/H Max.              | IS 1025 (Ball-24)   | 16  | If+:                                     |  |
| 4         | Floride (as P)                | mgh kitav,             | 4 X II-1 (1)<br>A PCA 2 PC Edword 2 PC                              | 8.24  | 1,3                                      |  |
| 4         | Notates (as NO)               | ap. Six                | 4900-NOvB<br>UV Spectroshift medical<br>Surgering, Nothed           | 3.1   | 55                                       |  |
| H.        | Lepper (w t n)                | right, Max.            | 3/11/10/20<br>APP A 215 Julian 2015                                 | earit5                                      | 1.5                                      |  |
| · L       | Manganese ys Mr               | ng1                    | 30 H B 57<br>A 24A 232 Tolding 2013                                 | 0.02  | 1777)                                    |  |
| 17-       | Sciornim (as Sci              | ng' Man                | 7114 III ot<br>APHA 23 <sup>8</sup> Edition 2013                    | 90.00                                       | 4,5 5                                    |  |
| 6         | Zitu has Zint                 | mgd, Stre              | 31 (1 i) or<br>38(10) 21 <sup>2</sup> 1 (1) or 2013                 | < 0.42                                      | В  |  |
| H         | Cx(mm(3x)/3)                  | ng-1 Max.              | 23 H. H. O<br>A6HA 23 S. Februar 2613                               | 400,000                                     | 10                                       |  |
| 1:-       | Inadjo Par                    | npt, Wis.              | 2. H ft et<br>3007/2311 Edujon 3911                                 | ×0.91                                       | 9.1                                      |  |
| 15        | Arsonic (45 A.4               | myl, Vas.              | 1014 C of<br>APHA 25 <sup>2</sup> Batton 2bt <sup>3</sup>           | <0,0)                                       | O, *                                     |  |
| r's       | Cyanide (as CN)               | ingl, Max              | 4500 CSE: Columnatur<br>Method, APDA 33 <sup>4</sup> Edular<br>2015 | <0.02                                       | 0.65                                     |  |
| 13.       | Chromium resit (1/11)         | ngd, Max.              | 1111 A of<br>APDA 281 (duen 2017                                    | <0.02                                       | 0.05                                     |  |
| D.        | An one Dourgers as MBAS'      | invl Mix               | Angel, Kint IS 13/18  | <p, td=""  <=""><td colspan="2">1</td></p,> | 1  |  |
| an.       | Phono of corporals (as Cotta) | mg t 24 <sub>k</sub> c | 18 (075) (245) (7)  | *II (IIII                                   | 0,054                                    |  |
| 21        | 17:07                         | прі                    | IS 3025 - Pre-54  | IS NICK PRESSED ON                          |  |  |
| 22        | (0 Olastic)                   | ligit                  | IN HOM (Parties)  |   | 1  |  |
| is.       | Dissolved Cooper (as (3))     | mp1,67 q               | 18 Jugs (1992-18)   | 4.5   | ۷  |  |
| ļe.       | Child Certific                | mg', ktas              | IS 3025 (Part-29)   | v1  | il.                                      |  |
|           | Total Cultimor                | Tepo" (4m), Max        | 15 1642   | ECT   | 100 Miles                                |  |

Interpretation of results: Not Decretion horsetest include No.

'Complaints Register is available at Laboration

Ema L

Cathorine Signifus Cathondra Modii I Covernmentel Signial

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Secunderabad - 500017,
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Website www.bsenviech.com

CIN No. - U74210TG I999PTC032358

WATER FLOW RATE REPORT

SEPTEMBER-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### TEST REPORT

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: September

Date

: 22.09.2021

#### SURFACE WATER FLOW RATE OF STREAMS

| S.No | Location                                     | Flow rate (Velocity)<br>in Meter/Second |
|------|--|---|
| 1.   | Orahari Nela Up Stream                       | 0.666                                   |
| 2.   | Confluence of Orahari & Karo Nala            | 1.159                                   |
| 3.   | Kasira Nala (Nala between Quarry no-3 & 4)   | 0.619                                   |
| 4.   | Karo River Down Stream (Nala near Gate no-1) | 1.298                                   |

For B.S Envi-Tech (P) Ltd.,

**Authorised Signatory** 

\*Complaint» Register is available at Laboratore.

Website | www.bsenvilech.cam CIN No. # U74210TG1999PTC032358

NOISE MONITORING REPORT

APRIL-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

#### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NE             | Issued to:                                |                          |
|-------------------------------|---|--------------------------|
| Reporting Date                | 03.05.2021                                |                          |
| Sample Description: A Month : | Narayanposhi Iron &<br>Manganese Ore Mine |                          |
| Sample Collected by:          | B.S. Envi-Tech (P) Ltd.,                  | of<br>M/s JSW Steel Ltd. |

| Temperature:                    |                          | *Celsius: 33.1 |  |
|---------------------------------|--------------------------|----------------|--|
| Wind speed(m/s):                | AVG: 3.4                 | MAX: 7.3       |  |
| Wind Direction:                 | SW-NE                    |                |  |
| Cloud Cover:                    | Sunny                    | Octos - 4/8    |  |
| Distance from Source (In Meter) | 2                        | ***            |  |
| SLM type:                       | fattron, Model SL-4023SD |                |  |
| SLM Serial Number;              | Q652513 & Q652517        |                |  |

| *                              | Date       | Time                  | Noise Levels in dB(A) |       |      |      |      |      |
|--------------------------------|------------|-----------------------|-----------------------|-------|------|------|------|------|
| Locations                      |            |                       | Laq                   | Lacia | Lea  | Lsa  | Lip  | Lnux |
| MAGAZINE AREA                  | 07.04.2021 | 09.15 AM-<br>10.15 AM | 64.7                  | 63.8  | 64.1 | 64.6 | 65.1 | 65.5 |
| MU BOUNDARY PILIAR NO. ]       | 07.04.2021 | 09.15 AM-<br>10.15 AM | 59.4                  | 58.5  | 58.9 | 59.2 | 59.7 | 60.3 |
| MINES FACE/BENCII              | 07.04.2021 | 10.45 AM-<br>11.45 AM | 79.7                  | 78.5  | 79.2 | 79.7 | 80.2 | 80.6 |
| HAULAGE ROAD                   | 07.04.2021 | 10.45 AM-<br>11.45 AM | 78.2                  | 77.4  | 77 8 | 78 1 | 78.5 | 78.9 |
| CRUSHER PLANT                  | 07.04.2021 | 02.30 PM-<br>03.30 PM | 79.3                  | 78.6  | 78 9 | 79.2 | 79.6 | 80.1 |
| SCREEN PLANT                   | 07.04.2021 | 02.30 PM-<br>03.30 PM | 78.9                  | 78.0  | 78.5 | 78.8 | 79.2 | 79.7 |
| ORE STOKAGE & LOADING<br>POINT | 07.04.2021 | 12.30 PM-<br>01.30 PM | 78.9                  | 77.9  | 78.3 | 78.8 | 79,4 | 79.9 |
| WASTE DUMP                     | 07.04.2021 | 12.30 PM-<br>01.30 PM | 62.0                  | 61.1  | 615  | 61.9 | 62.3 | 62.8 |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, event                           | s and contribution level details:        |                           |
|---|--|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                        | Event Duration<br>(mm:ss) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 58.5 to 80.6<br>dB(A) | 1 to 2 hrs                |

\*Complaints Register is available at Laboratory.

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Website www.bsanvitech.com

CIN No. 3 U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/NQ/2021-04                    |                          | Isaued to:                                 |
|---|--------------------------|--|
| Reporting Date  | 03.05.2021               |  |
| Sample Description: Ambient Noise Level  Month : April-2021 |                          | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:  | B.S. Envi-Tech [P] Ltd., | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                            | *Celsius: 36.4 |  |  |  |
|---------------------------------|----------------------------|----------------|--|--|--|
| Wind speed(m/s):                | AVG: 3.9                   | MAX: 8.3       |  |  |  |
| Wind Direction:                 | SW-NE                      |                |  |  |  |
| Cloud Cover:                    | Summy                      | Octas - 4/8    |  |  |  |
| Distance from Source (In Meter) | 2                          |                |  |  |  |
| SLM type:                       | Lutron, Model SL-4023SD    |                |  |  |  |
| SLM Serial Number:              | Q652514, Q652513 & Q652516 |                |  |  |  |

|                                |            |                       | Noise Levels in dB(A) |                  |      |      |             |      |
|--------------------------------|------------|-----------------------|-----------------------|------------------|------|------|-------------|------|
| Locations                      | Date       | Time                  | Leq                   | L <sub>Min</sub> | L90  | Lso  | <b>L</b> 10 | Lucz |
| MAGAZINE AREA                  | 14.04.2021 | 11.00 AM-<br>12.00 PM | 63.3                  | 62.5             | 62.9 | 63.1 | 63.6        | 64.2 |
| ML BOUNDARY PILLAR NO-L        | 14.04.2021 | 11.00 AM-<br>12.00 PM | 61.5                  | 60.6             | 60.9 | 61.4 | 619         | 62.3 |
| MINES PACE/BENCH               | 14.04.2021 | 12 30 PM-<br>01.30 PM | 77.5                  | 76.9             | 77.1 | 77,5 | 77.8        | 78.2 |
| HAULAGE ROAD                   | 14.04.2021 | 12:30 PM-<br>01:30 PM | 79.4                  | 78.5             | 78.9 | 79.3 | 79.8        | 80.2 |
| CRUSHER PLANT                  | 14.04.2021 | 12.30 PM-<br>01.30 PM | 79.9                  | 79.0             | 79.4 | 79.9 | 80.3        | 80.8 |
| SCREEN PLANT                   | 14.04.2021 | 11.00 AM-<br>12.00 PM | 79.1                  | 78.3             | 78.8 | 79.1 | 79.4        | 79.8 |
| ORE STORAGE & LOADING<br>POINT | 14 04.2021 | 09.30 AM-<br>10.30 AM | 78.2                  | 77.2             | 77.6 | 78.1 | 78.7        | 79.2 |
| WASTE DUMP                     | 14.04.2021 | 09.30 AM-<br>10.30 AM | 66.7                  | 65.8             | 66.2 | 66.7 | 67.1        | 67.4 |

N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events and contribution level details: |  |                |  |  |  |
|--|--|----------------|--|--|--|
| Noise Source/Event<br>Description                            | Noise Level dB(A)                        | Event Duration |  |  |  |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements        | Values ranged from 60.6 to 80.8<br>dB(A) | 1 to 2 hrs     |  |  |  |

\*Complaints Register is available at Laboratory.

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CIN No. 3 U74210TG1999PTC032358



Recognized by McEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NE             | Issued to:                                 |  |
|-------------------------------|--|--|
| Reporting Date                | 03.05.2021                                 |  |
| Sample Description: , Month ; | Narayanposhi Iron &<br>Manganese Ore Mines |  |
| Sample Collected by:          | of<br>M/s JSW Steel Ltd.                   |  |

| Temperature                     |                            | *Celsius: 35.9 |  |  |  |
|---------------------------------|----------------------------|----------------|--|--|--|
| Wind speed(m/s):                | AVG. 3.1                   | MAX: 6.8       |  |  |  |
| Wind Direction:                 | SW-NE                      |                |  |  |  |
| Cloud Cover:                    | Sunny                      | Octos = 4/8    |  |  |  |
| Distance from Source (In Meter) | 2                          |                |  |  |  |
| SLM type:                       | Lutron, Model St-4023SD    |                |  |  |  |
| SLM Serial Number:              | Q652514, Q652513 & Q652516 |                |  |  |  |

| T a a a b b a u a           |            |                       | Noise Levels in dB(A) |      |      |      |                 |        |
|-----------------------------|------------|-----------------------|-----------------------|------|------|------|-----------------|--------|
| Locations                   | Date       | Time                  | Lag                   | Lu-  | Loo  | Lso  | L <sub>10</sub> | Litter |
| MAGAZINE AREA               | 21.04.2021 | 03 45 PM-<br>04.45 PM | 62.3                  | 61.5 | 61.9 | 62.2 | 62.6            | 63.2   |
| ML BOUNDARY PILLAR NO-1     | 21.04.2021 | 03.45 PM-<br>04.45 PM | 60.8                  | 59.7 | 60.2 | 60.6 | 61.2            | 61.8   |
| MINES FACE/BENCH            | 21.04 2021 | 03.45 PM-<br>04.45 PM | 78.8                  | 77.7 | 78.2 | 78.8 | 79 2            | 79.7   |
| HAULAGE ROAD                | 21.04.2021 | 11.45 AM-<br>12.45 PM | 77.9                  | 76.9 | 77.3 | 77.8 | 78.2            | 78.8   |
| CRUSHER PLANT               | 21.04.2021 | 11.45 AM-<br>12 45 PM | 78.8                  | 77.9 | 78.3 | 78.7 | 79.2            | 79.5   |
| SCREEN PLANT                | 21 04.2021 | 11.45 AM-<br>12.45 PM | 78.1                  | 77.2 | 77.7 | 78.1 | 78.5            | 78.9   |
| ORE STORAGE & LOADING POINT | 21.04.2021 | 02.15 PM-<br>03.15 PM | 79.2                  | 78.1 | 78.6 | 79.2 | 79.7            | 80.2   |
| WASTE DUMP                  | 21.04.2021 | 02.15 PM-<br>03.15 PM | 65.8                  | 64.7 | 65.2 | 65.8 | 66.3            | 66.9   |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, event                           | a and contribution level details:        |                |
|---|--|----------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                        | Event Duration |
| Ore Crushing Activities, DG<br>Scts, Dumper Movements | Values ranged from 59.7 to 80.2<br>dB(A) | 1 to 2 hrs     |

