



**The Chairman**  
**State Environment Impact Assessment Authority, Odisha**  
**5RF-2/1, Acharya Vihar, Unit-IX, OPTCL Colony,**  
**Anand Bazar, Bhoi Nagar,**  
**Bhubaneswar, Odisha 751022**  
**Email: [seiaaorissa@gmail.com](mailto:seiaaorissa@gmail.com)**

MD/ENV/ 630 /130/2023  
Date: 29.05.2023

Ref: Environmental Clearance No.55807/89-MINB1/06-2022, dated: 18.10.2022

**Sub: Half-yearly compliance status report of Environmental Clearance conditions for the period October 2022 – March 2023 in respect of Kalamang West (Northern Part) Block Iron Ore Mines, M/s Tata Steel Limited.**

Dear Sir,

Kindly find attached herewith the half-yearly compliance status report in respect of the stipulated Environmental Clearance conditions of Kalamang West (Northern Part) Block Iron Ore Mines, M/s Tata Steel Limited for the period from **October 2022 – March 2023**. The same has been mailed in soft copy to your good office on email: [seiaaorissa@gmail.com](mailto:seiaaorissa@gmail.com) for your ready reference.

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

Thanking you,

Yours faithfully,  
f: Tata Steel Limited

*Pinky Kumar*  
**Head (Planning), OMQ**

Encl: As above

Copy to:

- The Chairman, Central Pollution Control Board, Southern Conclave, Block 502, 5<sup>th</sup> & 6<sup>th</sup> Floors, 1582 Rajdanga Main Road, Kolkata - 700107 (W. B.)
- The Member Secretary, State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit – VIII, Bhubaneswar – 751012 (Odisha)
- The Regional Officer, SPCB, Near Panposh Hockey Chowk, Rourkela – 769004, Dist – Sundargarh
- The Regional Officer, SPCB, College Road, Baniapata, Keonjhar – 758001 (Odisha)
- The Regional Officer, MoEF & CC, (EZ), MoEF & CC, Govt. of India, A/3 Chandrasekharpur, Bhubaneswar – 751013 (Odisha).

**TATA STEEL LIMITED**

Mines Division Noamundi 833 217 India  
Tel 91 9234301340 Fax 91 6596 290737

Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India  
Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website [www.tatasteel.com](http://www.tatasteel.com)

**Environment Clearance compliance condition for Kalamang West (Northern Part)**

**Iron ore Block**

<b>Sr. No.</b>	<b>Condition</b>	<b>Compliance status</b>
<b>A.</b>	<b>Specific conditions:</b>	
(i)	The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of EIA report.	Agreed. Necessary arrangements being carried out. It will be complied once the mine is operational.
(ii)	The public road passing through the mining lease shall be given access to the public after lease execution in consultation with the villagers.	Agreed. The access to the public road shall be given access to the public in consultation to the villagers after lease execution.
iii)	As submitted by project proponent vide letter no.GM/OMQ/70/11-G/FY"23 dated 17.10.2022, an amount of Rs.140 Lakhs shall be spent towards implementation for surface water run-off management, installation of STP & ETP in three years time period.	In progress of compliance <ul style="list-style-type: none"> <li>• The work order for surface water run-off management is under progress and the recommendations of the study shall be implemented.</li> <li>• Installation of STP &amp; ETP shall be done within stipulated timeframe.</li> </ul>
<b>B.</b>	<b>Standard Conditions:</b>	
<b>I.</b>	<b>Statutory compliance:</b>	
(i)	This Environmental Clearance (EC) is subject 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.	Not Applicable.
(ii)	The Project proponent complies with all the 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.	Agreed. We agree to comply of obtaining all statutory requirements before commencing of mining operations.
(iii)	The State Government concerned shall ensure that mining operation shall not be commenced 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 Write Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.	Not Applicable. It is a virgin iron ore block obtained through auction process. No prior compensation levied.
(iv)	This Environmental Clearance shall become operational only after receiving formal NBWL	The NBWL clearance from MoEFCC is not applicable for this project.

	Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project,	
(v)	This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the project.	Agreed. The request for Forest clearance has been made via proposal no. FP/OR/MIN/49169/2020. The same will be obtained before start of Mining activity.
(vi)	Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board.	Agreed CTE for the project has been obtained by the State pollution control board of Odisha via letter <b>No. 20953/IND-II-CTE-6743</b> dated 11.11.2022. CTO will be obtained before commencing mining activity.
(vii)	The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & 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.	Agreed All the provisions of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under shall be adhered to. The various circulars issued by DGMS and IBM from time to time will be strictly adhered to as directed.
(viii)	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.	Agreed. Consents from all the concerned land owners, before start of mining operations will be obtained as per the provisions of MMDR Act, 1957
(ix)	The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. <b>Z-11013/57/2014-IA.II (M), dated 29th October, 2014</b> , 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".	Agreed. Provisions made in the Office Memorandum are taken into consideration and proper mitigative measures will be taken to address impact of mining on Habitations and villages.
(x)	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 groundwater for the project.	Complied CGWA NOC granted vide letter no. CGWA/NOC/MIN/ORIG/2022/1d6214 dated 01.09.2022 is valid till 31.08.2024 ( <b>Annexure-I</b> )
(xi)	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.	Complied A copy of EC letter has been marked to Guali Gram panchayat & Malda Gram panchayat. ( <b>Annexure-II</b> )
(xii)	State Pollution Control Board shall be responsible for display of this EC letter at its	Complied.

	Regional office, District Industries Centre and Collector's office/ Tahasildar's Office for 30 days.	
(xiii)	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 and web site of the Ministry of Environment, Forest and Climate Change (www.environmentclearance.nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.	<p><b>Complied.</b></p> <p>Advt. done in Sunday Pioneer dated 23.10.2022 and in Pragatibadi Odiya Newspaper on Sunday dated 23.10.2022 (<b>Annexure-III</b>).</p> <p>The copy of the advertisement is forwarded to the MoEFCC Regional Office at Bhubaneswar for compliance and record (<b>Annexure-IV</b>).</p>
(xiv)	The Project Proponent shall inform the MoEF&CC/SEIAA, Odisha 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 provisions of the para 11 of EIA Notification, 2006 as amended from time to time.	<p>Agreed.</p> <p>In case there will be any change in the ownership of Mining lease, MoEF&amp;CC/SEIAA will be informed in prior &amp; the same will be carried as per the provisions of EIA Notification,2006.</p>
<b>(I)</b>	<b>Air quality monitoring and preservation</b>	
(i)	The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that 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-29016/20/90/PC1/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 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.	<p>It will be complied once the mine is operational.</p> <p>Installation of CAAQMS and digital display of the data shall be done in consultation with Regional office of OSPCB, Keonjhar &amp; Sundargarh.</p> <p>Manual monitoring of ambient air quality is being carried out in core &amp; buffer zone. Monitoring report attached as (<b>Annexure-V</b>)</p>

<b>(ii)</b>	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 ah sources shall be regularly controlled by installation of required equipment/ 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 MoEF&CC/ Central Pollution Control Board.	Effective safeguard measures for dust generation & subsequent suppression will be taken during operation. Fugitive emission from sources will be controlled by installation of required equipment and we shall ensure that air pollution level conform to the standards prescribed by the MoEF&CC/ Central Pollution Control Board.
<b>(II)</b>	<b>Water quality monitoring and preservation</b>	
<b>(i)</b>	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 MoEF&CC 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.	Agreed During current mining scheme period there is no intersection of GW table. In case of intersection due permission/NOC shall be taken from CGWA.
<b>(ii)</b>	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located 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.	Agreed. Regular monitoring of the springs & nallahs is being carried out by NABL accredited lab.  Monitoring report containing water quality analysis attached as <b>(Annexure-V)</b>

(iii)	<p>Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as 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.</p>	<p>Agreed. It will be conducted by a NABL accredited lab. Network will be established once the mine is in operation. In mean time ground water quality and ground water level is monitored in open well in surrounding villages.</p>
(iv)	<p>The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and 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-a-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 MoEF&amp;CC / SEIAA, Odisha. 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 (November) and winter (January) and the record of monitored data be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, SEIAA, Odisha, 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.</p>	<p>It will be complied. Regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease is being carried out by a NABL accredited lab.  Monitoring report containing water quality analysis attached as (<b>Annexure-V</b>)</p>
(v)	<p>Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid</p>	<p>It will be complied after the commencement of the mining activities.</p>