\*Complaints Register is available at Laboratory

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

# **TEST REPORT**

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/NQ/2021-04                   |                          | Issued to:                                 |
|--|--------------------------|--|
| Reporting Date   | 03.05.2021               |  |
| Sample Description: Ambient Noise Level Month : April-2021 |                          | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:                                       | B.S. Envi-Tech (P) Ltd., | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                            | *Celsius. 36,1 |  |  |  |
|---------------------------------|----------------------------|----------------|--|--|--|
| Wind speed[m/s]:                | AVG: 3.7                   | MAX: 7.8       |  |  |  |
| Wind Direction:                 | SW-NE                      |                |  |  |  |
| Cloud Cover:                    | Sunny                      | Octas - 4/8    |  |  |  |
| Distance from Source (In Meter) | 2                          |                |  |  |  |
| SLM type:                       | Lutron, Model SL-4023SD    |                |  |  |  |
| SLM Serial Number:              | Q652514, Q652513 & Q652516 |                |  |  |  |

| f.a.a.blaus             |            |                        | Noise Levels in dH(A) |      |      |      |      |                  |
|-------------------------|------------|------------------------|-----------------------|------|------|------|------|------------------|
| Locations               | Date       | Time                   | Loa                   | Late | 1.90 | Lso  | Lio  | L <sub>Mex</sub> |
| MAGAZINE ARBA           | 28.04.2021 | 08 30 AM -<br>09.30 AM | 60.8                  | 59.9 | 60.5 | 60.8 | 61.2 | 61.5             |
| ML BOUNDARY PILLAR NO-L | 28.04.2021 | 08.30 AM-<br>09.30 AM  | 60.0                  | 59.2 | 59.5 | 59.9 | 60.3 | 60.7             |
| MINES PACE/BENCH        | 28.04.2021 | 08.30 AM-<br>09.30 AM  | 76.7                  | 75.8 | 76.2 | 76.7 | 77.1 | 77.5             |
| HAULAGE ROAD            | 28.04.2021 | 11.30 AM-<br>12.30 PM  | 75.3                  | 74,4 | 74.8 | 75.2 | 75.7 | 76. t            |
| CRUSHER PLANT           | 28 04,2021 | 11.30 AM-<br>12.30 PM  | 78.9                  | 78.1 | 78.5 | 78.8 | 79.2 | 79.7             |
| SCREEN PLANT            | 28 04 2021 | 11.30 AM-<br>12.30 PM  | 77.2                  | 76.6 | 76.9 | 77.2 | 77.5 | 77.9             |
| ORE STORAGE & LOADING   | 28.04.2021 | 10.00 AM-<br>11.00 AM  | 79.3                  | 78.6 | 78.9 | 79.1 | 79 4 | 80.3             |
| WASTE DUMP              | 28.04 2021 | 10.00 AM-<br>11.00 AM  | 64.8                  | 63.8 | 64.5 | 64.8 | 65.2 | 65.6             |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, event                           | s and contribution level details:     |                           |
|---|---------------------------------------|---------------------------|
| Noise Source/Event Description                        | Noise Level dB(A)                     | Event Duration<br>(mm:es) |
| Orc Crushing Activities, DG<br>Scts, Dumper Movements | Values ranged from 59.2 to 80.3 dB(A) | I to 2 hrs                |

\*Complaints Register is available at Laboratory

Woosile www.bsenvitech.com

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP   | Issued to:               |  |
|---|--------------------------|--|
| Reporting Date  | 03.05.2021               |  |
| Sample Description: Ambient Noise Level  Month : April 2021 |                          | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:  | B.S. Envi-Tech (P) Ltd., | of<br>M/a JSW Steel Ltd.                   |

| Measurement Location: | Koira Basti         |                         |  |  |  |
|-----------------------|---------------------|-------------------------|--|--|--|
| Temperature:          |                     | *Celsius: 25.6          |  |  |  |
| Wind speed(m/s):      | AVG: 3.5            | MAX- 7.7                |  |  |  |
| Wind Direction:       | SW NE               |                         |  |  |  |
| Cloud Cover:          | Sunny               | Octas - 4/8             |  |  |  |
| SLM type:             | Lutron, Model SI-40 | Lutron, Model SI-4023SD |  |  |  |
| SLM Senat Number:     | Q652514             |                         |  |  |  |

|             |          | Measurem             | ent detai           | is and etc | tistical | notae k    | rvels - (  | IB (A)                        |             |               |
|-------------|----------|----------------------|---------------------|------------|----------|------------|------------|-------------------------------|-------------|---------------|
| Start       |          | Noise Level (dB (A)) |                     |            |          |            | 2000       | Applicable<br>Standard  dB  A |             |               |
| Time        | Duration | Duration Pate        | L <sub>144</sub> ,T | LAgus      | LAnte    | LA<br>10,7 | Leq<br>Day | Leq<br>Night                  | Day<br>Time | Night<br>Time |
| 09.00<br>AM | 24 brs   | 07.04.2031           | 53 4                | 54.6       | 41.6     | 54.4       | 53.4       | 42. <b>B</b>                  | 85          | 45            |

| Noise Source/Event<br>Description  | Noise Level dB(A)                     | Event Duration<br>(mm:ss)  |
|--|---------------------------------------|--|
| No specific source.  Village activities prevailing which include  Movement of vehicles mainly two wheelers, transportation of tippers. | Values ranged from 41.6 to 54.6 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |

'Complaints Register's available at Laboratory

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/NQ/2021-04                   |            | Isaued to:                                 |
|--|------------|--|
| Reporting Date   | 03.05.2021 |  |
| Sample Description: Ambient Noise Level Month : April-2021 |            | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by: B.S. Envi-Tech (P) Ltd.,              |            | of<br>M/s JSW Steel Ltd.                   |

| Measurement Location: | Kasıra Basti        |                |  |
|-----------------------|---------------------|----------------|--|
| Temperature:          |                     | *Celsius: 26.2 |  |
| Wind speed(m/s):      | AVG: 3.2            | MAX: 7.5       |  |
| Wind Direction:       | SW NE               |                |  |
| Cloud Cover:          | Sunny               | Octas - 4/8    |  |
| SLM type:             | Lutron, Model SL-40 |                |  |
| SLM Serial Number:    | Q652516             |                |  |

|             |          | Meanurem   | ent detai            | le and st | atistical | доіве і    | rveis – c  | iB (A)                          |             |               |
|-------------|----------|------------|----------------------|-----------|-----------|------------|------------|---------------------------------|-------------|---------------|
| Start       |          |            | Roise Level  dB (Aj) |           |           |            |            | Applicable<br>Standard (dB (A)) |             |               |
| Time        | Duration | Pate       | L,,T                 | LAgu      | LAnn      | LA<br>so,r | Leq<br>Day | Leq<br>Right                    | Day<br>Time | Night<br>Time |
| 08.30<br>AM | 24 hrs   | 07.04 202) | 53.9                 | 54.4      | 39.5      | 54.1       | 52.9       | 40.9                            | 55          | 45            |

| Noise Source/Byent<br>Description                                    | Noise Level dB(A)                     | Event Duration (mm:sa)   |
|--|---------------------------------------|--|
| No specific source,  |                                       | 10 10 10   |
| Village activities prevailing which include                          | Values ranged from 40.9 to 54.4 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |
| Movement of vehicles mainly two wheelers, transportation of tippers. |                                       | movemend   |

\*Complaints Register is available at Laboratory

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Engineer

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# NARAYANPOSHI IRON AND MANGENESE ORE MINES

NOISE MONITORING REPORT

MAY-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP  | Issued to: |  |
|--|------------|--|
| Reporting Date   | 01.06.2021 |  |
| Sample Description: Ambient Noise Level Month : May-2021 |            | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by: B.S. Envi-Tech (P) Ltd              |            | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                   | *Celsius: 33.5                         |  |  |
|---------------------------------|-------------------|--|--|--|
| Wind speed[m/s]:                | AVG: 3.1          | MAX: 6.9                               |  |  |
| Wind Direction:                 | SW-NE             |  |  |  |
| Cloud Cover:                    | Sunny             | Octas - 4/8                            |  |  |
| Distance from Source (In Meter) | 2                 | // // // // // // // // // // // // // |  |  |
| SLM type:                       | Lutron, Model SL- | 40238D                                 |  |  |
| SLM Serial Number:              | Q652513 & Q652517 |  |  |  |

|                             |            |                       | Noise Levels in dB(A) |                  |      |      |      |                  |
|-----------------------------|------------|-----------------------|-----------------------|------------------|------|------|------|------------------|
| Locations                   | Date       | Time                  | Leq                   | L <sub>Min</sub> | L90  | Lso  | L10  | L <sub>Nex</sub> |
| MAGAZINE AREA               | 04.05.2021 | 10.00 AM-<br>11.00 AM | 60.7                  | 59.8             | 60.3 | 60.6 | 61.1 | 61.7             |
| MIL BOUNDARY PILLAR NO-L    | 04.05.2021 | 10.00 AM-<br>11.00 AM | 58.8                  | \$7.9            | 58.3 | 58.8 | 59.1 | 59.6             |
| MINES FACE/BENCH            | 04.05.2021 | 11.30 AM-<br>12.30 PM | 78.7                  | 77.7             | 78.1 | 78.6 | 79.2 | 79.7             |
| HAULAGE ROAD                | 04.05.2021 | 11.30 AM-<br>12.30 PM | 76.B                  | 75.8             | 76.2 | 76.7 | 77.1 | 77.7             |
| CRUSHER PLANT               | 04.05.2021 | 02.15 PM-<br>03.15 PM | 79.4                  | 78.3             | 78.8 | 79.5 | 79.9 | 80.2             |
| SCREEN PLANT                | 04.05.2021 | 02.15 PM-<br>03.15 PM | 78.1                  | 77.2             | 77.7 | 78.1 | 78.5 | 78.8             |
| ORE STORAGE & LOADING POINT | 04.05.2021 | 03.45 PM-<br>04.45 PM | 79.5                  | 78.6             | 79.1 | 79.5 | 79.B | 80.2             |
| WASTE DUMP                  | 04.05.2021 | 03,45 PM-<br>04,45 PM | 66 4                  | 65.5             | 65.9 | 66.3 | 66.8 | 67.2             |

### N.B: <85 dB[A] AS PER CTO & EC

| Noted noise source/s, events and contribution level details: |  |                |  |  |  |
|--|--|----------------|--|--|--|
| Noise Source/Event<br>Description                            | Noise Level dB(A)                        | Event Duration |  |  |  |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements        | Values ranged from 57.9 to 80.2<br>dB(A) | 1 to 2 hrs     |  |  |  |

\*Complaints Register is available at Leboratory

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. Engineer

Website www.bservitech.com CIN No. U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/NQ/2021-05                 | Issued to:                                |  |  |
|--|---|--|--|
| Reporting Date 01.06.2021                                |   |  |  |
| Sample Description: Ambient Noise Level Month : May-2021 | Narayanposhi Iron &<br>Manganese Ore Mine |  |  |
| Sample Collected by: B.S. Envi Tech (P) Ltd.,            | of<br>M/s JSW Steel Ltd.                  |  |  |

| Temperature:                    |                            | *Cetsius; 34.7 |  |  |  |
|---------------------------------|----------------------------|----------------|--|--|--|
| Wind speed(m/s):                | AVG: 3.6                   | MAX: 8.0       |  |  |  |
| Wind Direction:                 | SW-NE                      |                |  |  |  |
| Cloud Cover:                    | Sunny                      | Octos = 4/8    |  |  |  |
| Distance from Source (In Meter) | 2                          |                |  |  |  |
| SLM type:                       | Lutron, Model St-4023SD    |                |  |  |  |
| SLM Serial Number:              | Q652514, Q652513 & Q652516 |                |  |  |  |

|                             |            | 10                    | Noise Levels in dB(A) |                  |      |      |      |      |  |
|-----------------------------|------------|-----------------------|-----------------------|------------------|------|------|------|------|--|
| Locations                   | Date       | Time                  | Leq                   | L <sub>Min</sub> | L-90 | Lso  | Lio  | LHLE |  |
| MAGAZINE AREA               | 11.05,2021 | 08.30 AM-<br>09.30 AM | 61.6                  | 60.6             | 61.1 | 615  | 62.1 | 62.6 |  |
| ML BOUNDARY PILLAR NO-1     | 11.05.2021 | 08.30 AM<br>09.30 AM  | \$9.3                 | 58.3             | 58.8 | 59 2 | 59.7 | 60.3 |  |
| MINES FACE/BENCH            | 11.05.2021 | 08.30 AM<br>09.30 AM  | 79 1                  | 78.2             | 78.8 | 79.) | 79 4 | 79.9 |  |
| HAULAGE ROAD                | 11.05.2021 | 11.15 AM-<br>12.15 PM | 77.9                  | 76.9             | 77.3 | 77 9 | 78.4 | 78.9 |  |
| CRUSHER PLANT               | 11.05.2021 | 10.00 AM-<br>11.00 AM | 79.7                  | 78.7             | 79.1 | 79.6 | 80.2 | 80.6 |  |
| SCREEN PLANT                | 11.05.2021 | 10.00 AM-<br>11.00 AM | 78.7                  | 77.8             | 78.3 | 78.7 | 79.1 | 79.5 |  |
| ORE STORAGE & LOADING POINT | 11.05.2021 | 10.00 AM-<br>11.00 AM | 77.7                  | 76.8             | 77.1 | 77.5 | 78.1 | 78.7 |  |
| WASTE DUMP                  | 11.05.2021 | 11.15 AM-<br>12.15 PM | 63.7                  | 62.8             | 63.1 | 63.7 | 64.1 | 64.5 |  |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events and contribution level details: |  |                           |  |  |  |  |
|--|--|---------------------------|--|--|--|--|
| Noise Source/Event<br>Description                            | Noise Level dB(A)                        | Event Duration<br>(mm:ss) |  |  |  |  |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements        | Values ranged from 58.3 to 80.6<br>dB(A) | 1 to 2 hrs                |  |  |  |  |

\*Complaints Register is available at Laboratory

nv. Engineer

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Email | lab@bserwitech.com, info@bservitech.com Website | www.bservitech.com

CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/NQ/2021-05 |  | Issued to:               |
|--|--|--------------------------|
| Reporting Date 01.06.2021                |  |                          |
| Sample Description: A Month :            | Narayanposhi Iron &<br>Manganese Ore Mines |                          |
| Sample Collected by:                     | B.S. Envi-Tech (P) Ltd.,                   | of<br>M/s JSW Steel Ltd. |

| Temperature:                    |                            | *Celsus: 33.9 |  |  |  |
|---------------------------------|----------------------------|---------------|--|--|--|
| Wind speed(m/s):                | AVC: 3.3                   | MAX: 7.1      |  |  |  |
| Wind Direction:                 | SW-NE                      |               |  |  |  |
| Cloud Cover:                    | Sunny                      | Octas = 4/8   |  |  |  |
| Distance from Source (In Meter) | 2                          | ***           |  |  |  |
| Sl.M type:                      | Lutron, Model St. 4023SD   |               |  |  |  |
| Sl.M Serial Number:             | Q652514, Q652513 & Q652516 |               |  |  |  |

|                             |            |                       | Noise Levels in dB(A) |      |                 |      |      |      |  |
|-----------------------------|------------|-----------------------|-----------------------|------|-----------------|------|------|------|--|
| Locations                   | Date       | Time                  | Leq                   | Lega | L <sub>90</sub> | Lso  | Lio  | LMAR |  |
| MAGAZINE AREA               | 18.05.2021 | 10.15 AM-<br>11.15 AM | 59.7                  | 58.7 | 59.2            | 59.6 | 60.1 | 60.5 |  |
| ML BOUNDARY PILLAR NO-1     | 18.05.2021 | 10.15 AM-<br>11.15 AM | 57.9                  | 56.9 | 57.4            | 57.9 | 58.2 | 58.8 |  |
| MINES PACE/BENCH            | 18.05.2021 | 10.15 AM-<br>11.15 AM | 77.6                  | 76.8 | 77.1            | 77.5 | 77.9 | 78.3 |  |
| HAULAGE ROAD                | 18.05.2021 | 02.30 PM-<br>03.30 PM | 78.3                  | 77.4 | 77.8            | 78.3 | 78.8 | 79.2 |  |
| CRUSHER PLANT               | 18 05.2021 | 02.30 PM-<br>03.30 PM | 80.0                  | 79.1 | 79.6            | 79.9 | 80.3 | 80.8 |  |
| SCREEN PLANT                | 18.05.2021 | 02.30 PM-<br>03.30 PM | 79.0                  | 78.2 | 78.5            | 78.9 | 79.3 | 79.7 |  |
| ORE STURAGE & LOADING POINT | 18.05.2021 | 11.45 AM-<br>12.45 PM | 78.3                  | 77.5 | 77.9            | 78.2 | 78.B | 79.1 |  |
| WASTE DUMP                  | 18.05.2021 | 11.45 AM-<br>12.45 PM | 67.3                  | 66.1 | 66.7            | 67.2 | 67.B | 68.3 |  |

#### N.B: <85 dB(A) AS PER CTO & BC

| Noted noise source/s, events and contribution level details: |                                       |                |  |  |  |
|--|---------------------------------------|----------------|--|--|--|
| Noise Source/Event<br>Description                            | Noise Level dB(A)                     | Event Duration |  |  |  |
| Orc Crushing Activities, DG<br>Sets, Dumper Movements        | Values ranged from 56.9 to 80.8 dB(A) | 1 to 2 hrs     |  |  |  |

"Complaints Register is available at Laboratory

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v. Engineer

Website: www.bsenvitech.com CIN No.:: U74210TG1999PTG032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/NQ/2021-05 |                          | Issued to:               |
|--|--------------------------|--------------------------|
| Reporting Date                           | 01.06.2021               |                          |
| Sample Description:                      | Narayanposhi lron &      |                          |
| Month : May-2021                         |                          | Manganese Ore Mines      |
| Sample Collected by:                     | B.S. Envi-Tech (P) Ltd., | of<br>M/s JSW Steel Ltd. |

| Temperature:                    |                            | *Celsius: 31.9 |  |  |  |
|---------------------------------|----------------------------|----------------|--|--|--|
| Wind speed(m/sk)                | AVG: 3.7                   | MAX: 8.3       |  |  |  |
| Wind Direction:                 | SW-NE                      |                |  |  |  |
| Cloud Caver:                    | Sunny                      | Octas - 4/8    |  |  |  |
| Distance from Source (In Meter) | 2                          |                |  |  |  |
| SLM type:                       | Lutron, Model SL-4023SD    |                |  |  |  |
| SLM Serial Number:              | Q652514, Q652513 & Q652516 |                |  |  |  |

| 1                              |            |                       | Noise Levels In dB(A) |      |      |      |             | ,     |
|--------------------------------|------------|-----------------------|-----------------------|------|------|------|-------------|-------|
| Locations                      | Date       | Time                  | Leq                   | Lun  | Leo  | Lso  | <b>L</b> 10 | Letus |
| MAGAZINE AREA                  | 25.05.2021 | 11.45 AM-<br>12.45 PM | 59.0                  | 58.2 | 58.5 | 5B.9 | 59.3        | 59.7  |
| MIL BOUNDARY PILLAR NO-1       | 25.05.2021 | 11.45 AM-<br>12 45 PM | 58.3                  | 57.2 | 57.7 | 58.1 | 58.8        | 59.2  |
| MONES PACE/BENCH               | 25.05.2021 | 11 45 AM-<br>12 45 PM | 75.B                  | 74.7 | 75.2 | 75.8 | 76.3        | 76.9  |
| HAULAGE ROAD                   | 25.05.2021 | 09.00 AM-<br>10.00 AM | 74.9                  | 73.9 | 74.4 | 74.9 | 75.2        | 75.8  |
| CRUSHER PLANT                  | 25.05.2021 | 09.00 AM-<br>10.00 AM | 78.9                  | 78.0 | 78.4 | 78.9 | 79.3        | 79.7  |
| SCREEN PLANT                   | 25.05.2021 | 09.00 AM-<br>10.00 AM | 78.4                  | 77.5 | 77.9 | 78.3 | 78.7        | 79.2  |
| ORE STORAGE & LOADING<br>POINT | 25.05.2021 | 10.30 AM-<br>11.30 AM | 79.2                  | 78.3 | 78.8 | 79.2 | 79.6        | 79.9  |
| WASTE DUMP                     | 25.05.2021 | 10.30 AM-<br>11.30 AM | 70.2                  | 69.1 | 69.4 | 70.2 | 70.7        | 71.1  |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events and contribution level details: |                                       |                           |  |  |  |  |
|--|---------------------------------------|---------------------------|--|--|--|--|
| Noise Source/Event<br>Description                            | Noise Level dB(A)                     | Event Duration<br>(mm:sa) |  |  |  |  |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements        | Values ranged from 57.2 to 79 9 dB(A) | 1 to 2 hrs                |  |  |  |  |

"Complaints Register is available at Laboratory.

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Website : www.bsenvitech.com CIN No : J74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NI   | TMO/ENV/2021/NQ/2021-05 | Issued to:                                 |
|---|-------------------------|--|
| leporting Date 01.06.2021                                       |                         |  |
| Sample Description: Ambient Noise Level Month : May-2021        |                         | Narayanposhi Iron &<br>Manganese Ore Mines |
| Month ; May-2021  Sample Collected by: B.S. Envi-Tech (P) Ltd., |                         | of<br>M/s JSW Steel Ltd.                   |

| Measurement Location: | Koira Basti          | X.             |  |
|-----------------------|----------------------|----------------|--|
| Temperature.          |                      | *Celsius: 26 i |  |
| Wind speedtm/st:      | AVG: 3.3             | MAX: 6.8       |  |
| Wind Direction:       | SW-NE                |                |  |
| Cloud Cover:          | Sunny                | Octas - 4/8    |  |
| SLM type              | Lutron, Model St. 40 | 23SD           |  |
| SLM Serial Number     | Q652514              |                |  |

|                |        | Measurem   | ent dețui | s and st             | titical    | noise k    | vela - c     | IB (A)      | 0.                 |    |
|----------------|--------|------------|-----------|----------------------|------------|------------|--------------|-------------|--------------------|----|
| Start Duration |        |            |           | Noise Level (dB (A)) |            |            |              |             | Applia<br>Standard |    |
|                | Date   | Luq,T      | LAnz      | Man                  | LA<br>99.1 | Leq<br>Day | Leq<br>Fight | Day<br>Time | Kight<br>Time      |    |
| 08.00<br>AM    | 24 hrs | 04.05 2021 | 53.5      | 54.7                 | 40.5       | 54.5       | 53.5         | 41.4        | 55                 | 45 |

| Noted noise source/s, events and contribution level details:  |                                       |  |  |  |  |
|---|---------------------------------------|--|--|--|--|
| Noise Source/Event<br>Description   | Noise Level 48(A)                     | Event Duration (mm:64)   |  |  |  |
| No specific source,  Village activities prevailing which include  Movement of vehicles mainly two wheelers, transportation of uppers. | Values ranged from 40.5 to 54.7 dB(A) | Maximum recorded is for 2 minutes (only during value)e movement) |  |  |  |

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Bny Engineer

\*Gumptomis Register is available at Laboratory

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CIN No. 1 LI74210TG 1999PTC 032358

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NE                      | IMO/ENV/2021/NQ/2021-05 | Isaued to:               |
|--|-------------------------|--------------------------|
| Reporting Date                         | 01.06.2021              |                          |
| ample Description: Ambient Noise Level |                         | Narayanposhi Iron &      |
|  |                         | Manganese Ore Mines      |
|  |                         | of<br>M/s JSW Steel Ltd. |

| Measurement Location; | Kasıra Bastı        |                |  |
|-----------------------|---------------------|----------------|--|
| Temperature.          |                     | "Celsius: 26.6 |  |
| Wand speedim/sj:      | AVC: 3.4            | MAX: 7.8       |  |
| Wind Direction:       | SW-NE               |                |  |
| Cloud Cover:          | Sunny               | Octas - 4/8    |  |
| SLM type:             | Lutron, Model SL-40 | 23SD           |  |
| SLM Serial Number:    | Q652516             |                |  |

|             | (4            | Measurem   | ent detai | le and str           | atistical | noise h    | oveta – d    | LB (A)      | Ti.           |          |
|-------------|---------------|------------|-----------|----------------------|-----------|------------|--------------|-------------|---------------|----------|
| Start       | Duration Date |            |           | Noise Level (d9 (A)) |           |            |              |             |               | idB (A)i |
| Time        |               | L.,T       | LA        | LA                   | LA.       | Leq<br>Day | Leq<br>Hight | Day<br>Time | Night<br>Time |          |
| 08.30<br>AM | 24 brs        | 04.05.2021 | 52.1      | 54.0                 | 38.9      | 53.7       | 52.1         | 40.3        | 55            | 46       |

| Noise Source/Event<br>Description                                    | Noise Level dB(A)                     | Event Duration<br>(mm:sa)  |
|--|---------------------------------------|--|
| No specific source.  |                                       | 100 000  |
| Village activities prevailing which include                          | Values ranged from 38.9 to 54.0 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |
| Movement of vehicles mainly two wheelers, transportation of tippers. |                                       | 3  |

Engineer

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

GROUND WATER LEVEL REPORT

**MAY-2021** 



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

Client

: M/s. JSW Steel Ltd.

Name of Mines: Narayanposhi Iron & Manganese Ore Mine

Month

: May

Date

: 18.05.2021

#### GROUND WATER LEVEL, DEPTH FROM SURFACE

| S.No | Location                          | Ground Water Level<br>In Meters |
|------|-----------------------------------|---------------------------------|
| 1    | Dug Well Koira Basti              | 10.27                           |
| 2.   | Dug Well Kasira Basti             | 9.46                            |
| 3.   | Site Services Area (Pizometer-01) | 19.73                           |
| 4.   | Near 650 crusher (Pizometer-02)   | 14.41                           |
| 5    | Crusher plant area (Pizometer-03) | 35.55                           |

For B.S Envi-Tech (P) Ltd.,

uthorised Signatory

'Complaints Register is available at Laboratory.

Website | www.bsenvitoch.com

CIN No. 1: U74210TG1999PTCU32358

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

NOISE MONITORING REPORT

JUNE-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NI   | PLMO/ENV/2021/NQ/2021-06 | Issued to:                                 |
|---|--------------------------|--|
| Reporting Date  | 01.07.2021               |  |
| Sample Description: Ambient Noise Level Month : June-2021 |                          | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:                                      | B.S. Envi-Tech (P) Ltd., | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                  | *Celsius: 34.7 |  |
|---------------------------------|------------------|----------------|--|
| Wind speed(m/s):                | AVG: 2.9         | MAX: 6.1       |  |
| Wind Direction:                 | SW-NE            |                |  |
| Cloud Cover:                    | Sunny            | Octos - 4/8    |  |
| Distance from Source (In Meter) | 2                |                |  |
| SLM type:                       | Lutron, Model SL | 4023BD         |  |
| SLM Serial Number:              | Q652513 & Q652   |                |  |
| Calibration Validity            | 13/10/2021       |                |  |

|                             |            |                       | Noise Levels in dB(A) |       |      |      |      |       |  |
|-----------------------------|------------|-----------------------|-----------------------|-------|------|------|------|-------|--|
| Locations                   | Date       | Time                  | L <sub>eq</sub>       | Lean  | Lan  | Leo  | Lia  | Locas |  |
| MAGAZINE AREA               | 09.06.2021 | 10.30 AM-<br>11 30 AM | 60.3                  | 59.5  | 59.9 | 60.2 | 60.6 | 61.1  |  |
| ML BOUNDARY PIGLAR NO 1     | 09.06.2021 | 10.30 AM-<br>11.30 AM | 56.4                  | 55.6  | 55.9 | 56 4 | 56.8 | 57.2  |  |
| MINÉS PACE/BENCH            | 09.06.2021 | 09.15 AM-<br>10.15 AM | 79.9                  | 78.9  | 79.4 | 79.9 | 80.3 | 80.8  |  |
| HAULAGE ROAD                | 09.06.2021 | 09.15 AM-<br>10.15 AM | 79.9                  | 79.1  | 79.5 | 79.8 | 80.2 | 80.6  |  |
| CRUSHER PLANT               | 09.06.2021 | 11.55 AM-<br>12.55 PM | 79.7                  | 78.7  | 79.2 | 79.6 | 80.1 | 80.5  |  |
| SCREEN PLANT                | 09.06.2021 | 11,55 AM-<br>12,55 PM | 78.5                  | 77.6  | 78.1 | 78.4 | 78.9 | 79.2  |  |
| ONE STORAGE & LOADING POINT | 09.06.2021 | 02.15 PM-<br>03.15 PM | 80.3                  | 79.2  | 79.7 | 80.3 | 80.8 | 81.2  |  |
| WASTE DUMP                  | 09.06.2021 | 02.15 PM-<br>03.15 PM | 70.3                  | 69. I | 69.6 | 70.3 | 70.8 | 71.2  |  |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/e, events                          | s and contribution level details:        |                           |
|---|--|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                        | Event Duration<br>(mm:es) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 55.6 to 81.2<br>dB(A) | I to 2 hrs                |

"Complaints Register is available at Laboratory

Engineer

CIN No. U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP               | MO/ENV/2021/NQ/2021-06         | Issued to:                                 |
|---------------------------------|--------------------------------|--|
| Reporting Date                  | 01.07.2021                     |  |
| Sample Description: A Month : J | mbient Noise Level<br>une-2021 | Narayanposhi Iron &<br>Manganese Orc Mines |
| Sample Collected by:            | B.S. Envi-Tech (P) Ltd.,       | M/s JSW Steel Ltd.                         |

| Temperature:                    |                            | *Celsius: 32.9 |  |  |
|---------------------------------|----------------------------|----------------|--|--|
| Wind speed(m/s).                | AVG: 3.2                   | MAX: 7.6       |  |  |
| Wind Direction:                 | SW-NE                      | - ve           |  |  |
| Cloud Cover:                    | Summy                      | Octas - 4/8    |  |  |
| Distance from Source (In Meter) | 2                          |                |  |  |
| SLM type:                       | Lutron, Model SL-          | 4023SD         |  |  |
| SLM Serial Number:              | Q652514, Q652513 & Q652516 |                |  |  |
| Calibration Validity            | 13/10/2021                 |                |  |  |

| Locations                      |            |                       |      | Noi  | e Leve | Levels in dB(A) |                 |      |  |
|--------------------------------|------------|-----------------------|------|------|--------|-----------------|-----------------|------|--|
|                                | Date       | Time                  | Luq  | Luia | Leo    | Leo             | L <sub>10</sub> | Lww  |  |
| MAGAZINE ARSA                  | 16.06.2021 | 10.15 AM-<br>11.15 AM | 59.3 | 58.5 | 58.8   | 59.2            | 59.7            | 60.3 |  |
| ML BOUNDARY PILLAR NO-1        | 16.06.2021 | 10.15 AM-<br>11.15 AM | 60.9 | 59.7 | 60.3   | 60.8            | 61.4            | 61.8 |  |
| MINES FACE/BENCII              | 16.06.2021 | 10.15 AM-<br>11.15 AM | 76.8 | 75.9 | 76.3   | 76.8            | 77.1            | 77.5 |  |
| HAULAGE ROAD                   | 16.06.2021 | 02.30 PM<br>03.30 PM  | 78.8 | 77.9 | 78.3   | 78.8            | 79.2            | 79.6 |  |
| CRUSHER PLANT                  | 16.06.2021 | 02,30 PM-<br>03,30 PM | 79.2 | 78.2 | 78.5   | 79.1            | 79.7            | 80.1 |  |
| SCREEN PLANT                   | 16.06.2021 | 02.30 PM-<br>03.30 PM | 76.3 | 77.3 | 77.8   | 78.2            | 78.8            | 79.3 |  |
| ORE STORAGE & LOADING<br>POINT | 16.06.2021 | 11.45 AM-<br>12.45 PM | 79.8 | 78.8 | 79.4   | 79.8            | 80.2            | 80.7 |  |
| WASTE DUMP                     | 16.06.2021 | 11.45 AM-<br>12.45 PM | 67.8 | 66.7 | 67.2   | 67.9            | 68.3            | 68.8 |  |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, event                           | s and contribution level details:     |                           |
|---|---------------------------------------|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                     | Event Duration<br>(mm:sa) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 58.5 to 80.7 dB(A) | t to 2 hrs                |