	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.	
(vi)	The project proponent shall construct retaining wall and settling pond within the lease area. Further, check dams shall be constructed at strategic locations in which rainwater passes in rainy season. Finally, the excess supernatant after sedimentation shall be allowed to spill away through stone pitch structure to the nearby valley.	It will be complied before the commencement of the mining activities.
(vii)	De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit shall be submitted within 6 months from the date of issue of Environmental Clearance to this effect with periodicity of desilting.	De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted.  A legal affidavit with respect to this is attached ( <b>Annexure-VI</b> )
(viii)	Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil Engineer shall be submitted within 6 months from the date of issue of Environmental Clearance to ensure that no silt after wash up is escaped from the core/buffer zone of the mines.	Design of the existing retaining wall ( <b>Annexure-VII</b> )
(ix)	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, MoEF & CC annually.	Being Complied With. Rainwater harvesting measures as per the hydrogeological study will be implemented at the mine site.
(x)	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated in an ETP as proposed 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	It will be complied. An ETP will be established to treat the industrial waster water. The inlet & outlet properties of effluent will be monitored as per the standards issued by SPCB.

	Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.	
(xi)	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.	It will be complied after the commencement of the mining activities.
(III)	<b>Noise and vibration monitoring and prevention</b>	
(i)	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.	It will be complied as per DGMS guidelines after the mine becomes operational.
(ii)	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels 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 limits for day /night hours.	Agreed. All precautionary actions will be taken not to disturb the habitations around.
(iii)	The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The worker engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.	It will be complied. All the workers will be provided with earmuffs & ear plugs & other PPE w.r.t to the location and type of work. Adequate training & awareness will be provided for health & safety.  Monitoring Report for Noise level in core & buffer zones is attached as <b>Annexure-V</b>
(IV)	<b>Mining Plan</b>	
(i)	The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, overburden, interburden 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	Agreed. We will adhere to the working parameters of mining plan which was submitted at the time of EC appraisal.



	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.	
(ii)	The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of 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.	It will be complied within 2 months of the approval of final mine closure plan.
(iii)	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-a-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 until the vegetation becomes self sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.	Agreed. Excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation will be carried out as per the mine plan & the compliance status will be submitted half-yearly to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.
(V)	<b>Land reclamation</b>	
(i)	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.	Agreed. Mining operation is yet to start. The overburden generated shall be stacked & governed as per the approved mine plan.
(ii)	The reject/waste generated during the mining operations shall be stacked at earmarked waste	It will be complied as per DGMS guidelines.

	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.	
(iii)	The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.	It will be done as per Approved Mining Plan cum Progressive Mine Closure Plan.
(iv)	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 impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.	Agreed. Prescribed methodologies will be adhered to maintain the slope stability, prevent erosion and surface run off.
(v)	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, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.	The height of proposed Dump-A & B will be of 30m. However, the height of proposed Dump-C will be 40m for which the Slope stability study will be conducted. The report of the same will be submitted to the RO- MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.
(vi)	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and topsoil / OB / waste dumps to prevent runoff 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.	It will be complied. A detailed surface management study is being carried out for the same & same shall be implemented.
(vii)	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	It will be complied. Mining is yet to start. Check dams of appropriate size, gradient and length will be constructed

	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 comers of the garland drains.	around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies
(viii)	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.	Top soil will be stored at earmarked site and its physical parameters will be maintained as per DGMS guidelines.
(ix)	The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.	Agreed. Planation will be carried according to the mine closure plan.
(VI)	<b>Transportation</b>	
(i)	No Transportation of the minerals shall be allowed in case of roads passing through 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 mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the 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	Mining operation is yet to start. It will be complied. Proper traffic study of the mineral transportation has been carried out and the outcomes of the same will be implemented. Pollution Under Control (PUC) certificate for all the vehicles from will be maintained.

	vehicles from authorized pollution testing centers.	
(ii)	The Main haulage road within the mine lease should be provided with a permanent water arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipment like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.	It will be complied. The provision for permanent & mobile water sprinkling arrangement will be made in areas of dust generation.  Pollution control equipment like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution
(iii)	Traffic management shall be done as per recommendation of Traffic Management Study Report.	It will be complied. Recommendations will be implemented.
(iv)	The Project Proponent shall provide parking plaza for the heavy vehicles within the lease area as recommendation of NEERI.	Agreed. Proper parking plaza will be made as per the recommendation of NEERI.
(VII)	<b>Green Belt</b>	
(i)	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations 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.	7.5 m wide safety zone will be developed all along the mine lease boundary as per CPCB guidelines.
(ii)	The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural 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	The CPCB guidelines will be adhered to carryout plantation. Plantation will be carried out in mining lease, around water body, along the roadsides, in community areas etc.

	budgetary provision shall be made for protection and care of trees.	
(iii)	The Project Proponent shall make necessary 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. 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.	It will be complied. Arrangements for livestock feed will be developed in the nearby areas.
(iv)	The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt and implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.	The site-specific wildlife conservation plan for Kalamang (West) Northern Part Iron Ore Block has been prepared and submitted to DFO, Bonai Forest Division ( <b>Annexure-VIII</b> )
<b>(VIII)</b>	<b>Public hearing and human health issues</b>	
(i)	The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.	It shall be complied once the mine is operational.
(ii)	A commitment in form of an undertaking for periodical occupational health check-up of the employee and the local people shall be done through an occupational health expert as per the	A commitment in form of an undertaking has been submitted for periodical occupational health check-up of the employee and the local people to

	detailed action plan submitted with the proposal within 6 months from the date of issue of Environmental Clearance.	be done through an occupational health expert as per the detailed action plan submitted ( <b>Annexure-IX</b> )
(iii)	<p>The Project Proponent must demonstrate 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 neighborhood 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.</p>	<ul style="list-style-type: none"> <li>• We are committed 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 once the mine is operational.</li> <li>• Moreover, the efforts which are needed to be put for the surrounding community is already being provided (<b>Annexure-X</b>)</li> </ul>
(iv)	<p>The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) estimation in Blood; For Inorganic Chromium-Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be 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 to materials like Asbestos, Hard Rock Mining, 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</p>	It will be complied post commencement of operation.

	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).	
(v)	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 (FEV1),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, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.	It will be complied post commencement of operation. Records for performance indicators workers will be maintained & the same shall be submitted to Regional Office, MoEF&CC annually.
(vi)	The Project 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.	Training and information on safety and health aspects will be given to concerned person post commencement of operation.
(vii)	Project Proponent shall make provision for the housing for workers/labors or shall construct labor 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, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.	Agreed. Provision for housing with necessary infrastructure like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. will be provided.  STP will be installed for the treatment of Waster Water.

<b>(viii)</b>	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.	The work is in progress and the status report will be submitted to Regional Office of the Ministry along with District Administration.  Details of budget expended for fulfilling Public Hearing issues till FY'23 is attached as <b>Annexure-XI</b>
<b>(ix)</b>	Issues raised and recorded in proceedings of public hearing w.r.t. environment / pollution / CER shall be complied by the Mining Authority as per OM F. No. 22-65/2017-IA.III, dated 30.09.2020 of MoEF&CC, Govt. of India.	The Mine operation has not started. Issues raised will be dealt as per the prescribed plan and within stipulated time frame.
<b>(IX)</b>	<b>Corporate Environment Responsibility (CER)</b>	
<b>(i)</b>	The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by SEAC 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.	The OM has been receded/withdrawn. However the expenditure under environment responsibility is being kept in earmarked account.
<b>(ii)</b>	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 / SEIAA, Odisha.	It will be complied.
<b>(X)</b>	<b>Miscellaneous</b>	
<b>(i)</b>	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.	It will be complied. Digital map will be prepared once in 5 years once the mining operation starts.
<b>(ii)</b>	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.	Agreed. The same will be communicated.