"Complaints Register is available at Laboratory

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Env. Engineer

Website : www.bservilech.com CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP               | MO/ENV/2021/NQ/2021-06         | Issued to:                                 |
|---------------------------------|--------------------------------|--|
| Reporting Date                  | 01.07.2021                     |  |
| Sample Description: A Month : J | mbient Noise Level<br>une-2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:            | B.S. Envi-Tech (P) Ltd ,       | of<br>M/s JSW Steel Ltd.                   |

| Temperature;                    |                   | *Celsius: 29.7             |  |  |  |
|---------------------------------|-------------------|----------------------------|--|--|--|
| Wind speed(in/s):               | AVG: 3.5          | AVG: 3.5 MAX: 7.9          |  |  |  |
| Wind Direction:                 | SW-NE             | 211                        |  |  |  |
| Cloud Cover:                    | Cloudy            | Octas 4/8                  |  |  |  |
| Distance from Source (In Meter) | 2                 |                            |  |  |  |
| SLM type:                       | Lutron, Model St. | 40238D                     |  |  |  |
| SLM Serial Number:              | Q652514, Q65251   | Q652514, Q652513 & Q652516 |  |  |  |
| Calibration Validity            | 13/10/2021        | 13/10/2021                 |  |  |  |

|                             |            |                        | Noise Levels in dB(A) |      |      |      |              |      |
|-----------------------------|------------|------------------------|-----------------------|------|------|------|--------------|------|
| Locations                   | Date       | Time                   | Lot                   | LHIA | L90  | Lao  | Lin          | LHes |
| MAGAZINE AREA               | 23.06 2021 | 10.00 AM-<br>11.00 AM  | 58.8                  | 57.9 | 58.3 | 58.8 | 59.2         | 59.6 |
| ML BOUNDARY PILLAR NO-I     | 23.06.2021 | 10.00 AM<br>11.00 AM   | 58.4                  | 57.4 | 57.9 | 58.3 | 58.8         | 59.2 |
| MINES FACE/BENCH            | 23.06.2021 | 10.00 AM -<br>11.00 AM | 78.7                  | 77,7 | 78.3 | 78.8 | 79.2         | 79.8 |
| HAULAGE ROAD                | 23.06 2021 | 11.30 AM-<br>12.30 PM  | 79.3                  | 78.5 | 78.9 | 79.3 | 79.7         | 80.1 |
| CRUSHER PLANT               | 23.06.2021 | 11.30 AM-<br>12.30 PM  | 80.4                  | 79.5 | 79.9 | 80.3 | 80.7         | 81.2 |
| SCREEN PLANT                | 23.06.2021 | 11.30 AM-<br>12.30 PM  | 77.8                  | 76.8 | 77.2 | 77.7 | 78.3         | 78.8 |
| ORE STORAGE & LOADING POINT | 23.06.2021 | 08.30 AM-<br>09.30 AM  | 79.2                  | 78.1 | 78.6 | 79.2 | 79.B         | 80.2 |
| WASTE DUMP                  | 23,06 2021 | 08.30 AM-<br>09.30 AM  | 69.2                  | 68.3 | 68.8 | 69.2 | 69. <b>6</b> | 70.1 |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, event                           | s and contribution level details:     |                           |
|---|---------------------------------------|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                     | Event Duration<br>(mm:ss) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 57.4 to 81.2 dB(A) | 1 to 2 hrs                |

"Complaints Register is available at Laboratory

Engineer

CIN No. 1074210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO/       | ENV/2021/NQ/2021-06 | lesued to:               |
|-----------------------------|---------------------|--------------------------|
| Reporting Date              | 01.07.2021          |                          |
| Sample Description: Ambie:  | nt Noise Level      | Narayanposhi Iron &      |
| Month : June-2              | 021                 | Manganese Ore Mines      |
| Sample Collected by: B.S. E | nvi-Tech (P) Ltd    | of<br>M/s JSW Steel Ltd. |

| Temperature:                    |                   | *Cetsurs: 30.6             |  |  |  |
|---------------------------------|-------------------|----------------------------|--|--|--|
| Wind speed(m/s):                | AVG: 3.3          | MAX: 7.5                   |  |  |  |
| Wind Direction:                 | SW-NE             |                            |  |  |  |
| Cloud Cover:                    | Sunny             | Octas - 4/8                |  |  |  |
| Distance from Source (In Meter) | 2                 |                            |  |  |  |
| SLM type:                       | Lutron, Model SIz | 4023SD                     |  |  |  |
| SLM Serial Number:              | Q652514, Q6525    | Q652514, Q652513 & Q652516 |  |  |  |
| Calibration Validity            | 13/10/2021        |                            |  |  |  |

|                                | T/         |                       |      | Nol  | e Leve | la in d | B(A) |       |
|--------------------------------|------------|-----------------------|------|------|--------|---------|------|-------|
| Locations                      | Date       | Time                  | Leq  | Luia | Lab    | Leo     | L10  | Liter |
| MAGAZINE AREA                  | 30.06.2021 | 08.30 AM<br>09.30 AM  | 60.2 | 59.1 | 59.6   | 602     | 60.7 | 61.2  |
| ML BOUNDARY PILLAR NO-1        | 30.06.2021 | 08.30 AM<br>09.30 AM  | 59.3 | 58.3 | 58.8   | 59.2    | 59.7 | 60.2  |
| MINES FACE/BENCH               | 30.06.2021 | 08.30 AM<br>09.30 AM  | 77.7 | 76.6 | 77.1   | 77.7    | 78.2 | 78.8  |
| HAULAGE ROAD                   | 30.06.2021 | 11.15 AM-<br>12.15 PM | 78.2 | 77.4 | 77.8   | 78.2    | 78.5 | 78.9  |
| CRUSHER PLANT                  | 30.06.2021 | 10.00 AM-<br>11.00 AM | 80.0 | 79.1 | 79.6   | 80.0    | 80.4 | 80.8  |
| SCREEN PLANT                   | 30.06.2021 | 10.00 AM<br>11.00 AM  | 78.9 | 78.1 | 78.4   | 78.8    | 79.2 | 79.7  |
| ORE STORAGE & LOADING<br>POINT | 30.06.2021 | 10.00 AM-<br>11.00 AM | 80.5 | 79.7 | 80.1   | 80.5    | 80.8 | 81.2  |
| WASTE DUMP                     | 30.06.2021 | 11.15 AM-<br>12.15 PM | 71.7 | 70.7 | 71 2   | 71.7    | 72.2 | 72.6  |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noise Source/Event<br>Description                     | Noise Level dB(A)                     | Event Duration |
|---|---------------------------------------|----------------|
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 58.3 to 81.2 dB(A) | 1 to 2 hrs     |

"Crimplaints Register is available at Laboratory."

Engineer

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CIN No. 1174210TG1999PTCG32358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP  | TMO/ENV/2021/NQ/2021-06  | Issued to:                                 |
|--|--------------------------|--|
| Reporting Date 01.07.2021                                  |                          |  |
| Sample Description: Ambient Noise Level  Month : June-2021 |                          | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:                                       | B.S. Envi-Tech (P) Ltd., | of<br>M/s JSW Steel Ltd.                   |

| Measurement Location: | Koira Basti         |                |
|-----------------------|---------------------|----------------|
| Temperature:          |                     | *Celsius: 27.5 |
| Wind speed(m/s):      | AVG: 3.6            | MAX:8.0        |
| Wind Direction:       | SW-NE               |                |
| Cloud Covers          | Sunny               | Octas 4/8      |
| SLM type:             | Lutron, Model St-40 | 23SD           |
| SLM Serial Number:    | Q652514             |                |
| Calibration Validity  | 13/10/2021          |                |

|             |          | Measurem   | ent detail | is and str           | tistical | noise k    | rvels - d  | 3B (A)       |                                 |               |  |
|-------------|----------|------------|------------|----------------------|----------|------------|------------|--------------|---------------------------------|---------------|--|
| Start       |          |            |            | Holse Level (dB (A)) |          |            |            |              | Applicable<br>Standard (dB (A)) |               |  |
| Time        | Duration | Date       | L,,q,T     | LAnn                 | LAnu     | LA<br>so,r | Leq<br>Day | Leq<br>Night | Day<br>Time                     | Night<br>Time |  |
| OR.OU<br>AM | 24 hrs   | 09.06.2021 | 53.2       | 54.3                 | 40.4     | 54.1       | 53.2       | 41.4         | 55                              | 46            |  |

| Noted noise source/s, events and contribution level details:   |                                       |  |  |  |  |
|--|---------------------------------------|--|--|--|--|
| Noise Source/Event<br>Description  | Noise Level dB(A)                     | Event Duration (mm:es)   |  |  |  |
| No specific source.  Village activities prevailing which include  Movement of vehicles mainly two wheelers, transportation of tippers. | Values ranged from 40.4 to 54.3 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |  |  |  |

\*Complaints Register is available at Laboratory

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Website : www.bsenvitech.com

CIN No. + U74210TG1999P1C032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NI   | PIMO/ENV/2021/NQ/2021-06 | Issued to:                                 |
|---|--------------------------|--|
| Reporting Date  | 01.07.2021               |  |
| Sample Description: Ambient Noise Level Month : June-2021 |                          | Narayanposhi Iron &<br>Manganese Orc Mines |
| Sample Collected by:                                      | B.S. Envi-Tech (P) Ltd., | of<br>M/s JSW Steel Ltd.                   |

| Measurement Location: | Kasira Basti        |                |
|-----------------------|---------------------|----------------|
| Temperature:          |                     | *Celsius: 27.9 |
| Wind speed(m/s):      | AVG. 3.8            | MAX: 8.3       |
| Wind Direction:       | SW NE               | 45             |
| Cloud Cover:          | Sunny               | Octus 4/8      |
| SLM type.             | Lutron, Model SL-40 | 023SD          |
| SLM Serial Number:    | Q652516             |                |
| Calibration Validity  | 13/10/2021          |                |

|             | 0 0      | Measurem   | ent detail           | ls and st | اخوناوناه | noise le   | vela – d   | (B (A)                          |             |               |
|-------------|----------|------------|----------------------|-----------|-----------|------------|------------|---------------------------------|-------------|---------------|
| Start       |          |            | Noise Level (dB (A)) |           |           |            |            | Applicable<br>Standard (dB (A)) |             |               |
| Time        | Decetion | Dute       | Lucy, T              | LAnce     | LAmis     | LA<br>90,1 | Leq<br>Day | Leg<br>Night                    | Day<br>Time | Night<br>Time |
| 08.30<br>AM | 24 hrs   | 89.06 2021 | at 4                 | 52.8      | 39.7      | 52.5       | 51.4       | 4) 0                            | 66          | 45            |

| Noise Source/Event<br>Description                                    | Noise Level dB(A)          | Event Duration<br>(mm:ss)    |
|--|----------------------------|------------------------------|
| No specific source.  | Values ranged from 39.7 to | Maximum recorded is for 2    |
| Village activities prevailing which include                          | S2.8 dB(A)                 | minutes (only during vehicle |
| Movement of vehicles mainty two wheelers, transportation of tippers. |                            |                              |

Engineer

\*Complaints Register's available ant aboratory

Website Fwww.bschvitech.com

CIN No. : U742111 G1999P7C032358

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# NARAYANPOSHI IRON AND MANGENESE ORE MINES

# NOISE MONITORING REPORT

JULY-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NE   | TMO/ENV/2021/NQ/2021-07  | Issued to:                                 |
|---|--------------------------|--|
| Reporting Date  | 02.08.2021               |  |
| Sample Description: Ambient Noise Level Month : July-2021 |                          | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:                                      | B.S. Envi-Tech (P) L(d., | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                  | *Celstus: 29.6 |  |
|---------------------------------|------------------|----------------|--|
| Wind speed(m/s);                | AVC: 3.1         | MAX: 6.9       |  |
| Wind Direction:                 | SW-NE            |                |  |
| Cloud Cover:                    | Cloudy           | Octos 4/8      |  |
| Distance from Source (In Meter) | 2                |                |  |
| SLM type:                       | Lutran, Model SL | -4023SD        |  |
| SLM Serial Number:              | Q652513 & Q652   | 517            |  |
| Calibration Validity            | 13/10/2021       |                |  |

|                             |            |                       |      | Not  | se Leve | b nt sk | B(A) |      |
|-----------------------------|------------|-----------------------|------|------|---------|---------|------|------|
| Locations                   | Date       | Time                  | Leq  | Leum | Leo     | Lso     | Lio  | Luax |
| MAGAZINE AREA               | 09.07.2021 | 10.00 AM-<br>11.00 AM | 58.6 | 57.9 | 58.3    | 588     | 59.2 | 59.7 |
| MU DOUNDARY PILLAR NO-1     | 09.07.2021 | 10.00 AM-<br>11.00 AM | 56.2 | 55.1 | 55.5    | 56 1    | 56.7 | 57.2 |
| MINES PACE/BENCH            | 09.07.2021 | 11.30 AM-<br>12.30 PM | 79.4 | 78.4 | 78.8    | 79.3    | 79.7 | 80.4 |
| HAULAGE ROAD                | 09.07.2021 | 11.30 AM<br>12.30 PM  | 79.4 | 78.5 | 78.8    | 79.3    | 79.9 | 80.3 |
| CRUSHER PLANT               | 09.07 2021 | 02.15 PM-<br>03.15 PM | 79.0 | 78.1 | 78.6    | 79.1    | 79.4 | 79.8 |
| SCREEN PLANT                | 09.07.2021 | 02.15 PM<br>03.15 PM  | 76.3 | 77.3 | 77.8    | 78.2    | 78.8 | 79.3 |
| ORE STORAGE & LOADING POINT | 09.07.2021 | 03.45 PM-<br>04.45 PM | 79.7 | 78.8 | 79.2    | 79.6    | 80.1 | 80.7 |
| WASTE DUMP                  | 09.07.2021 | 03.45 PM-<br>04.45 PM | 67.2 | 66.1 | 66.6    | 67.2    | 67.7 | 68.1 |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events                          | a and contribution level details:        |                           |
|---|--|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                        | Event Duration<br>(mm:ss) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 55.1 to 80.7<br>dB(A) | 1 to 2 hrs                |

"Complaints Register is available at Laboratory,

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CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP               | IMO/ENV/2021/NG/2021-07          | Issued to:                                 |
|---------------------------------|----------------------------------|--|
| Reporting Date                  | 02.08.2021                       |  |
| Sample Description: A Month : J | Ambient Noise Level<br>fuly-2021 | Narayanposhi Iron &<br>Manganese Ore Minea |
| Sample Collected by:            | B.S. Envi-Tech (P) Ltd.,         | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                   | *Celsius: 28.8 |  |
|---------------------------------|-------------------|----------------|--|
| Wind speedim/sk;                | AVG: 3.6          | MAX: 8.3       |  |
| Wind Direction:                 | SW-NE             |                |  |
| Cloud Cover:                    | Cloudy            | Octas 4/8      |  |
| Distance from Source (In Meter) | 2                 |                |  |
| SLM type:                       | Lutron, Model SL- | 4023SD         |  |
| SLM Serial Number:              | Q652514, Q65251   | 3 & Q652516    |  |
| Calibration Validity            | 13/10/2021        | .,             |  |

| Locations                   |            |                       |      | Noise Levels in dB(A) |      |      |      |       |  |
|-----------------------------|------------|-----------------------|------|-----------------------|------|------|------|-------|--|
|                             | Date       | Time                  | Leq  | Luin                  | Loo  | Leo  | L10  | Lotus |  |
| MAGAZINE AREA               | 16.07.2021 | 10.00 AM-<br>11.00 AM | 59.0 | 58.2                  | 58.6 | 58.9 | 59.3 | 59.8  |  |
| MI. HOUNDARY PILLAR NO-1    | 16.07.2021 | 10.00 AM-<br>11.00 AM | 58.7 | 57.7                  | 58.2 | 58.6 | 59.1 | 59.5  |  |
| MINES PACE/BENCH            | 16.07.2021 | 10.00 AM-<br>11.00 AM | 75.8 | 74.8                  | 75 3 | 75.6 | 76.1 | 7G.7  |  |
| HAULAGE ROAD                | 16.07.2021 | 11.30 AM<br>12.30 PM  | 78.3 | 77.3                  | 77.8 | 78.2 | 76.8 | 79.3  |  |
| CRUSHER PLANT               | 16.07.2021 | 11.30 AM-<br>12.30 PM | 80.0 | 79.1                  | 79.5 | 79.9 | 80.3 | 80.8  |  |
| SCREEN PLANT                | 16.07.2021 | 11.30 AM<br>12.30 PM  | 78.4 | 77.5                  | 77.9 | 78.3 | 78.7 | 79.2  |  |
| ORE STORAGE & LOADING FOINT | 16.07.2021 | 08.30 AM-<br>09.30 AM | 80.1 | 79. t                 | 79.5 | 80.0 | 80.6 | 81.1  |  |
| WASTE DUMP                  | 16.07.2021 | 08.30 AM-<br>09.30 AM | 66.8 | 65.9                  | 66.3 | 66.8 | 67.2 | 67.7  |  |

#### N.B; <65 dB(A) AS PER CTO & EC

| Noted noise source/s, events                          | and contribution level details:       |                           |
|---|---------------------------------------|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                     | Event Duration<br>(mm:ss) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 57.7 to 81.1 dB(A) | 1 to 2 hrs                |

\*Complaints Register is available at Laboratory.

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. Engineer

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CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NE           | PIMO/ENV/2021/NQ/2021-07         | Issued to:                                 |
|-----------------------------|----------------------------------|--|
| Reporting Date              | 02.08.2021                       |  |
| Sample Description: Month : | Ambient Noise Level<br>July-2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:        | B.S. Envt-Tech [P] Ltd           | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                   | *Celsius: 29.3 |  |
|---------------------------------|-------------------|----------------|--|
| Wind speed(m/s):                | AVG: 3.0 MAX: 7.2 |                |  |
| Wind Direction:                 | SW-NE             |                |  |
| Cloud Cover:                    | Cloudy            | Octos 4/8      |  |
| Distance from Source (In Meter) | 2                 |                |  |
| SLM type:                       | Lutron, Model SL- | 4023SD         |  |
| SLM Scrial Number:              | Q652514, Q65251   |                |  |
| Calibration Validity            | 13/10/2021        |                |  |

| Locations                   |            |                       | Noise Levels in dB(A) |                  |                 |      |      |      |
|-----------------------------|------------|-----------------------|-----------------------|------------------|-----------------|------|------|------|
|                             | Date       | Time                  | Log                   | L <sub>Min</sub> | L <sub>60</sub> | Leo  | Lia  | Lua  |
| MAGAZINE ARKA               | 23.07.2021 | -MA 0E.80<br>MA 0E.60 | 58.4                  | 57.5             | 57.9            | 58.4 | 58.8 | 59.3 |
| MUBOUNDARY PILLAR NO-L      | 23.07.2021 | 08.30 AM-<br>09.30 AM | 59.3                  | 58.3             | 58.8            | 59.2 | 59.7 | 60.1 |
| MINES FACE/BENCII           | 23.07.2021 | 08.30 AM-<br>09.30 AM | 77.3                  | 76.1             | 76.9            | 77,3 | 77.8 | 78.2 |
| HAULAGE ROAD                | 23.07.2021 | 11.15 AM-<br>12.15 PM | 79.8                  | 78.9             | 79.3            | 79.8 | 80.2 | 80.6 |
| CRUSHER PLANT               | 23.07.2021 | 10.00 AM<br>11.00 AM  | 79.6                  | 76.7             | 79.2            | 79.6 | 79.9 | 80.3 |
| SCREEN PLANT                | 23.07.2021 | 10.00 AM-<br>11.00 AM | 77.5                  | 76.6             | 77. i           | 77.5 | 77.9 | 78.3 |
| ORE STORAGE & LOADING POINT | 23.07.2021 | 10.00 AM<br>11.00 AM  | 79.2                  | 78.3             | 78.8            | 79.3 | 79.6 | 80.0 |
| WASTE DUMP                  | 23.07.2021 | 11.15 AM<br>12.15 PM  | 67.9                  | 67. t            | 67.4            | 67.8 | 68.2 | 68.6 |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, event                           | s and contribution level details:        |                           |
|---|--|---------------------------|
| Naise Source/Event<br>Description                     | Noise Level dB(A)                        | Event Duration<br>(mm:ss) |
| Ore Crushing Activities, DG<br>Scts, Dumper Movements | Values ranged from 57.5 to 80.6<br>dB(A) | 1 to 2 hrs                |

"Complaints Register is available at Laboratory

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP   | IMO/ENV/2021/NQ/2021-07  | Issued to:                              |
|---|--------------------------|---|
| Reporting Date  | 02.08.2021               |   |
| Reporting Date   02.08.2021 Sample Description: Ambient Noise Level Month : July-2021 |                          | Narayanposhi Iron & Manganese Ore Mines |
| Sample Collected by:  | B.S. Envi-Tech (P) Ltd., | of<br>M/s JSW Steel Ltd.                |

| Temperature;                    |                  | "Celsius; 26,3 |  |
|---------------------------------|------------------|----------------|--|
| Wind speedim/st:                | AVG: 3.5         | MAX: 8.4       |  |
| Wind Direction:                 | SW-NE            |                |  |
| Cloud Cover:                    | Cloudy           | Octos - 4/8    |  |
| Distance from Source (in Meter) | 2                |                |  |
| SLM type:                       | Lutron, Model SL | 4023SD         |  |
| SLM Serial Number:              | Q652514, Q6525   | 3 & Q652516    |  |
| Calibration Validity            | 13/10/2021       |                |  |

| Locations               |            |                       |      | Noise Levels in dB(A) |      |      |      |      |
|-------------------------|------------|-----------------------|------|-----------------------|------|------|------|------|
|                         | Date       | Time                  | Leq  | Latin                 | Lan  | Lao  | Lio  | Luc  |
| MACAZINE ARKA           | 30.07.2021 | 10.15 AM-<br>11.15 AM | 57.9 | 56.9                  | 57.3 | 57.8 | 58.2 | 58.8 |
| ML BOUNDARY PILLAR NO-1 | 30.07.2021 | 10-15 AM-<br>11.15 AM | 58.3 | 57.3                  | 57.9 | 58.2 | 58.8 | 59.1 |
| MINES FACE/BENCH        | 30.07.2021 | 10 15 AM-<br>11.15 AM | 76.9 | 75.8                  | 76.3 | 76.9 | 77.2 | 77.9 |
| HAULAGE ROAD            | 30.07,2021 | 02.30 PM-<br>03.30 PM | 79,9 | 79.1                  | 79.4 | 79.9 | 80.2 | 80.6 |
| CRUSHER PLANT           | 30.07.2021 | 02.30 PM-<br>03.30 PM | 79.3 | 78.4                  | 78.8 | 79.2 | 79.6 | 80.1 |
| SCREEN PLANT            | 30,07,2021 | 02.30 PM<br>03.30 PM  | 77.7 | 76.9                  | 77.2 | 77.7 | 78.1 | 78.5 |
| ORE STORAGE & LOADING   | 30.07.2021 | 11.45 AM-<br>12.45 PM | 78.8 | 77.9                  | 78.3 | 78.8 | 79.2 | 79.6 |
| WASTE DUMP              | 30.07.2021 | 11.45 AM-<br>12.45 PM | 66.4 | 65.5                  | 65.9 | 66.3 | 66.8 | 67.2 |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events and contribution level details: |  |                           |  |  |  |
|--|--|---------------------------|--|--|--|
| Noise Source/Event Description                               | Noise Level dB(A)                        | Event Duration<br>(mm:ss) |  |  |  |
| Orc Crushing Activities, DG<br>Sets, Dumper Movements        | Values ranged from 56.9 to 80.6<br>dB(A) | 1 to 2 hrs                |  |  |  |

\*Complaints Register is available at Laboratory.

nv. Engineer

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CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NF  | TMO/ENV/2021/NG/2021-07 | Issued to:                                 |
|--|-------------------------|--|
| Reporting Date   |                         |  |
| Sample Description: Ambient Noise Level  Month : July-2021 |                         | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by: B.S. Envi-Tech (P) Ltd                |                         | of<br>M/s JSW Steel Ltd.                   |

| Measurement Location: | Koira Basti         |                |  |
|-----------------------|---------------------|----------------|--|
| Temperature:          |                     | °Celsius: 27.2 |  |
| Wind speed(m/s):      | AVG: 3.3            | MAX.7.8        |  |
| Wind Direction:       | SW-NE               |                |  |
| Cloud Cover:          | Cloudy              | Octos - 4/8    |  |
| SLM type:             | Lutron, Model SL-40 | 23SD           |  |
| SLM Serial Number:    | Q652514             |                |  |
| Calibration Validity  | 13/10/2021          |                |  |

|               | 200      | Measurem      | ent detai            | s and at          | Ltistical         | noise is   | vels - d   | IB [A]            |                   |               |
|---------------|----------|---------------|----------------------|-------------------|-------------------|------------|------------|-------------------|-------------------|---------------|
| Start<br>Time |          |               | Noise Level (dB (A)) |                   |                   |            |            | Appli<br>Standard | cable<br>(dB (A)) |               |
|               | Duration | Juration Date | L,,,T                | LA <sub>mur</sub> | LA <sub>ple</sub> | LA<br>eo.r | Leq<br>Day | Leq<br>Night      | Day<br>Time       | Might<br>Time |
| 0В.ОВ<br>АМ   | 24 hrs   | 09.07.2021    | 52.9                 | 54.5              | 40.4              | 54.2       | 52.9       | 42.1              | 55                | 45            |

| Noise Source/Event<br>Description   | Noise Level dB(A)                        | Event Duration (mm:ss)   |
|---|--|--|
| No specific source.  Village activities prevailing which include  Movement of vehicles mainly two wheelers, transportation of appear. | Values ranged from 40.4 to<br>54.5 dt48) | Maximum recorded is for 2 minutes (only during vehicle movement) |

"Complaints Register is available at Caboratury.

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Engineer

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CIN No. 1074210TG1999PTC0:i2358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NE  | MO/ENV/2021/NQ/2021-07 | Issued to:                                 |
|--|------------------------|--|
| Reporting Date   | 02.08.2021             |  |
| Sample Description: Ambient Noise Level                          |                        | Narayanposhi Iron &<br>Manganese Ore Mines |
| Month : July-2021  Sample Collected by: B.S. Envi-Tech (P) Ltd., |                        | of   |
| sample confected by: B.S. Envi-Tech (F) Ltd.,                    |                        | M/s JSW Steel Ltd.                         |

| Measurement Location: | Kasira Basti        |                |  |
|-----------------------|---------------------|----------------|--|
| Temperature:          |                     | *Celsius: 27.7 |  |
| Wind speed(m/s):      | AVC: 3.8            | MAX: 8.5       |  |
| Wind Direction:       | SW-NE               |                |  |
| Cloud Cover:          | Cloudy              | Octos - 4/8    |  |
| SLM type:             | Lutron, Model SL-40 | 23SD           |  |
| SLM Social Number:    | Q652516             |                |  |
| Calibration Validity  | 13/10/2021          |                |  |

|             |          | Менишет    | ent detail           | is and sta | tistical | noise le  | vela – c   | IB (A)       |                               |               |  |
|-------------|----------|------------|----------------------|------------|----------|-----------|------------|--------------|-------------------------------|---------------|--|
| Btart       |          |            | Natur Level (dB (A)) |            |          |           |            |              | Applicable<br>Standard (dB (A |               |  |
| Time        | Duration | Date       | Lang, T              | LAme       | [Anja    | EA<br>9A1 | Leq<br>Day | Leq<br>Night | Day<br>Time                   | Night<br>Time |  |
| OR.BO<br>MA | 24 hrs   | 09.07.2021 | 51.3                 | 53.1       | 36.4     | 52.6      | 51.3       | 37.9         | 55                            | 45            |  |

| Noise Source/Event<br>Description                                    | Noise Level dB(A)                     | Event Duration (mm:ss)  |  |  |  |
|--|---------------------------------------|---|--|--|--|
| No specific source.  |                                       |   |  |  |  |
| Village activities prevailing which include                          | Values ranged from 36.4 to 53.1 dB(A) | Maximum recorded to for 2 mbutes (only during vehicle movement) |  |  |  |
| Movement of vehicles mainly two wheelers, transportation of appears. |                                       |   |  |  |  |

Engineer

"Complaints Register is available at Laboratory.