<b>(iii)</b>	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC & its concerned Regional Office, SEIAA, Odisha, Central Pollution Control Board and State Pollution Control Board.	It will be complied. Compliance report will be submitted in every 6 months to MoEF&CC & its concerned Regional Office, SEIAA & SPCB.
<b>(iv)</b>	A separate „Environmental Management Cell“ with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.	Complied . Separate “Environment Management has been established. The organizational structure attached as <b>Annexure-XII</b>
<b>(v)</b>	The proponent shall comply all the specific conditions as recommended by CSIR-NEERI on carrying capacity study (as applicable) in time bound manner as proposed.	It will be complied within stipulated timeframe.
<b>(vi)</b>	The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.	It will be complied.
<b>(vii)</b>	The project proponent shall augment infrastructure on drinking water, health care and education in nearby villages as per time bound action plan submitted.	Agreed. Infrastructure on drinking water, health care and education in nearby villages will be completed within stipulated time frame.
<b>(viii)</b>	The project proponent shall obtain permission from DGMS under 106(2b) to carry out blasting operation within the lease area.	Agreed. Proper permission from DGMS will be taken to carry out blasting operation.
<b>(ix)</b>	Fe grade - 55 and +45 to be attempted to use by blending with higher grade.	Agreed. It will be done after the starting of mine operations.
<b>(x)</b>	It shall be mandatory for the project management to submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA), Odisha, SPCB & Regional Office of the Ministry of Environment & Forest, Odisha in hard and soft copies on 1st June and 1st December of each calendar year. The proponent shall also upload the compliance report including results of monitored data, as applicable in the website of the Ministry for monitoring of EC Conditions.	It will be complied. Compliance report will be submitted in every 6 months to MoEF&CC & its concerned Regional Office, NisSEIAA & SPCB

<b>(xi)</b>	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the Odisha State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective to the MoEF&CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.	It will be complied.  It will be submitted in the stipulated time frame.
<b>(xii)</b>	The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	It will be complied. We will be submitting the six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on our website and shall update the same periodically
<b>(xiii)</b>	The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.	Agreed. The same will be practiced.
<b>(xiv)</b>	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act,1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.	Agreed.
<b>(xv)</b>	This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and	Agreed.

	any other Court of Law, Common Cause Conditions as may be applicable.	
<b>(xvi)</b>	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Not Applicable in our case.



भारत सरकार  
जल शक्ति मंत्रालय  
जल संसाधन, नदी विकास  
और गंगा संरक्षण विभाग  
केन्द्रीय भूमि जल प्राधिकरण  
Government of India  
Ministry of Jal Shakti  
Department of Water Resources,  
River Development & Ganga Rejuvenation  
Central Ground Water Authority

(भूजल निकासी हेतु अनापत्ति प्रमाण पत्र)

**NO OBJECTION CERTIFICATE (NOC) FOR GROUND WATER ABSTRACTION**

Project Name:	Kalamang West (northern Part) Iron Ore Mines In Respect Of M/s Tata Steel Ltd		
Project Address:	Village-kalamang And Ghodabudani		
Village:	Kalmanga	Block:	Koida
District:	Sundargarh	State:	Odisha
Pin Code:			
Communication Address:	Bombay House, 24 Homi Mody Steet Fort, Mumbai-400001, Mumbai, Mumbai, Maharashtra - 400001		
Address of CGWB Regional Office :	Central Ground Water Board South Eastern Region, Bhujal Bhawan, Khandagiri Square, Nh-5, Bhubaneshwar, Khordha, Odisha - 750001		

1. <b>NOC No.:</b>	CGWA/NOC/MIN/ORIG/2022/16214											
2. Application No.:	21-4/3864/OR/MIN/2022	3. Category: (GWRE 2020)	Safe									
4. Project Status:	New Project	5. NOC Type:	New									
6. <b>Valid from:</b>	01/09/2022	7. <b>Valid up to:</b>	31/08/2024									
8. Ground Water Abstraction Permitted:												
	Fresh Water		Saline Water									
	Dewatering		Total									
	m <sup>3</sup> /day	m <sup>3</sup> /year	m <sup>3</sup> /day									
	m <sup>3</sup> /day	m <sup>3</sup> /year	m <sup>3</sup> /day									
	65.00	23725.00										
9. Details of ground water abstraction /Dewatering structures												
	<b>Total Existing No.:0</b>						<b>Total Proposed No.:2</b>					
	DW	DCB	BW	TW	MP	MPu	DW	DCB	BW	TW	MP	MPu
Abstraction Structure*	0	0	0	0	0	0	0	0	2	0	0	0
*DW- Dug Well; DCB-Dug-cum-Bore Well; BW-Bore Well; TW-Tube Well; MP-Mine Pit;MPu-Mine Pumps												
10. Ground Water Abstraction/Restoration Charges paid (Rs.):	23725.00											
11. Number of Piezometers(Observation wells) to be constructed/ monitored & Monitoring mechanism.	No. of Piezometers						Monitoring Mechanism					
							Manual	DWLR**	DWLR With Telemetry			
**DWLR - Digital Water Level Recorder	1						0	1	0			

(Compliance Conditions given overleaf)

This is an auto generated document & need not to be signed.

18/11, जामनगर हाउस, मानसिंह रोड, नई दिल्ली - 110011 / 18/11, Jamnagar House, Mansingh Road, New Delhi-110011

Phone: (011) 23383561 Fax: 23382051, 23386743

Website: cgwa-noc.gov.in

पानी बचाये - जीवन बचाये  
SAVE WATER - SAVE LIFE

**Validity of this NOC shall be subject to compliance of the following conditions:**

**Mandatory conditions:**

- 1) Installation of tamper proof digital water flow meter with telemetry on all the abstraction structure(s) shall be mandatory for all users seeking No Objection Certificate and intimation regarding their installation shall be communicated to the CGWA within 30 days of grant of No Objection Certificate.
- 2) Proponents shall mandatorily get water flow meter calibrated from an authorized agency once in a year.
- 3) Construction of purpose-built observation wells (piezometers) for ground water level monitoring shall be mandatory as per Section 14 of Guidelines. Water level data shall be made available to CGWA through web portal. Detailed guidelines for construction of piezometers are given in Annexure-II of the guidelines.
- 4) Proponents shall monitor quality of ground water from the abstraction structure(s) once in a year. Water samples from bore wells/ tube wells / dug wells shall be collected during April/May every year and analysed in NABL accredited laboratories for basic parameters (cations and anions), heavy metals, pesticides/ organic compounds etc. Water quality data shall be made available to CGWA through the web portal.
- 5) In case of mining projects, additional key wells shall be established in consultation with the Regional Director, CGWB for ground water level monitoring four (4) times a year (January, May, August and November) in core as well as buffer zones of the mine.
- 6) In case of mining project the firm shall submit water quality report of mine discharge/ seepage from Govt. approved/ NABL accredited lab.
- 7) The firm shall report compliance of the NOC conditions online in the website ([www.cgwa-noc.gov.in](http://www.cgwa-noc.gov.in)) within one year from the date of issue of this NOC.
- 8) Industries abstracting ground water in excess of 100 m<sup>3</sup>/d shall undertake annual water audit through certified auditors and submit audit reports within three months of completion of the same to CGWA. All such industries shall be required to reduce their ground water use by at least 20% over the next three years through appropriate means.
- 9) Application for renewal can be submitted online from 90 days before the expiry of NOC. Ground water withdrawal, if any, after expiry of NOC shall be illegal & liable for legal action as per provisions of Environment (Protection) Act, 1986.
- 10) This NOC is subject to prevailing Central/State Government rules/laws/norms or Court orders related to construction of tube well/ground water abstraction structure / recharge or conservation structure/discharge of effluents or any such matter as applicable.