Website Twww.bsenvilech.com

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# NARAYANPOSHI IRON AND MANGENESE ORE MINES

# NOISE MONITORING REPORT

AUGUST-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/NG/2021-08      |                     | Issued to:               |
|---|---------------------|--------------------------|
| Reporting Date                                | 01.09.2021          |                          |
| Sample Description:                           | Narayanposhi Iron & |                          |
| Month : August 2021                           |                     | Manganese Ore Mines      |
| Sample Collected by: B.S. Envi-Tech [P] Ltd., |                     | of<br>M/s JSW Steel Ltd. |

| Temperature:                    |                   | *Cetsius: 30.3    |  |  |  |  |
|---------------------------------|-------------------|-------------------|--|--|--|--|
| Wind speed(m/s):                | AVG: 3.6          | MAX: 7.4          |  |  |  |  |
| Wind Direction;                 | SW-NE             |                   |  |  |  |  |
| Cloud Cover-                    | Clear             | Octos - 4/8       |  |  |  |  |
| Dislance from Source [In Meter] | 2                 |                   |  |  |  |  |
| SLM type:                       | Lutron, Model SL- | 4023SD            |  |  |  |  |
| SLM Serial Number:              | Q652513 & Q6529   | Q652513 & Q652517 |  |  |  |  |
| Calibration Validity            | 13/10/2021        |                   |  |  |  |  |

|                                |            |                       | Noise Levels In dB(A) |      |      |      |      |        |
|--------------------------------|------------|-----------------------|-----------------------|------|------|------|------|--------|
| Locations                      | Date       | Time                  | Leq                   | Laun | Le0  | L50  | L10  | Letter |
| MAGAZINE AREA                  | 06.08.2021 | 09.00 AM-<br>10.00 AM | 56.6                  | 55.8 | 56.2 | 56.6 | 56.9 | 57.3   |
| ML BOUNDARY PILLAR NO. I       | 06 08.2021 | 09.00 AM-<br>10.00 AM | 55.6                  | 54.7 | 55.1 | 55.6 | 55.9 | 56.3   |
| MINES FACE/BENCH               | 06.08.2021 | 10.30 AM-<br>11.30 AM | 78.4                  | 77.6 | 77.9 | 78.3 | 78.8 | 79.2   |
| HAULAGE ROAD                   | 06.08.2021 | 10.30 AM-<br>11.30 AM | 79,9                  | 79.1 | 79.5 | 79 8 | 80.2 | 80.6   |
| CRUSHER PLANT                  | 06.08.2021 | 12.00 PM-<br>01.00 PM | 78.4                  | 77.5 | 77.9 | 78.3 | 78.8 | 79 2   |
| SCREEN PLANT                   | 06.08.2021 | 12.00 PM-<br>01.00 PM | 77.7                  | 76.6 | 77.1 | 77.8 | 78.2 | 78 +   |
| ORE STORAGE & LOADING<br>POINT | 06.08.2021 | 02.15 PM-<br>03.15 PM | 80.1                  | 79.1 | 79.5 | 80.1 | 80.5 | 80.9   |
| WASTE DUMP                     | 06.08.2021 | 02.15 PM-<br>03.15 PM | 65.7                  | 64,8 | 65.2 | 65.7 | 66.1 | 66.4   |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, event                           | s and contribution level details:     |                           |
|---|---------------------------------------|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                     | Event Duration<br>(mm:es) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 54.7 to 80.9 dB(A) | 1 to 2 hrs                |

\*Complaints Register is available at Laboratury.

Env. Engineer

Website | www.bsenvitech.com CIN No. 1U74210TG1999PTC03235R



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP               | IMO/ENV/2021/NQ/2021-08            | issued to:                                 |
|---------------------------------|------------------------------------|--|
| Reporting Date                  | 01.09,2021                         |  |
| Sample Description: A Month : A | umbient Noise Level<br>august-2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:            | H.S. Envi-Tech (P) Ltd.,           | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                   | *Celsuis: 29.7             |  |  |  |
|---------------------------------|-------------------|----------------------------|--|--|--|
| Wind speed(m/s):                | AVG: 3.2          | MAX; 7.0                   |  |  |  |
| Wind Direction:                 | SW-NE             |                            |  |  |  |
| Clmud Cover:                    | Clear             | Octos - 4/8                |  |  |  |
| Histance from Source (In Meter) | 2                 |                            |  |  |  |
| SLM type:                       | Lutron, Model Sta | Lutron, Model S1-4023SD    |  |  |  |
| SLM Serial Number:              | Q652514, Q65251   | Q652514, Q652513 & Q652516 |  |  |  |
| Calibration Validity            | 13/10/2021        | -                          |  |  |  |

|                             |            |                       |      | Not   | is in d | in dB(A) |      |      |
|-----------------------------|------------|-----------------------|------|-------|---------|----------|------|------|
| Locations                   | Date       | Time                  | Leq  | Latin | Leo     | Lso      | Lio  | Luc  |
| MAGAZINE AREA               | 13 08.2021 | 10.15 AM-<br>11.15 AM | 57.1 | 56.3  | 56.7    | 57.1     | 57.4 | 57.6 |
| ML BOUNDARY PILLAR NO-1     | 13.08.2021 | 10.15 AM-<br>11.15 AM | 56.8 | 55.9  | 56.3    | 56.8     | 57.2 | 57.5 |
| MINES FACE/BENCH            | 13.08.2021 | 10.15 AM<br>11.15 AM  | 76.3 | 75 5  | 75.9    | 76.3     | 76.7 | 77.1 |
| FLAULAGE ROAD               | 13.08.2021 | 02.30 PM-<br>03.30 PM | 78.7 | 77.7  | 78.2    | 78.6     | 79.1 | 79.5 |
| CRUSHER FLANT               | 13.08.2021 | 02.30 PM-<br>03.30 PM | 78.9 | 78.2  | 78.6    | 78.9     | 79.2 | 79.6 |
| SCREEN PLANT                | 13.08.2021 | 02.30 PM-<br>03.30 PM | 77.9 | 77.1  | 77.5    | 77.9     | 78.2 | 78.7 |
| ORE STORAGE & LOADING POINT | 13.08.2021 | 11.45 AM-<br>12.45 PM | 80.3 | 79.4  | 79.9    | 80.2     | 80.7 | 81.2 |
| WASTE DUMP                  | 13.08.2021 | 11.45 AM-<br>12.45 PM | 66.5 | 65.7  | 66.1    | 66.6     | 66.9 | 67.2 |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events                          | and contribution level details:       |                           |
|---|---------------------------------------|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                     | Event Duration<br>(mm:ee) |
| Ore Crushing Activities, DG<br>Sets. Dumper Movements | Values ranged from 55.9 to 81.2 dB(A) | 1 to 2 hrs                |

C.F.O.

Env. Engineer

"Complaints Register is available at Laboratory

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CIN No. : U74/210TG1999PTG032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022.

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NF               | TMO/ENV/2021/NQ/2021-08                       | Issued to:         |
|---------------------------------|---|--------------------|
| Reporting Date                  | 01.09.2021                                    |                    |
| Sample Description: , Month : , | Narayanposhi Iron &<br>Manganese Ore Mines of |                    |
| Sample Collected by:            | B.S. Envi-Tech (P) Ltd.,                      | M/s JSW Steel Ltd. |

| Temperature:                    |                   | *Celsius: 29.5    |  |  |  |  |
|---------------------------------|-------------------|-------------------|--|--|--|--|
| Wind speed(m/s):                | AVG: 3.4          | AVG: 3.4 MAX: 7.7 |  |  |  |  |
| Wind Direction:                 | SW-NE             |                   |  |  |  |  |
| Cloud Cover:                    | Cloudy            | Octos - 4/8       |  |  |  |  |
| Distance from Source (In Meter) | 2                 |                   |  |  |  |  |
| SLM type:                       | Lutron, Model SL- | 4023SD            |  |  |  |  |
| SLM Serial Number:              | Q652514, Q6525    | 13 & Q652516      |  |  |  |  |
| Calibration Validity            | 13/10/2021        |                   |  |  |  |  |

|                                |            |                       |      | Noise Levels in dB(A) |      |       |             |      |
|--------------------------------|------------|-----------------------|------|-----------------------|------|-------|-------------|------|
| Locations                      | Date       | Time                  | Lag  | Leda                  | Leo  | Lou   | <b>L</b> 10 | Lun  |
| MAGAZINE AREA                  | 20.08.2021 | 02.00 PM-<br>03.00 PM | 57.7 | 56.9                  | 57.3 | 57.6  | 58 U        | 58.5 |
| ML BOUNDARY PILLAR NO-1        | 20.08.2021 | 02.00 PM-<br>03 00 PM | 56.3 | 55. <b>5</b>          | 55.8 | 56.2  | 56.6        | 57.1 |
| MINES PACE/BENCH               | 20.08.2021 | 02.00 PM-<br>03.00 PM | 77.6 | 76.7                  | 77.2 | 77.6  | 78.0        | 78.5 |
| HAULAGE ROAD                   | 20.08.2021 | 03.30 PM-<br>04.30 PM | 79.3 | 78.3                  | 78.6 | 79.2  | 79 7        | 80.1 |
| CRUSHER PLANT                  | 20.08.2021 | 03.30 PM-<br>04.30 PM | 79.2 | 78.4                  | 78.9 | 79.2  | 79.6        | 79.8 |
| SCREEN PLANT                   | 20.08.2021 | 03.30 PM-<br>04.30 PM | 77.3 | 76.3                  | 76.8 | 77.2  | 77.7        | 78.1 |
| ORE STORAGE & LOADING<br>POINT | 20.08.2021 | 11.45 AM-<br>12.45 PM | 79.6 | 78.7                  | 79.2 | 79.6  | 79.9        | 80.3 |
| WASTE DUMP                     | 20.08.2021 | 11.45 AM-<br>12.45 PM | 66.2 | 65.2                  | 65.6 | 66. t | 66.6        | 67.2 |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events and contribution level details: |                                       |                           |  |  |  |
|--|---------------------------------------|---------------------------|--|--|--|
| Noise Source/Event Description                               | Noise Level dB(A)                     | Event Duration<br>(mm:ss) |  |  |  |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements        | Values ranged from 55.5 to 80.3 dB(A) | 1 to 2 hrs                |  |  |  |

"Complaints Register is available at Lahoratory

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CIN No. : U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# **TEST REPORT**

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NF     | IMO/ENV/2021/NQ/2021-08            | Issued to:                                 |
|-----------------------|------------------------------------|--|
| Reporting Date        | 01.09.2021                         |  |
| Sample Description: A | Amblent Noise Level<br>August-2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:  | B.S. Envi-Tech (P) Ltd.,           | of<br>M/s JSW Steel Ltd.                   |

| Temperature.                    |                   | *Celstus: 29.1             |  |  |  |
|---------------------------------|-------------------|----------------------------|--|--|--|
| Wind speed(m/s):                | AVG: 3.0          | MAX: 7.1                   |  |  |  |
| Wind Direction:                 | SW-NE             |                            |  |  |  |
| Cloud Cover:                    | Cloudy            | Octos - 4/8                |  |  |  |
| Distance from Source (in Meter) | 2                 | n e                        |  |  |  |
| SLM type:                       | Lutron, Model SL- | 4023SD                     |  |  |  |
| SLM Serial Number:              | Q652514, Q65251   | Q652514, Q652513 & Q652516 |  |  |  |
| Calibration Validity            | 13/10/2021        |                            |  |  |  |

| Locations                      |            |                       |      | Not   | se Leve | ile in d        | B(A) | //   |
|--------------------------------|------------|-----------------------|------|-------|---------|-----------------|------|------|
|                                | Date       | Time                  | Leq  | Lates | Leo     | L <sub>00</sub> | Lio  | Lucz |
| MAGAZINE AREA                  | 27.08.2021 | 09.15 AM-<br>10.15 AM | 58.6 | 57.7  | 58.2    | 58.5            | 58.9 | 59.3 |
| MI. BOUNDARY PILLAR NO 1       | 27.08.2021 | 09.15 AM-<br>10.15 AM | 56.0 | 55.1  | 55.6    | 55.9            | 56.3 | 56.8 |
| MINES PACE/BENCH               | 27.08.2021 | 09.15 AM-<br>10.15 AM | 79.0 | 76.1  | 78.5    | <b>7</b> 9.1    | 79.4 | 79.8 |
| HAULAGE ROAD                   | 27.08.2021 | 10.45 AM-<br>11.45 AM | 79.6 | 78.7  | 79.2    | 79.6            | 79.9 | 80.2 |
| CRUSHER PLANT                  | 27.08.2021 | 10.45 AM-<br>11.45 AM | 78.8 | 77.9  | 78.3    | 76.8            | 79.2 | 79.6 |
| SCREEN PLANT                   | 27.08.2021 | 10.45 AM-<br>11.45 AM | 77.9 | 76.9  | 77.4    | 77.9            | 78.3 | 78.8 |
| ORE STORAGE & LOADING<br>POINT | 27.08.2021 | 12.15 AM-<br>01.15 PM | 80.4 | 79.6  | 79.9    | 80.3            | 80.8 | 81.2 |
| WASTE DUMP                     | 27.08.2021 | 12-15 AM-<br>01-15 PM | 67,0 | 66.1  | 66.6    | 66.9            | 67.3 | 67.7 |

#### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, event                           | and contribution level details:          |                           |
|---|--|---------------------------|
| Noise Source/Event Description                        | Noise Level dB(A)                        | Event Duration<br>(mm:ss) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 55.1 to 81.2<br>dB(A) | 1 to 2 hrs                |

'Complaints Register is available at Laboratory,

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Env. Engineer

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CIN No. #U74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# **TEST REPORT**

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP  | MO/ENV/2021/NQ/2021-08   | Issued to:                                    |
|--|--------------------------|---|
| Reporting Date   | eporting Date 01.09.2021 |   |
| Sample Description: Ambient Noise Level  Month : August-2021 |                          | Narayanposhi Iron &<br>Manganese Ore Mines of |
| Sample Collected by:   | B.S. Envi-Tech (P) Ltd., | M/a JSW Steel Ltd.                            |

| Measurement Location: | Koira Basti         |                |
|-----------------------|---------------------|----------------|
| Temperature:          | 1                   | "Celsius: 26.9 |
| Wind speed(m/s):      | AVG. 3.4            | MAX:8.0        |
| Wind Direction:       | SW-NE               |                |
| Cloud Cover:          | Clear               | Ortas - 4/8    |
| SLM type:             | Lutron, Model SL-40 | 23SD           |
| SLM Serial Number:    | Q652514             |                |
| Calibration Validity  | 13/10/2021          |                |

|             |               | Measurem            | ent detai | le and at            | atistical  | notse k    | rvels – c    | iB (A)      |                                 |    |  |
|-------------|---------------|---------------------|-----------|----------------------|------------|------------|--------------|-------------|---------------------------------|----|--|
| Start       |               |                     |           | Notes Level (dB (A)) |            |            |              |             | Applicable<br>Standard (dB (A)) |    |  |
| Time        | Duration Date | L <sub>eeq</sub> ,T | l.Acu     | LAza                 | LA<br>mo 7 | Leg<br>Day | Leq<br>Night | Day<br>Time | Night<br>Time                   |    |  |
| 08.00<br>AM | 24 hrs        | R6 08 202)          | 52.2      | 54.0                 | 4D.3       | 53.7       | 52 2         | 42.0        | 55                              | 45 |  |

| Noise Source/Event<br>Description                                    | Noise Level dB(A)                        | Event Duration (mm:ss)   |
|--|--|--|
| No specific source.  |  |  |
| Village activities prevailing which include                          | Values ranged from 40.3 to<br>54.0 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |
| Movement of vehicles mainly two wheelers, transportation of tippers. |  | movement   |

Env. Engineer

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\*Complaints Register is evallable at Laboratury.