**General conditions:**

- 11) No additional ground water abstraction and/or de-watering structures shall be constructed for this purpose without prior approval of the Central Ground Water Authority (CGWA).
- 12) The proponent shall seek prior permission from CGWA for any increase in quantum of groundwater abstraction (more than that permitted in NOC for specific period).
- 13) Proponents shall install roof top rain water harvesting in the premise as per the existing building bye laws in the premise.
- 14) The project proponent shall take all necessary measures to prevent contamination of ground water in the premises failing which the firm shall be responsible for any consequences arising thereupon.
- 15) In case of industries that are likely to contaminate the ground water, no recharge measures shall be taken up by the firm inside the plant premises. The runoff generated from the rooftop shall be stored and put to beneficial use by the firm.
- 16) Wherever feasible, requirement of water for greenbelt (horticulture) shall be met from recycled / treated waste water.
- 17) Wherever the NOC is for abstraction of saline water and the existing wells (s) is /are yielding fresh water, the same shall be sealed and new tubewell(s) tapping saline water zone shall be constructed within 3 months of the issuance of NOC. The firm shall also ensure safe disposal of saline residue, if any.
- 18) Unexpected variations in inflow of ground water into the mine pit, if any, shall be reported to the concerned Regional Director, Central Ground Water Board.
- 19) In case of violation of any NOC conditions, the applicant shall be liable to pay the penalties as per Section 16 of Guidelines.
- 20) This NOC does not absolve the proponents of their obligation / requirement to obtain other statutory and administrative clearances from appropriate authorities.
- 21) The issue of this NOC does not imply that other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would consider the project on merits and take decisions independently of the NOC.
- 22) In case of change of ownership, new owner of the industry will have to apply for incorporation of necessary changes in the No Objection Certificate with documentary proof within 60 days of taking over possession of the premises.
- 23) This NOC is being issued without any prejudice to the directions of the Hon'ble NGT/court orders in cases related to ground water or any other related matters.
- 24) Proponents, who have installed/constructed artificial recharge structures in compliance of the NOC granted to them previously and have availed rebate of upto 50% (fifty percent) in the ground water abstraction charges/ground water restoration charges, shall continue to regularly maintain artificial recharge structures.
- 25) Industries which are likely to cause ground water pollution e.g. Tanning, Slaughter Houses, Dye, Chemical/ Petrochemical, Coal washeries, pharmaceutical, other hazardous units etc. (as per CPCB list) need to undertake necessary well head protection measures to ensure prevention of ground water pollution as per Annexure III of the guidelines.
- 26) In case of new infrastructure projects having ground water abstraction of more than 20 m<sup>3</sup>/day, the firm/entity shall ensure implementation of dual water supply system in the projects.
- 27) In case of infrastructure projects, paved/parking area must be covered with interlocking/perforated tiles or other suitable measures to ensure groundwater infiltration/harvesting.
- 28) In case of coal and other base metal mining projects, the project proponent shall use the advance dewatering technology (by construction of series of dewatering abstraction structures) to avoid contamination of surface water.
- 29) The NOC issued is conditional subject to the conditions mentioned in the Public notice dated 27.01.2021 failing which penalty/EC/cancellation of NOC shall be imposed as the case may be.
- 30) This NOC is issued subject to the clearance of Expert Appraisal Committee (EAC) (if applicable).

**(Non-compliance of the conditions mentioned above is likely to result in the cancellation of NOC and legal action against the proponent.)**



To,

**The Sarpanch  
Guali Gram Panchayat  
Guali, Dist- Keonjhar**

Ref: JCO/13/175/118  
Dated: 19<sup>th</sup> Oct' 2022

**Sub: Environmental Clearance of M/s Tata Steel Limited for Kalamang West (Northern Part) Iron Mine of M/s Tata Steel Limited has been granted for mining of Iron Ore with Production Capacity of 2.95 MTPA (RoM) at Village- Kalamang & Ghodabudani, District- Sundergarh & Village - Gandhalpada, District - Keonjhar, Odisha (ML Area: 92.875 ha)**

Ref: SEIAA, Odisha File No. 55807/89-MINB1/06-2022 (EC Identification No. - EC22B001OR117596, dated 18th October 2022)

Dear Sir,

Environmental Clearance of M/s Tata Steel Limited for Kalamang West (Northern Part) Iron Mine of M/s Tata Steel Limited has been granted for mining of Iron Ore with Production Capacity of 2.95 MTPA (RoM) at Village- Kalamang & Ghodabudani, District- Sundergarh & Village - Gandhalpada, District - Keonjhar, Odisha (ML Area: 92.875 ha). A copy of EC is enclosed for reference.

Thanking you,

Yours sincerely,  
f: Tata Steel Limited

**Chief (Kalamang &  
Gandhalpada Project)  
Tata Steel Limited**

**Sarpanch  
GUALI GRAM PANCHAYAT  
GUALI**

Encl: As above

**TATA STEEL LIMITED**

Mines Division Joda Keonjhar, Odisha 758 034 Tel 91 9238101031  
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India  
Tel 91 22 66658282 Fax 91 22 66657724  
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



To,

**The Sarpanch  
Malda Gram Panchayat  
Malda, Dist- Sundergarh**

Ref: JCO/13/174/118  
Dated: 19<sup>th</sup> Oct' 2022

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Thanking you,

Yours sincerely,  
f: Tata Steel Limited

**Chief (Kalamang &  
Gandhalpada Project)  
Tata Steel Limited**

Encl: As above

*Surubali Patra*  
**Surubali Patra**  
**Sarpanch Malda G.P**  
Pin-770048

**TATA STEEL LIMITED**

Mines Division Joda Keonjhar, Odisha 758 034 Tel 91 9238101031  
Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India  
Tel 91 22 66658282 Fax 91 22 66657724  
Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



sports 08

NZ CRUSH AUSTRALIA BY 89 RUNS IN SUPER 12 OPENER

PTI SYDNEY

Wicketkeeper-batter Devon Conway... NZ 192-1/0 vs Australia 103-10/7



We were very clinical in what we needed to do: Williamson

PTI SYDNEY

Captain Kane Williamson... NZ 192-1/0 vs Australia 103-10/7



In reply, Kiwi pacers Tim Southee... NZ 192-1/0 vs Australia 103-10/7

as Mitchell Marsh played some cogent... NZ 192-1/0 vs Australia 103-10/7

and tried to complete a slender... NZ 192-1/0 vs Australia 103-10/7

to push the total to 200 with an off... NZ 192-1/0 vs Australia 103-10/7

He continued his fury against Pat... NZ 192-1/0 vs Australia 103-10/7

The New Zealanders were inhibited... NZ 192-1/0 vs Australia 103-10/7

as Mitchell Marsh played some cogent... NZ 192-1/0 vs Australia 103-10/7

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to push the total to 200 with an off... NZ 192-1/0 vs Australia 103-10/7

He continued his fury against Pat... NZ 192-1/0 vs Australia 103-10/7

All-round England beat Afghanistan by 5 wickets after Curran's 5/10

PTI PERTH

England were eddily with the ball... ENG 221-4 vs AFG 137-7

On a lively Optus track... ENG 221-4 vs AFG 137-7

that encouraged a good contest... ENG 221-4 vs AFG 137-7



using Zafar's nerves... ENG 221-4 vs AFG 137-7

and Usman Ghani flicked him... ENG 221-4 vs AFG 137-7

Sam Curran led the way... ENG 221-4 vs AFG 137-7

Butler did not last long... ENG 221-4 vs AFG 137-7

Declined to tie the game... ENG 221-4 vs AFG 137-7

Wood welcomed Ibrahim... ENG 221-4 vs AFG 137-7

Ben Stokes... ENG 221-4 vs AFG 137-7

Ben Stokes... ENG 221-4 vs AFG 137-7

Ben Stokes... ENG 221-4 vs AFG 137-7

While left arm fast bowler... ENG 221-4 vs AFG 137-7

Ben Stokes... ENG 221-4 vs AFG 137-7

Ben Stokes... ENG 221-4 vs AFG 137-7

Ben Stokes... ENG 221-4 vs AFG 137-7

Ben Stokes... ENG 221-4 vs AFG 137-7

Ben Stokes... ENG 221-4 vs AFG 137-7

Ben Stokes... ENG 221-4 vs AFG 137-7

We have plans for everyone, not just Surya: Babar

PTI MELBOURNE

Suryakumar Yadav has a... PTI MELBOURNE

is conscious of eyes... PTI MELBOURNE

is conscious of eyes... PTI MELBOURNE

is conscious of eyes... PTI MELBOURNE

is conscious of eyes... PTI MELBOURNE

is conscious of eyes... PTI MELBOURNE

is conscious of eyes... PTI MELBOURNE

Surya tells me he will take his chances, just wants me to be there: Kohli

PTI MELBOURNE

Virat Kohli has no qualms... PTI MELBOURNE

Virat Kohli has no qualms... PTI MELBOURNE

Strategy to deal with Shaheen is to play within 'V': Tendulkar

PTI MELBOURNE

Shaheen Shahzad Afridi is... PTI MELBOURNE

Shaheen Shahzad Afridi is... PTI MELBOURNE

The Match: Confident India hoping to turn tables on Pakistan

PTI MELBOURNE

To understate a record of six... PTI MELBOURNE

to tell you this is another... PTI MELBOURNE

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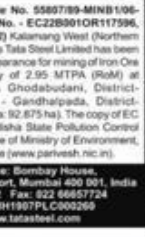
to tell you this is another... PTI MELBOURNE

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to tell you this is another... PTI MELBOURNE

AFFIDAVIT content regarding TATA STEEL, including details about a mining project in Odisha, India.





ଶାହାଜାଦୀ ନୃତ୍ୟ ଉତ୍ସବ କାମ୍ୟ କାବଣ୍ୟ ଉଦ୍‌ଘାଟିତ

କଳାକାରଙ୍କ ନୃତ୍ୟ ପ୍ରଦର୍ଶନ



କଳାକାରଙ୍କ ନୃତ୍ୟ ପ୍ରଦର୍ଶନ... ଉତ୍ସବର ଅନ୍ତର୍ଗତ ନୃତ୍ୟ ପ୍ରଦର୍ଶନ...

ଉଦ୍‌ଘାଟନୀ: ଶ୍ରୀମତୀ ସୁମିତ୍ରା ଚନ୍ଦ୍ର... ଉଦ୍‌ଘାଟନୀଙ୍କ ଦ୍ୱାରା ନୃତ୍ୟ ପ୍ରଦର୍ଶନର ଉଦ୍‌ଘାଟନା...

ଦାଦି ପୁରାଣ ନ ହେଲେ କୁକୁଡ଼ାଚାଷୀଙ୍କ ଆନ୍ଦୋଳନ



କୃଷକମାନଙ୍କୁ ଉପାୟ ଦେବା... ଦାଦି ପୁରାଣ ନ ହେଲେ କୁକୁଡ଼ାଚାଷୀଙ୍କ ଆନ୍ଦୋଳନ...

ସଂକୀର୍ତ୍ତନ ମହୋତ୍ସବ

କୃଷକମାନଙ୍କୁ ଉପାୟ ଦେବା... ସଂକୀର୍ତ୍ତନ ମହୋତ୍ସବର ବିବରଣ୍ୟ...

TATA STEEL advertisement with contact information and logo.

ଫାଇଲ ନମ୍ବର ୫୯୯୯

Table with columns for File No., Date, and other details. It contains a list of entries with their respective dates and numbers.

Main table with multiple columns containing numerical data, likely a ledger or record book. It includes columns for various categories and values.

Table with columns for File No., Date, and other details, similar to the first table but with different data entries.



To,

Deputy Director General of Forests (C)  
MoEF&CC, Integrated Regional Office,  
A/3, Chandrasekharapur,  
Bhubaneswar – 751023

Ref: GM/OMQ/ 75 /11-G/ FY'23

Dated: 24<sup>th</sup> Oct' 2022

**Sub: Environmental Clearance of M/s Tata Steel Limited for Kalamang West (Northern Part) Iron Mine has been granted for mining of Iron Ore with Production Capacity of 2.95 MTPA (RoM) at Village- Kalamang & Ghodabudani, District- Sundergarh & Village - Gandhalpada, District - Keonjhar, Odisha (ML Area: 92.875 ha)**

Ref: SEIAA, Odisha File No. 55807/89-MINB1/06-2022 (EC Identification No. - EC22B001OR117596, dated 18th October 2022)

Dear Sir,

In reference to above letter on captioned subject, we would like to inform your good office that in compliance to the General condition no. xiii of the Environmental Clearance granted, we have widely advertised about the grant of this Environmental Clearance letter by printing the same at Odia newspaper "Pragatibadi" and English Newspaper "The Pioneer" on 23<sup>rd</sup> Oct' 2022 mentioning that the instant project has been accorded Environmental Clearance and copy of the Environmental Clearance letter is available with the State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change ([www.environmentclearance.nic.in](http://www.environmentclearance.nic.in)). Copy of both the advertisement is enclosed herewith for your kind reference.

Thanking you,

Yours sincerely,  
f: Tata Steel Limited

(Atul Kumar Bhatnagar)  
General Manager, OMQ

Encl: As above

**TATA STEEL LIMITED**

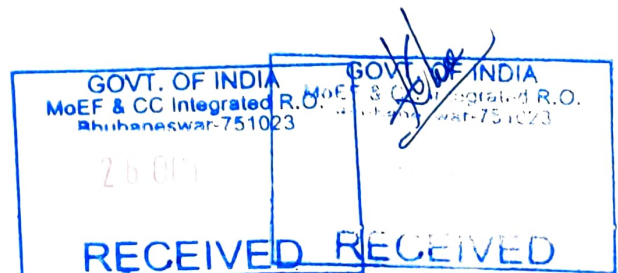
Mines Division Noamundi 833 217 India

Tel 91 9234301340 Fax 91 6596 290737

Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India

Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com





**Anacon  
Laboratories**

**Anacon Laboratories Pvt. Ltd. Nagpur Lab**  
 ♣ FP-34, 35, Food Park, Five Star Industrial Estate,  
 MIDC Butibori, Nagpur, Maharashtra, India - 441 122  
 ☎ + 91 8045685558 ✉ Email : info@anacon.in  
 🌐 https:// www.anaconlaboratories.com

*Test Report*

**Ambient Air Quality Analysis Report-April-2023**

Report Code: AN/AA/2023/1-1

Issue Date: 29/04/2023

Issued To : **M/s Kalamang Iron Mine  
(M/s TATA STEEL LIMITED)**

**Mines Area (Core Zone)**

Inward No. : AI.PI./24042023/ENV-91/1-KIM/CZ-1  
 Sample Description : Ambient Air  
 Sample Drawn On : 17/04/2023 to 18/04/2023  
 Sample Drawn By : Anacon Representative  
 Sample Received On : 20/04/2023  
 Sampling Location : **Mines Lease Area (AAQ-1)**  
 Sampling Plan & Procedure : ANtd/7.2/Mon-01  
 Analysis Duration : 21/04/2023  
 Sampling Time : 24 Hrs.  
 Ambient Temperature : 34°C  
 Average Flow Rate of SPM : 1.1 (m<sup>3</sup>/min)  
 Average Flow Rate of Gases : 0.3 (lpm)  
 Weather Conditions : Clear

Sl. No.	PARAMETER	TEST METHOD	RESULT	UNIT	CPCB Standard
1	Particulate Matter (PM <sub>10</sub> )	IS:5182 (Part 23)	71.6	µg /m <sup>3</sup>	100 (24 hrs)
2	Particulate Matter (PM <sub>2.5</sub> )	USEPA-40 (Part 50)	32.8	µg /m <sup>3</sup>	60 (24 hrs)
3	Sulphur dioxide (as SO <sub>2</sub> )	IS:5182 (Part 2)	14.2	µg /m <sup>3</sup>	80 (24 hrs)
4	Nitrogen dioxide (as NO <sub>2</sub> )	IS:5182 (Part 6)	21.9	µg /m <sup>3</sup>	80 (24 hrs)
5	Carbon Monoxide (as CO)	IS:5182 (Part 10)	BDL (DL-0.5)	mg /m <sup>3</sup>	2.0 (8 hrs)

**NOTES:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BDL- Below detection limit ● DL- Indicates detection limit of instrument/method and shall be considered as 'absent'.