Wabsite (www.bsenwiech.com)

CIN No. EU74210TG1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO                    | /ENV/2021/NG/2021-08 | Issued to:             |
|---|----------------------|------------------------|
| Reporting Date                          |                      |                        |
| Sample Description: Ambient Notse Level |                      | Narayanposhi Iron &    |
| Month : August-2021                     |                      | Manganese Ore Mines of |
| Sample Collected by: B.S.               | Envi-Tech (P) Ltd.,  | M/s JSW Steel Ltd.     |

| Measurement Location: | Kastra Basti        |                |
|-----------------------|---------------------|----------------|
| Temperature:          |                     | *Celsius: 27.3 |
| Wind speed(m/s):      | AVG: 3.6            | MAX: 8.3       |
| Wind Direction:       | SW-NE               | 1              |
| Cloud Cover:          | Clear               | Ocias - 4/8    |
| SLM type:             | Lutron, Model SL-40 | 23SD           |
| SLM Serial Number:    | Q652516             |                |
| Calibration Validity  | 13/10/2021          |                |

|             |          | Measurem   | cat detal | is and sta           | atistical         | noise le   | vels - c   | IB (A)       |                                |               |
|-------------|----------|------------|-----------|----------------------|-------------------|------------|------------|--------------|--------------------------------|---------------|
| Start       |          |            |           | Noise Level (dB (A)) |                   |            |            |              | Applicable<br>Standard (dB (A) |               |
| Time        | Duration | Date       | L.,T      | [A <sub>max</sub>    | LA <sub>mis</sub> | 1A<br>10.7 | Leq<br>Dey | Leq<br>Night | Day<br>Time                    | Night<br>Time |
| 08.30<br>AM | 24 hrs   | 06.08.2021 | 51.1      | 53.2                 | 39.7              | 52.8       | 51.1       | 40.6         | 55                             | 45            |

| Noted noise source/s, events and contribution level details:   |                                       |  |  |  |  |  |
|--|---------------------------------------|--|--|--|--|--|
| Noise Source/Event<br>Description  | Noise Level dB(A)                     | Event Duration [mm:ee]   |  |  |  |  |
| No specific source.  Village activities prevailing which include  Movement of vehicles mainly two wheelers, transportation of tippers. | Values ranged from 39.7 to 53.2 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |  |  |  |  |

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CIN No. : U74210TG1999PTC032358

"Completes Register is available at Laboratory,

# NARAYANPOSHI IRON AND MANGENESE ORE MINES

NOISE MONITORING REPORT

SEPTEMBER-2021



Recognized by MoEF & CC, Gol: Valid upto August, 2022

### **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| EPORT NO: JSW/NPIMO/ENV/2021/NQ/2021-09 eporting Date 01.10.2021 |                          | Isoued to:                                 |
|--|--------------------------|--|
| Reporting Date   | 01.10.2021               |  |
| Sample Description: Ambient Noise Level Month : September-2021   |                          | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:   | B.S. Envi-Tech (P) Ltd., | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                  | *Celsius. 28.7 |  |
|---------------------------------|------------------|----------------|--|
| Wind speed(m/s):                | AVG 3.1          | MAX: 6.8       |  |
| Wind Direction:                 | SW-NE            |                |  |
| Cloud Cover:                    | Clear            | Octas - 4/8    |  |
| Distance from Source (In Meter) | 2                |                |  |
| SLM type:                       | Lutron, Model SL | -4023SD        |  |
| SLM Serial Number:              | Q652513 & Q652   | 517            |  |
| Calibration Validity            | 13/10/2021       |                |  |

|                                |            |                       |              | Noi  | se Leve | ls in di | B(A) |      |
|--------------------------------|------------|-----------------------|--------------|------|---------|----------|------|------|
| Locations                      | Date       | Time                  | Lnq          | Leim | Lub     | Lso      | Lio  | LNes |
| MAGAZINE AREA                  | 02.09.2021 | 02.10 PM-<br>03.10 PM | 55.5         | 54.7 | 55.1    | 55.5     | 55.8 | 56.3 |
| ML BOUNDARY PILLAR NO-1        | 02.09.2021 | 02.10 PM-<br>03.10 PM | 54.2         | 53.3 | 53.7    | 54.2     | 54.6 | 54.9 |
| MINES FACE/BENCH               | 02.09.2021 | 03 30 PM-<br>04.30 PM | 72.7         | 71.9 | 72.2    | 72.6     | 73.1 | 73,4 |
| HAULAGE ROAD                   | 02.09.2021 | 03.30 PM-<br>04.30 PM | 77.5         | 76.6 | 77.1    | 77.5     | 77.8 | 78.2 |
| CRUSHER PLANT                  | 02.09.2021 | 10.15 AM-<br>11.15 AM | 79.3         | 78.5 | 78.9    | 79.3     | 79.6 | 80.1 |
| SCREEN PLANT                   | 02.09.2021 | 10.15 AM-<br>11.15 AM | <b>7</b> 7.9 | 77.0 | 77.4    | 77.9     | 78.2 | 78.6 |
| ORE STORAGE & LOADING<br>POINT | 02.09.2021 | 11.45 AM-<br>12.45 PM | 79.6         | 78.7 | 79.2    | 79.6     | 79.9 | 80.3 |
| WASTE DUMP                     | 02.09.2021 | 11.45 AM-<br>12.45 PM | 63.6         | 62.8 | 63.2    | 63.5     | 63.9 | 64.4 |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events and contribution level details: |  |                           |  |  |  |
|--|--|---------------------------|--|--|--|
| Noise Source/Event<br>Description                            | Noise Level dB(A)                        | Event Duration<br>(mm:ss) |  |  |  |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements        | Values ranged from 53.3 to 80.3<br>dB(A) | 1 to 2 hrs                |  |  |  |

\*Complaints Register is available at Lancy story.

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NI                | IMO/ENV/2021/NQ/2021-09               | Issued to:                                 |
|----------------------------------|---------------------------------------|--|
| Reporting Date                   |                                       |  |
| Sample Description: .<br>Month : | Ambient Noise Level<br>September-2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:             | B.S. Envi-Tech (P) Ltd                | of<br>M/s JSW Steel Ltd.                   |

| Temperature:                    |                  | "Celsius: 28 1 |  |
|---------------------------------|------------------|----------------|--|
| Wind speed(m/s):                | AVG: 3.4         | MAX: 7.2       |  |
| Wind Direction:                 | SW-NE            |                |  |
| Cloud Cover.                    | Cloudy           | Octas 4/8      |  |
| Distance from Source (In Meter) | 2                |                |  |
| SLM type:                       | Lutron, Model SL | 4023SD         |  |
| SLM Serial Number:              | Q652514, Q6525   | 13 & Q652516   |  |
| Calibration Validity            | 13/10/2021       |                |  |

|                             |            |                       |      | Noise Levels in dB(A) |      |      |              |      |  |
|-----------------------------|------------|-----------------------|------|-----------------------|------|------|--------------|------|--|
| Locations                   | Date       | Time                  | L+4  | Lwin                  | Lua  | L50  | Lia          | Luc  |  |
| MAGAZINE AREA               | 09.09.2021 | 09.15 AM<br>10.15 AM  | 54.1 | 53.2                  | 53.7 | 54.1 | 54.6         | 54.9 |  |
| ML BOUNDARY PILLAR NO-1     | 09.09.2021 | 09.15 AM-<br>10.15 AM | 53.7 | 52.7                  | 53.3 | 53.7 | 54.1         | 54.5 |  |
| MINES FACE/BENCH            | 09.09.2021 | 09.15 AM-<br>10.15 AM | 73.5 | 72.7                  | 73.1 | 73.5 | 73.8         | 74.2 |  |
| HAULAGE ROAD                | 09.09.2021 | 10.45 AM-<br>11.45 AM | 78.2 | 77.3                  | 77.7 | 79.1 | 78.6         | 78.9 |  |
| CRUSHER PLANT               | 09.09.2021 | 10.45 AM-<br>11.45 AM | 78.6 | 77.8                  | 78.1 | 78.6 | 78.9         | 79.3 |  |
| SCREEN PLANT                | 09.09.2021 | 10.45 AM-<br>11.45 AM | 77.2 | 76.5                  | 76.9 | 77.2 | 77.4         | 77.8 |  |
| ORE STORAGE & LOADING POINT | 09.09.2021 | 12.15 PM-<br>01.15 PM | 78.9 | 78.1                  | 78.5 | 78.9 | 79.3         | 79.6 |  |
| WASTE DUMP                  | 09.09.2021 | 12.15 PM-<br>01.15 PM | 60.5 | 59.8                  | 60.2 | 60.5 | <b>6</b> 0 9 | 61.2 |  |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, event                           | s and contribution level details:        |                           |
|---|--|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                        | Event Duration<br>(mm:ss) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 52.7 to 79.6<br>dB(A) | t to 2 hrs                |

"Complaints Register a available at Laboratory.

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

### TEST REPORT

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP                  | IMO/ENV/2021/NQ/2021-09               | Issued to:                                 |
|------------------------------------|---------------------------------------|--|
| Reporting Date                     | 01.10.2021                            |  |
| Sample Description: A<br>Month : 5 | Ambient Noise Level<br>September-2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:               | B.S. Envi-Tech (P) Ltd.,              | M/s JSW Steel Ltd.                         |

| Temperature:                    |                   | *Celsius: 29.3 |  |  |  |
|---------------------------------|-------------------|----------------|--|--|--|
| Wind speed(m/s):                | AVG: 3.0          | MAX: 6.6       |  |  |  |
| Wind Direction:                 | SW-NE             |                |  |  |  |
| Cloud Cover:                    | Clear             | Octas 4/8      |  |  |  |
| Distance from Source (In Meter) | 2                 |                |  |  |  |
| SLM type:                       | Lutron, Model SL- | 4023SD         |  |  |  |
| SLM Senal Number                | Q652514, Q65251   | 3 & Q652516    |  |  |  |
| Calibration Validity            | 13/10/2021        |                |  |  |  |

| Locations                      | l'         |                        |      | Note | ie Leve | le in di | in dB(A)      |      |  |
|--------------------------------|------------|------------------------|------|------|---------|----------|---------------|------|--|
|                                | Date       | Time                   | L.q  | Laua | L90     | L-50     | L10           | Leax |  |
| MAGAZINE AREA                  | 16.09.2021 | 08.30 AM-<br>08.30 AM  | 55.7 | 55.1 | 55.4    | \$5.6    | 55.9          | 56.2 |  |
| ME BOUNDARY PILLAR NO-L        | 16.09.2021 | 08.30 AM-<br>09.30 AM  | 53.1 | 52.2 | 52 6    | 53.1     | 53.4          | 53.8 |  |
| MINES PACE/BENCH               | 16,09,2021 | 08.30 AM-<br>09.30 AM  | 73.8 | 73.1 | 73 4    | 73 9     | 74.2          | 74.5 |  |
| HAULAGE ROAD                   | 16.09 2021 | 10.00 AM-<br>11.00 AM  | 76.7 | 75.9 | 76.3    | 76.6     | 77.1          | 77,4 |  |
| CRUSHER PLANT                  | 16.09.2021 | 10.00 AM -<br>11.00 AM | 78.2 | 77.3 | 77.8    | 78.2     | 78.5          | 78.9 |  |
| SCREEN PLANT                   | 16.09.2021 | 10.00 AM-<br>11.00 AM  | 76.9 | 76.1 | 76.4    | 76.9     | 77.2          | 77.7 |  |
| ORE STORAGE & LOADING<br>POINT | 16.09.2021 | 11.30 AM<br>12.30 PM   | 78.8 | 77.9 | 78.3    | 78.6     | 79.2          | 79.5 |  |
| WASTE DUMP                     | 16.09.2023 | 11 30 AM<br>12 30 PM   | 59.7 | 58.8 | 59.2    | 59.7     | <b>6</b> 0. t | 60.5 |  |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events                          | and contribution level details:          |                           |
|---|--|---------------------------|
| Noise Source/Event<br>Description                     | Noise Level dB(A)                        | Event Duration<br>(mm:ss) |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements | Values ranged from 52.2 to 79.5<br>dB(A) | 1 to 2 hrs                |

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### **TEST REPORT**

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO/ENV/2021/NQ/2021-09 Reporting Date 01.10.2021 Rample Description: Ambient Noise Level |                                       | Issued to:                                 |
|--|---------------------------------------|--|
| eporting Date 01.10.2021   |                                       |  |
|  | Ambient Noise Level<br>September-2021 | Narayanposhi Iron &<br>Manganese Ore Mines |
| Sample Collected by:   | B.S. Envi-Tech (Pl Ltd.,              | M/s JSW Steel Ltd.                         |

| Temperature:                    |                  | "Celsius: 28.9   |  |
|---------------------------------|------------------|--|--|
| Wind speed[m/s]:                | AVG: 3.5         | MAX: 7.9   |  |
| Wind Direction:                 | SW-NE            | in the second se |  |
| Cloud Cover:                    | Cloudy           | Octas 4/8  |  |
| Distance from Source [In Meter] | 2                |  |  |
| SLM type:                       | Lutron, Model SL | -4023SD  |  |
| SLM Serial Number:              | Q652514, Q6525   | 13 & Q652516   |  |
| Calibration Validity            | 13/10/2021       |  |  |

| Locations                      |            |                       | Noise Levels in dB(A) |       |      |      |      |      |
|--------------------------------|------------|-----------------------|-----------------------|-------|------|------|------|------|
|                                | Date       | Time                  | Leq                   | Locin | L90  | Lso  | Liè  | Lua  |
| MAGAZINE AREA                  | 24.09.2021 | 09.45 AM-<br>10.45 AM | 54.7                  | 53.9  | 54.2 | 54.7 | 55.1 | 55.5 |
| MIL BOUNDARY PILLAR NO-I       | 24.09.2021 | 09.45 AM-<br>10.45 AM | 52.7                  | 51.9  | 52.2 | 52.6 | 53.1 | 53.5 |
| MINES FACE/BENCH               | 24,09,2021 | 09.45 AM-<br>10.45 AM | 73.1                  | 72.2  | 72.7 | 73 1 | 73.4 | 73.8 |
| HAULAGE ROAD                   | 24.09.2021 | 11.15 AM<br>12.15 PM  | 77.2                  | 76.3  | 76.8 | 77.1 | 77.5 | 78 0 |
| CRUSHER PLANT                  | 24.09.2021 | 11.15 AM<br>12.15 PM  | 78.9                  | 78.1  | 78.4 | 78.9 | 79.2 | 79.6 |
| SCREEN PLANT                   | 24.09.2021 | 11.15 AM<br>12.15 PM  | 77.2                  | 76.3  | 76.8 | 77.2 | 77.5 | 77.9 |
| ORE STORAGE & LOADING<br>POINT | 24.09.2021 | 02.00 PM-<br>03.00 PM | 78.2                  | 77.5  | 77.9 | 78.2 | 78 6 | 78.9 |
| WASTE DUMP                     | 24.09.2021 | 02.00 PM-<br>03.00 PM | 59.2                  | 58.3  | 58.7 | 59.2 | 59 6 | 60.1 |