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway  
Quality Manager

-----End of Report-----

Thanks for putting in your faith and trust in our services, We at Anacon Laboratories cherish our relationship. We put in a lot of hard work to ensure that you have a seamless experience at every step of our relationship. In order to ensure that your next experience will be significantly better, we welcome your feedback over email on feedback@anacon.in





*Test Report*

**Ambient Air Quality Analysis Report-April-2023**

Report Code: AN/AA/2023/1-2

Issue Date: 29/04/2023

Issued To : **M/s Kalamang Iron Mine  
(M/s TATA STEEL LIMITED)**

**Mines Area (Core Zone)**

Inward No. : ALPL/24042023/ENV-91/1-KIM/CZ-2  
Sample Description : Ambient Air  
Sample Drawn On : 17/04/2023 to 18/04/2023  
Sample Drawn By : Anacon Representative  
Sample Received On : 20/04/2023  
Sampling Location : **Mines Lease Area (AAQ-2)**  
Sampling Plan & Procedure : ANtd/7.2/Mon-01  
Analysis Duration : 21/04/2023  
Sampling Time : 24 Hrs.  
Ambient Temperature : 34°C  
Average Flow Rate of SPM : 1.2 (m<sup>3</sup>/min)  
Average Flow Rate of Gases : 0.3 (lpm)  
Weather Conditions : Clear

Sl. No.	PARAMETER	TEST METHOD	RESULT	UNIT	CPCB Standard
1	Particulate Matter (PM <sub>10</sub> )	IS:5182 (Part 23)	67.3	µg /m <sup>3</sup>	100 (24 hrs)
2	Particulate Matter (PM <sub>2.5</sub> )	USEPA-40 (Part 50)	26.8	µg /m <sup>3</sup>	60 (24 hrs)
3	Sulphur dioxide (as SO <sub>2</sub> )	IS:5182 (Part 2)	12.1	µg /m <sup>3</sup>	80 (24 hrs)
4	Nitrogen dioxide (as NO <sub>2</sub> )	IS:5182 (Part 6)	24.7	µg /m <sup>3</sup>	80 (24 hrs)
5	Carbon Monoxide (as CO)	IS:5182 (Part 10)	BDL (DL-0.5)	mg /m <sup>3</sup>	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BDL- Below detection limit ● DL- Indicates detection limit of instrument/method and shall be considered as 'absent'.

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway

Quality Manager

----End of Report----





Test Report

**Ambient Air Quality Analysis Report-April-2023**

Report Code: AN/AA/2023/1-3

Issue Date: 29/04/2023

Issued To : **M/s Kalamang Iron Mine  
(M/s TATA STEEL LIMITED)**

**Mines Area (Buffer Zone)**

Inward No. : ALPL/24042023/ENV-91/1-KIM/BZ-1  
Sample Description : Ambient Air  
Sample Drawn On : 20/04/2023 to 21/04/2023  
Sample Drawn By : Anacon Representative  
Sample Received On : 24/04/2023  
Sampling Location : **Guali Village (AAQ-3)**  
Sampling Plan & Procedure : ANtd/7.2/Mon-01  
Analysis Duration : 25/04/2023  
Sampling Time : 24 Hrs.  
Ambient Temperature : 32°C  
Average Flow Rate of SPM : 1.2 (m<sup>3</sup>/min)  
Average Flow Rate of Gases : 0.4 (lpm)  
Weather Conditions : Clear

Sl. No.	PARAMETER	TEST METHOD	RESULT	UNIT	CPCB Standard
1	Particulate Matter (PM <sub>10</sub> )	IS:5182 (Part 23)	56.3	µg /m <sup>3</sup>	100 (24 hrs)
2	Particulate Matter (PM <sub>2.5</sub> )	USEPA-40 (Part 50)	17.2	µg /m <sup>3</sup>	60 (24 hrs)
3	Sulphur dioxide (as SO <sub>2</sub> )	IS:5182 (Part 2)	9.1	µg /m <sup>3</sup>	80 (24 hrs)
4	Nitrogen dioxide (as NO <sub>2</sub> )	IS:5182 (Part 6)	16.4	µg /m <sup>3</sup>	80 (24 hrs)
5	Carbon Monoxide (as CO)	IS:5182 (Part 10)	BDL. (DL.-0.5)	mg /m <sup>3</sup>	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BDL- Below detection limit ● DL- Indicates detection limit of instrument/method and shall be considered as 'absent'.

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway  
Quality Manager

----End of Report----





Test Report

**Ambient Air Quality Analysis Report-April-2023**

Report Code: AN/AA/2023/1-4

Issue Date: 29/04/2023

Issued To : **M/s Kalamang Iron Mine  
(M/s TATA STEEL LIMITED)**

**Mines Area (Buffer Zone)**

Inward No. : ALPL/24042023/ENV-91/1-KIM/BZ-2  
Sample Description : Ambient Air  
Sample Drawn On : 18/04/2023 to 19/04/2023  
Sample Drawn By : Anacon Representative  
Sample Received On : 24/04/2023  
Sampling Location : **Kalamang Village (AAQ-4)**  
Sampling Plan & Procedure : ANtd/7.2/Mon-01  
Analysis Duration : 25/04/2023  
Sampling Time : 24 Hrs.  
Ambient Temperature : 32°C  
Average Flow Rate of SPM : 1.1 (m<sup>3</sup>/min)  
Average Flow Rate of Gases : 0.4 (lpm)  
Weather Conditions : Clear

Sl. No.	PARAMETER	TEST METHOD	RESULT	UNIT	CPCB Standard
1	Particulate Matter (PM <sub>10</sub> )	IS:5182 (Part 23)	47.2	µg /m <sup>3</sup>	100 (24 hrs)
2	Particulate Matter (PM <sub>2.5</sub> )	USEPA-40 (Part 50)	16.7	µg /m <sup>3</sup>	60 (24 hrs)
3	Sulphur dioxide (as SO <sub>2</sub> )	IS:5182 (Part 2)	8.4	µg /m <sup>3</sup>	80 (24 hrs)
4	Nitrogen dioxide (as NO <sub>2</sub> )	IS:5182 (Part 6)	17.1	µg /m <sup>3</sup>	80 (24 hrs)
5	Carbon Monoxide (as CO)	IS:5182 (Part 10)	BDL (DL-0.5)	mg /m <sup>3</sup>	2.0 (8 hrs)

**NOTES:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BDL- Below detection limit ● DL- Indicates detection limit of instrument/method and shall be considered as 'absent'.

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway

Quality Manager

----End of Report----





Test Report

**Ambient Air Quality Analysis Report-April-2023**

Report Code: AN/AA/2023/1-5

Issue Date: 29/04/2023

Issued To : **M/s Kalamang Iron Mine  
(M/s TATA STEEL LIMITED)**

**Mines Area (Buffer Zone)**

Inward No. : ALPL/24042023/ENV-91/1-KIM/BZ-3  
Sample Description : Ambient Air  
Sample Drawn On : 19/04/2023 to 20/04/2023  
Sample Drawn By : Anacon Representative  
Sample Received On : 24/04/2023  
Sampling Location : **Sagasahi Village (AAQ-5)**  
Sampling Plan & Procedure : ANtd/7.2/Mon-01  
Analysis Duration : 25/04/2023  
Sampling Time : 24 Hrs.  
Ambient Temperature : 34°C  
Average Flow Rate of SPM : 1.2 (m<sup>3</sup>/min)  
Average Flow Rate of Gases : 0.4 (lpm)  
Weather Conditions : Clear

Sl. No.	PARAMETER	TEST METHOD	RESULT	UNIT	CPCB Standard
1	Particulate Matter (PM <sub>10</sub> )	IS:5182 (Part 23)	53.7	µg /m <sup>3</sup>	100 (24 hrs)
2	Particulate Matter (PM <sub>2.5</sub> )	USEPA-40 (Part 50)	23.1	µg /m <sup>3</sup>	60 (24 hrs)
3	Sulphur dioxide (as SO <sub>2</sub> )	IS:5182 (Part 2)	11.4	µg /m <sup>3</sup>	80 (24 hrs)
4	Nitrogen dioxide (as NO <sub>2</sub> )	IS:5182 (Part 6)	18.6	µg /m <sup>3</sup>	80 (24 hrs)
5	Carbon Monoxide (as CO)	IS:5182 (Part 10)	BDL (DL-0.5)	mg /m <sup>3</sup>	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BDL- Below detection limit ● DL- Indicates detection limit of instrument/method and shall be considered as 'absent'.

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway  
Quality Manager

----End of Report----





Test Report

**Ambient Air Quality Analysis Report-April-2023**

Report Code: AN/AA/2023/1-6

Issue Date: 29/04/2023

Issued To : **M/s Kalamang Iron Mine  
(M/s TATA STEEL LIMITED)**

**Mines Area (Buffer Zone)**

Inward No. : ALPL/24042023/ENV-91/1-KIM/BZ-4  
Sample Description : Ambient Air  
Sample Drawn On : 19/04/2023 to 20/04/2023  
Sample Drawn By : Anacon Representative  
Sample Received On : 24/04/2023  
Sampling Location : **Gandalpada Village (AAQ-6)**  
Sampling Plan & Procedure : ANtd/7.2/Mon-01  
Analysis Duration : 25/04/2023  
Sampling Time : 24 Hrs.  
Ambient Temperature : 34°C  
Average Flow Rate of SPM : 1.3 (m<sup>3</sup>/min)  
Average Flow Rate of Gases : 0.4 (lpm)  
Weather Conditions : Clear

Sl. No.	PARAMETER	TEST METHOD	RESULT	UNIT	CPCB Standard
1	Particulate Matter (PM <sub>10</sub> )	IS:5182 (Part 23)	48.3	µg /m <sup>3</sup>	100 (24 hrs)
2	Particulate Matter (PM <sub>2.5</sub> )	USEPA-40 (Part 50)	21.7	µg /m <sup>3</sup>	60 (24 hrs)
3	Sulphur dioxide (as SO <sub>2</sub> )	IS:5182 (Part 2)	8.4	µg /m <sup>3</sup>	80 (24 hrs)
4	Nitrogen dioxide (as NO <sub>2</sub> )	IS:5182 (Part 6)	16.1	µg /m <sup>3</sup>	80 (24 hrs)
5	Carbon Monoxide (as CO)	IS:5182 (Part 10)	BDL (DL-0.5)	mg /m <sup>3</sup>	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BDL- Below detection limit ● DL- Indicates detection limit of instrument/method and shall be considered as 'absent'.

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway  
Quality Manager

-----End of Report-----







Test Report

**Ambient Air Quality Analysis Report-April-2023**

Report Code: AN/AA/2023/1-7

Issue Date: 29/04/2023

Issued To : **M/s Kalamang Iron Mine  
(M/s TATA STEEL LIMITED)**

**Mines Area (Buffer Zone)**

Inward No. : ALPL/24042023/ENV-91/1-KIM/BZ-5  
Sample Description : Ambient Air  
Sample Drawn On : 18/04/2023 to 19/04/2023  
Sample Drawn By : Anacon Representative  
Sample Received On : 24/04/2023  
Sampling Location : **Sunindpur Village (AAQ-7)**  
Sampling Plan & Procedure : ANtd/7.2/Mon-01  
Analysis Duration : 25/04/2023  
Sampling Time : 24 Hrs.  
Ambient Temperature : 32°C  
Average Flow Rate of SPM : 1.2 (m<sup>3</sup>/min)  
Average Flow Rate of Gases : 0.4 (lpm)  
Weather Conditions : Clear

Sl. No.	PARAMETER	TEST METHOD	RESULT	UNIT	CPCB Standard
1	Particulate Matter (PM <sub>10</sub> )	IS:5182 (Part 23)	56.1	µg /m <sup>3</sup>	100 (24 hrs)
2	Particulate Matter (PM <sub>2.5</sub> )	USEPA-40 (Part 50)	23.6	µg /m <sup>3</sup>	60 (24 hrs)
3	Sulphur dioxide (as SO <sub>2</sub> )	IS:5182 (Part 2)	11.4	µg /m <sup>3</sup>	80 (24 hrs)
4	Nitrogen dioxide (as NO <sub>2</sub> )	IS:5182 (Part 6)	18.2	µg /m <sup>3</sup>	80 (24 hrs)
5	Carbon Monoxide (as CO)	IS:5182 (Part 10)	BDL (DL-0.5)	mg /m <sup>3</sup>	2.0 (8 hrs)

NOTES: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● BDL- Below detection limit ● DL- Indicates detection limit of instrument/method and shall be considered as 'absent'.

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway  
Quality Manager

----End of Report----





*Test Report*

**Noise Monitoring Report-April-2023**

Report No.: AN/NE/TS-KIM/2023/1-8		Date: 29/04/2023	
Name and Address of Industry:-	M/s Kalamang Iron Mine (M/s TATA Steel Limited)		
Sample Description/Type	Noise Monitoring	Sample Ref. No.:-	ALPL/24042023/ENV-91/1/KIM/NE-1 to 7
Sample Drawn By:-	Mr. Sovan Giri	Data Inward date:-	24/04/2023
Sampling Procedure	ANtd/7.2/Mon-01	Sampling Method	IS 9989:1981(R2001)

Sampling Date: 13/04/2023 to 15/04/2023.

Sl. No.	Location Name	Results dB(A)	
		Day Time (6:00 am to 10:00pm)	Night Time (10:00 pm to 06:00am)
<b>Core Zone</b>			
NE-1	Mines Lease Area	71.3	56.4
NE-2	Mines Lease Area	64.9	52.8
<b>Buffer Zone</b>			
NE-3	Guali Village	51.2	42.6
NE-4	Kalamong Village	48.1	38.9
NE-5	Sagasahi Village	52.6	41.7
NE-6	Gandalpada Village	47.2	38.1
NE-7	Sunindpur Village	49.4	39.6
Norms:	Industrial Area	75.0	70.0
	Commercial Area	65.0	55.0
	Residential Area	55.0	45.0

NOTES: • Please see watermark "Original Test Report" to confirm the authenticity of this report. • Results shall be referred to tested sample(s) and applicable to tested parameters only. • Test report shall not be reproduced except in full without prior written approval of Anacon Labs.

**Remark:** - All Results are within Limit as per CPCB Standards.

Verified by

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S. D. Garway

Quality Manager

----End of Report----





Test Report

Test Report No. : ALPL/29042023/1-9A

dated 29/04/2023

Page 1 of 3

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-1	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-1	<b>Sample Condition</b> Sealed & Ice Preserved
			<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
			<b>Sampling Location</b> Guali Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Biological Testing 1. Water</b>					
1	<i>Escherichia coli</i>	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
<b>II</b>	<b>Chemical Testing 1. Water</b>					
2	Alkalinity (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 23) : 1986	200	600	176.28
3	Anionic surface active agents (as MBAS)	mg/l	IS 13428 (Annex K) : 2005	0.2	1.0	BDL (DL - 0.01)
4	Colour	Hazen units	IS 3025 (Part 4) : 2021	5	15	1
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1986	0.05	No relaxation	BDL (DL - 0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	250	1000	24.76
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	48.29
8	Free residual chlorine	mg/l	IS 3025 (Part 26) : 2021	Min. 0.2	1	BDL (DL - 0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.26
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	11.32
11	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	5.73
12	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
13	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	6.84 at 25°C
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 2022	0.001	0.002	BDL (DL - 0.001)
15	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	13.86
16	Taste	-	IS 3025 (Part 8) : 1984	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	281
18	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.4
19	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	167.21

☐ Please refer last Page for Note and Remarks.

Verified By

*Snehal Raut*

Snehal Raut  
Deputy Technical Manager

Authorized Signatories

*Pooja Kathate*

Pooja Kathate  
Technical Manager

*Dr. (Mrs.) S.D. Garway*

Dr. (Mrs.) S.D. Garway  
Quality Manager

Thanks for putting in your faith and trust in our services, We at Anacon Laboratories cherish our relationship. We put in a lot of hard work to ensure that you have a seamless experience at every step of our relationship. In order to ensure that your next experience will be significantly better, we welcome your feedback over email on feedback@anacon.in





Test Report

Test Report No. : ALPL/29042023/1-9A

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-1 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water	
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-1	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm	<b>Sampling Location</b> Guali Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>II Chemical Testing 2. Residues In Water</b>						
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL (DL - 0.01)
22	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
23	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
24	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
25	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.31
26	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
27	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
28	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.0005)
29	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
30	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
31	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)
32	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/01: 2018	0.1	No relaxation	BDL(DL-0.03)

□ Please refer last Page for Note and Remarks.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager





Test Report

Test Report No. : ALPL/29042023/1-9A

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-1	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-1	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
			<b>Quantity Received</b> 5.0 Ltr & 250 ml
			<b>Sampling Location</b> Guali Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
33	<b>Pesticide Residues Organochlorine</b>					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BDL (DL - 0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BDL (DL - 0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	BDL (DL - 0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01: 2018	0.3	No relaxation	BDL (DL - 0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01: 2018	190	No relaxation	BDL (DL - 0.03)
xx	Malaaxon	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01: 2018	3	No relaxation	BDL (DL - 0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01: 2018	30	No relaxation	BDL (DL - 0.03)

**NOTE:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. ● Result for test no. 8 is not relevant. ● ANtr/7.2/RES-01,06; Inhouse validated method. ● NT' indicates not Tested as sample failed to establish safety concerns.