### N.B: <85 dB(A) AS PER CTO & EC

| Noted noise source/s, events and contribution level details: |                                       |                           |  |  |  |  |
|--|---------------------------------------|---------------------------|--|--|--|--|
| Noise Source/Event<br>Description                            | Noise Level dB(A)                     | Event Duration<br>(mm:ss) |  |  |  |  |
| Ore Crushing Activities, DG<br>Sets, Dumper Movements        | Values ranged from 51.9 to 79.6 dB(A) | 1 to 2 hrs                |  |  |  |  |

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP   | IMO/ENV/2021/NQ/2021-09                    | Issued to:               |
|---|--|--------------------------|
| Reporting Date  | 01.10.2021                                 |                          |
| Sample Description: A<br>Month : 5                                    | Narayanposhi Iron &<br>Manganese Ore Minos |                          |
| Month : September-2021  Sample Collected by: B.S. Envi-Tech  P  Ltd., |  | of<br>M/s JSW Steel Ltd. |

| Measurement Location: | Koira Basti         |   |  |
|-----------------------|---------------------|---|--|
| Temperature:          |                     | *Celsius: 25.5                            |  |
| Wind speed(m/s):      | AVG: 3.0            | MAX:6.6                                   |  |
| Wind Direction:       | SW-NE               | N. C. |  |
| Cloud Cover:          | Clear               | Octos – 4/8                               |  |
| SLM type:             | Lutron, Model SL-40 | 23\$D                                     |  |
| SLM Serial Number:    | Q652514             |   |  |
| Calibration Validity  | 13/10/2021          |   |  |

|               | Measurement details and statistical noise levels - dB (A)  Noise Level [dB (A)] |            |                     |       |                   | Applicable<br>Stendard (dB (A |            |              |             |               |
|---------------|---|------------|---------------------|-------|-------------------|-------------------------------|------------|--------------|-------------|---------------|
| Start<br>Time | Ducation  | Date       | L <sub>arq</sub> ,T | LAmes | LA <sub>mir</sub> | LA<br>40.F                    | Leq<br>Day | Leq<br>Night | Day<br>Time | Night<br>Time |
| 08.00<br>AM   | 24 hrs  | 02.09.2021 | 51.1                | 52.5  | 40.4              | 52 4                          | 51.1       | 41.9         | 33          | 45            |

| Noted noise source/s, events and contribution level details:   |                                       |  |  |  |  |  |  |
|--|---------------------------------------|--|--|--|--|--|--|
| Noise Source/Event<br>Description  | Noise Level dB(A)                     | Event Duration<br>(mm:ss)  |  |  |  |  |  |
| No specific source,  Village activities prevailing which include  Movement of vehicles mainly two wheelers, transportation | Values ranged from 40.4 to 52.5 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |  |  |  |  |  |
| of tippers.  |                                       |  |  |  |  |  |  |

\*Complaints Register is available at Laboratory

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CIN No U74210 G1999PTC032358



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NPIMO                    | /ENV/2021/NQ/2021-09                       | Issued to:         |
|---|--|--------------------|
| Reporting Date                          | 01.10.2021                                 |                    |
| Sample Description: Amb<br>Month : Sept | Narayanposhi Iron &<br>Manganese Ore Mines |                    |
| Sample Collected by: B.S                | Envi-Tech (Pr Ltd.,                        | M/s JSW Steel Ltd. |

| Measurement Location: | Kasıra Basti         |                |  |
|-----------------------|----------------------|----------------|--|
| Temperature:          |                      | *Cetsius: 25.9 |  |
| Wind speed(m/s):      | AVG: 3.4             | MAX: 7.8       |  |
| Wind Direction:       | SW-NE                |                |  |
| Cloud Cover:          | Clear                | Octas · 4/8    |  |
| SLM type:             | Lutron, Model St. 40 | 2380           |  |
| SLM Serial Number:    | Q652516              |                |  |
| Calibration Validity  | 13/10/2021           |                |  |

|             |          | Measucem   | ent detail           | la and sta | tistical | noise k    | rela – d   | IB [A]       |                               |               |
|-------------|----------|------------|----------------------|------------|----------|------------|------------|--------------|-------------------------------|---------------|
| <b>*</b>    |          |            | Noise Level (dB (A)) |            |          |            |            |              | Applicable<br>Standard  dB  A |               |
| Start       | Duration | Date       | L <sub>max</sub> , T | 1.4        | LA       | LA<br>Po,T | Loq<br>Day | Leq<br>Night | Duy<br>Time                   | Night<br>Time |
| 08 30<br>AM | 24 hrs   | 02.09.2021 | 49.4                 | 51.2       | 39.3     | 51.0       | 49.4       | 40,4         | 55                            | 45            |

| Noise Source/Event<br>Description  | Noise Level dB(A)                     | Event Duration<br>(mm:ss)  |
|--|---------------------------------------|--|
| No specific source.  Village activities prevailing which include  Movement of vehicles mainly two wheelers, transportation of tippers. | Values ranged from 39 3 to 51.2 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |

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### **TEST REPORT**

### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP                | lastied to:                             |  |
|----------------------------------|---|--|
| Reporting Date                   | 01.10.2021                              |  |
| Sample Description: A<br>Month : | Narayanposhi Iron & Manganese Ore Mines |  |
| Sample Collected by:             | M/s JSW Steel Ltd.                      |  |

| Measurement Location | East Boundary       |                |  |
|----------------------|---------------------|----------------|--|
| Temperature:         |                     | *Celsius: 28.1 |  |
| Wind speed(m/s):     | AVC: 3.9            | MAX/8.3        |  |
| Wind Direction:      | SW-NE               |                |  |
| Cloud Cover:         | Clear               | Octas - 4/8    |  |
| SLM type:            | Lutran, Model SL-40 | 23SD           |  |
| SLM Serial Number:   | Q652514             |                |  |
| Calibration Validity | 13/10/2021          |                |  |

|               |          | Measureme  | ent detail           | is and ste | tistical | noise le    | evels - c  | (A) (II)     |                              |               |
|---------------|----------|------------|----------------------|------------|----------|-------------|------------|--------------|------------------------------|---------------|
|               |          |            | Roise Level (dB (A)) |            |          |             |            |              | Applicable Standard [dB [A)] |               |
| Blast<br>Time | Duration | Date       | Lug, T               | LAnn       | LAge     | 1.A<br>60,7 | Leq<br>Day | Leq<br>Night | Day<br>Time                  | Might<br>Time |
| 08.00<br>AM   | 24 hrs   | 30.09.2021 | 64.9                 | 69.2       | 56.6     | 68.3        | 64.9       | 58.5         | 75                           | 70            |

| Noise Source/Event<br>Description           | Noise Level dB(A)          | Event Duration [mm:ss]                    |
|---|----------------------------|---|
| No specific source,                         | Values ranged from 56.6 to | Maximum recorded is for 2                 |
| Village activities prevailing which include | 69.2 dB(A)                 | minutes (only during vehicle<br>movement) |
| Movement of vehicles mainly                 |                            |   |
| two wheelers, transportation of tippers.    |                            |   |

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

# **TEST REPORT**

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NE                 | TMO/ENV/2021/NQ/2021-09                    | Issued to: |
|-----------------------------------|--|------------|
| Reporting Date                    |  |            |
| Sample Description: .<br>Month :: | Narayanposhi Iron &<br>Manganese Ore Mines |            |
| Sample Collected by:              | of<br>M/s JSW Steel Ltd.                   |            |

| Measurement Location: | West Boundary       | West Boundary |  |  |  |  |  |
|-----------------------|---------------------|---------------|--|--|--|--|--|
| Temperature:          | - 25                | "Celsus: 28.4 |  |  |  |  |  |
| Wind speed(m/s):      | AVG: 3.6            | MAX: 8.0      |  |  |  |  |  |
| Wind Direction:       | SW-NE               | 0             |  |  |  |  |  |
| Cloud Cover;          | Clear               | Octas 1/8     |  |  |  |  |  |
| SLM type:             | Lutron, Model SL-40 | 23SD          |  |  |  |  |  |
| SLM Serial Number;    | Q652516             | Q652516       |  |  |  |  |  |
| Calibration Validity  | 13/10/2021          |               |  |  |  |  |  |

|               |           | Measurem             | ent detail           | h and at          | distical   | noise li   | ovela – c    | 4B (A)                        |               |    |
|---------------|-----------|----------------------|----------------------|-------------------|------------|------------|--------------|-------------------------------|---------------|----|
| Start         |           |                      | Roise Level (dB  A ) |                   |            |            |              | Applicable<br>Standard (dB (A |               |    |
| Time Duration | tion Date | L <sub>ect</sub> , T | LA <sub>mus</sub>    | LA <sub>nlı</sub> | LA<br>SO,T | Leq<br>Duy | Leq<br>Night | Day<br>Time                   | Night<br>Time |    |
| 06.30<br>AM   | 24 hrs    | 30,09,2021           | 60.4                 | 64.8              | 52.7       | 63.7       | GU.4         | 56.0                          | 75            | 70 |

| Noted noise source/s, events and contribution level details:         |                                       |  |  |  |  |  |
|--|---------------------------------------|--|--|--|--|--|
| Noise Source/Event<br>Description                                    | Noise Level dB(A)                     | Event Duration (mm:ss)                                 |  |  |  |  |
| No specific source: Village activities prevailing which include      | Values ranged from 52.7 to 64 8 dB(A) | Maximum recorded is for 2 minutes jobly during vehicle |  |  |  |  |
| Movement of vehicles mainly two wheelers, transportation of tippers. |                                       | movement)  |  |  |  |  |

\*Complaints Register is available at Laboratory.

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Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NE                | PIMO/ENV/2021/NQ/2021-09                | Issued to:               |
|----------------------------------|---|--------------------------|
| Reporting Date                   | 01.10.2021                              |                          |
| Sample Description: .<br>Month : | Narayanposhi Iron & Manganese Ore Mines |                          |
| Sample Collected by:             | B S. Envi-Tech (P) Ltd                  | of<br>M/s JSW Steel Ltd. |

| Measurement Location: | North Boundary      |                |
|-----------------------|---------------------|----------------|
| Temperature:          |                     | *Celsius: 28.9 |
| Wind apeed(m/s):      | AVG. 3.3            | MAX:7.5        |
| Wind Direction:       | SW NE               |                |
| Cloud Cover:          | Clear               | Octas 4/8      |
| SLM type;             | Lutron, Model SL-40 | 23SD           |
| SLM Scrial Number.    | Q652514             |                |
| Calibration Validity  | 13/10/2021          |                |

|                   | Measurement details and statistical noise levels – dB (A) |                      |       |      |           |            |              |                                |               |    |
|-------------------|---|----------------------|-------|------|-----------|------------|--------------|--------------------------------|---------------|----|
| Start. Duration I |   | Noise Level (dB (A)) |       |      |           |            |              | Applicable<br>Standard (dB (A) |               |    |
|                   | Date  | L.,q,T               | LAmex | LAnk | LA<br>vo. | Leq<br>Day | Leg<br>Night | Day<br>Time                    | Night<br>Time |    |
| 09.00<br>AM       | 24 hrs  | 30.09 2021           | 64.2  | 71.3 | 5.i 2     | 71.1       | 69.2         | 56 6                           | 75            | 70 |

| Noted noise source/s, events and contribution level details:               |                                       |  |  |  |  |  |
|--|---------------------------------------|--|--|--|--|--|
| Noise Source/Event<br>Description  | Noise Level dB(A)                     | Event Duration [mm:ss]   |  |  |  |  |
| No specific source,  |                                       | 1/2 1/2  |  |  |  |  |
| Village activities prevailing which include                                | Values ranged from 55.2 to 71.3 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |  |  |  |  |
| Movement of vehicles mainly<br>two wheelers, transportation<br>of tippers. |                                       |  |  |  |  |  |

Complaints Register is available at Laboratory.

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Wohsile | www.bsenvitech.com CIN No. | U74210TG1999PTC032358

Complaints Register is available at Laborator



Recognized by MoEF & CC, Gol: Valid upto August, 2022

# TEST REPORT

#### NOISE LEVEL MONITORING REPORT

| REPORT NO: JSW/NP     | IMO/ENV/2021/NQ/2021-09 | lasued to: |
|-----------------------|-------------------------|------------|
| Reporting Date        |                         |            |
| Sample Description: / | Narayanposhi Iron &     |            |
| Month : S             | Manganese Ore Mines     |            |
| Sample Collected by:  | M/s JSW Steel Ltd.      |            |

| Measurement Location: | South Boundary      |                |
|-----------------------|---------------------|----------------|
| Temperature:          |                     | *Celsius: 29.2 |
| Wind speed(m/s):      | AVC: 3.7            | MAX. 8.0       |
| Wind Direction:       | SW-NE               | re-            |
| Cloud Covers          | Clear               | Octas 4/8      |
| SLM type:             | Lutron, Model SL-40 | 23SD           |
| SLM Serial Number:    | Q652536             |                |
| Calibration Validity  | 13/10/2021          |                |

|             | Measurement details and statistical noise levels - dB (A) |            |                      |      |        |             |            |              |                                 |               |
|-------------|---|------------|----------------------|------|--------|-------------|------------|--------------|---------------------------------|---------------|
| Start       |   |            | Noise Level (4B (A)) |      |        |             |            |              | Applicable<br>Standard (dB (A)) |               |
| Time        | Duration  | Date       | L.,T                 | LAnu | LALeis | 1.A<br>90.T | Leq<br>Duy | Leq<br>Night | Day<br>Time                     | Might<br>Time |
| 09.30<br>AM | 24 hrs  | 30.09.2021 | 64.4                 | 67.2 | 52.6   | 66.8        | 64.4       | 54.7         | 75                              | 70            |

| Noted noise source/s, events and contribution level details:         |                                       |  |
|--|---------------------------------------|--|
| Noise Source/Event<br>Description                                    | Noise Level dB(A)                     | Event Duration (mm;es)   |
| No specific source.  Village activities prevailing which include     | Values ranged from 52.6 to 67.2 dB(A) | Maximum recorded is for 2 minutes (only during vehicle movement) |
| Movement of vehicles mainly two wheelers, transportation of tippers. |                                       |  |

\*Complaints Register is available at Laboratory

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