**REMARKS:** As requested by the client, sample was tested for above parameters only. Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

*Y.S. Kombe*

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

*S. Garway*

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----

Thanks for putting in your faith and trust in our services, We at Anacon Laboratories cherish our relationship. We put in a lot of hard work to ensure that you have a seamless experience at every step of our relationship. In order to ensure that your next experience will be significantly better, we welcome your feedback over email on feedback@anacon.in





Test Report

Test Report No. : ALPL/29042023/1-9B

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-1 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water	
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-1	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm	<b>Sampling Location</b> Guali Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
1	Mineral Oil	mg/l	ANtr/7.2/RES/06: 2018	1	No relaxation	BDL (DL - 0.001)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. ● Result for test no. 8 is not relevant. ● ANtr/7.2/RES -01,06.: Inhouse validated method. ● NT' indicates not Tested as sample failed to establish safety concerns.

REMARKS: As requested by the client, sample was tested for above parameters only.

Verified By

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-10A

dated 29/04/2023

Page 1 of 3

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-2	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-2	<b>Sample Condition</b> Sealed & Ice Preserved
			<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
			<b>Sampling Location</b> Kalamong Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Biological Testing 1. Water</b>					
1	<i>Escherichia coli</i>	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
<b>II</b>	<b>Chemical Testing 1. Water</b>					
2	Alkalinity (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 23) : 1986	200	600	192.82
3	Anionic/surface active agents (as MBAS)	mg/l	IS 13428 : (Annex K): 2005	0.2	1.0	BDL (DL - 0.01)
4	Colour	Hazen units	IS 3025 (Part 4) : 2021	5	15	1
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1986	0.05	No relaxation	BDL (DL - 0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	250	1000	28.16
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	53.64
8	Free residual chlorine	mg/l	IS 3025 (Part 26) : 2021	Min. 0.2	1	BDL (DL - 0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.24
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	12.68
11	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	6.27
12	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
13	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	8.14 at 25°C
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 2022	0.001	0.002	BDL (DL - 0.001)
15	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	16.32
16	Taste	-	IS 3025 (Part 8) : 1984	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	308
18	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.3
19	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	186.17

☐ Please refer last Page for Note and Remarks.

Verified By

Snehal Raut  
Deputy Technical Manager

Authorized Signatories

Pooja Kathane  
Technical Manager

Dr. (Mrs.) S.D. Garway  
Quality Manager

Thanks for putting in your faith and trust in our services, We at Anacon Laboratories cherish our relationship. We put in a lot of hard work to ensure that you have a seamless experience at every step of our relationship. In order to ensure that your next experience will be significantly better, we welcome your feedback over email on feedback@anacon.in





Test Report

Test Report No. : ALPL/29042023/1-10A

dated 29/04/2023

Page 2 of 3

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-2 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water	
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-2	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm	<b>Sampling Location</b> Kalamong Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>II Chemical Testing 2. Residues In Water</b>						
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL (DL - 0.01)
22	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
23	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
24	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
25	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.26
26	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
27	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
28	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.0005)
29	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
30	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
31	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)
32	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/01: 2018	0.1	No relaxation	BDL(DL-0.03)

□ Please refer last Page for Note and Remarks.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager







Test Report

Test Report No. : ALPL/29042023/1-10A

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-2	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-2	<b>Sample Condition</b> Sealed & Ice Preserved
			<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
			<b>Sampling Location</b> Kalamang Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
33	<b>Pesticide Residues Organochlorine</b>					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BDL (DL - 0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BDL (DL - 0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	BDL (DL - 0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01: 2018	0.3	No relaxation	BDL (DL - 0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01: 2018	190	No relaxation	BDL (DL - 0.03)
xx	Malaoxon	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01: 2018	3	No relaxation	BDL (DL - 0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01: 2018	30	No relaxation	BDL (DL - 0.03)

**NOTE:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. ● Result for test no. 8 is not relevant. ● ANtr/7.2/RES -01,06; Inhouse validated method. ● NT' indicates not Tested as sample failed to establish safety concerns.

**REMARKS:** As requested by the client, sample was tested for above parameters only. Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----

Thanks for putting in your faith and trust in our services, We at Anacon Laboratories cherish our relationship. We put in a lot of hard work to ensure that you have a seamless experience at every step of our relationship. In order to ensure that your next experience will be significantly better, we welcome your feedback over email on feedback@anacon.in





Test Report

Test Report No. : ALPL/29042023/1-10B

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-2 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water	
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-2	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm	<b>Sampling Location</b> Kalamang Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
1	Mineral Oil	mg/l	ANtr/7.2/RES/06: 2018	1	No relaxation	BDL (DL - 0.001)

NOTE: ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. ● Result for test no. 8 is not relevant. ● ANtr/7.2/RES -01,06; Inhouse validated method. ● NT indicates not Tested as sample failed to establish safety concerns.

REMARKS: As requested by the client, sample was tested for above parameters only.

Verified By

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-11A

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-3	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-3	<b>Sample Condition</b> Sealed & Ice Preserved
			<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
			<b>Sampling Location</b> Sagasahi Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Biological Testing 1. Water</b>					
1	<i>Escherichia coli</i>	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
<b>II</b>	<b>Chemical Testing 1. Water</b>					
2	Alkalinity (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 23) : 1986	200	600	167.28
3	Anionic surface active agents (as MBAS)	mg/l	IS 13428 : (Annex K): 2005	0.2	1.0	BDL (DL - 0.01)
4	Colour	Hazen units	IS 3025 (Part 4) : 2021	5	15	1
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1986	0.05	No relaxation	BDL (DL - 0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	250	1000	32.58
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	46.96
8	Free residual chlorine	mg/l	IS 3025 (Part 26) : 2021	Min. 0.2	1	BDL (DL - 0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.36
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	13.74
11	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	8.26
12	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
13	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	6.87 at 25°C
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 2022	0.001	0.002	BDL (DL - 0.001)
15	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	18.24
16	Taste	-	IS 3025 (Part 8) : 1984	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	297
18	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.6
19	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	173.83

□ Please refer last Page for Note and Remarks.

Verified By

Snehal Raut  
Deputy Technical Manager

Authorized Signatories

Pooja Kathane  
Technical Manager

Dr. (Mrs.) S.D. Garway  
Quality Manager





Test Report

Test Report No. : ALPL/29042023/1-11A

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-3 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water	
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-3	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm	<b>Sampling Location</b> Sagasahi Village

TEST RESULTS

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>II Chemical Testing 2. Residues In Water</b>						
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL (DL - 0.01)
22	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
23	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
24	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
25	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.34
26	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
27	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
28	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.0005)
29	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
30	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
31	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)
32	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/01: 2018	0.1	No relaxation	BDL(DL-0.03)

☐ Please refer last Page for Note and Remarks.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager





*Test Report*

Test Report No. : ALPL/29042023/1-11A

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-3	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-3	<b>Sample Condition</b> Sealed & Ice Preserved
			<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
			<b>Sampling Location</b> Sagasahi Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
33	<b>Pesticide Residues Organochlorine</b>					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BDL (DL - 0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
iv	Delta- HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BDL (DL - 0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	BDL (DL - 0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01: 2018	0.3	No relaxation	BDL (DL - 0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01: 2018	190	No relaxation	BDL (DL - 0.03)
xx	Malaaxon	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01: 2018	3	No relaxation	BDL (DL - 0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01: 2018	30	No relaxation	BDL (DL - 0.03)

**NOTE:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. ● Result for test no. 8 is not relevant. ● ANtr/7.2/RES -01,06; Inhouse validated method. ● NT' indicates not Tested as sample failed to establish safety concerns.

**REMARKS:** As requested by the client, sample was tested for above parameters only. Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

*Y.S. Kombe*

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

*S.D. Garway*

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-11B

dated 29/04/2023

Page 1 of 1

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-3 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water	
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-3	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm	<b>Sampling Location</b> Sagasahi Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
1	Mineral Oil	mg/l	ANtr/7.2/RES/06: 2018	1	No relaxation	BDL (DL - 0.001)

**NOTE:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. ● Result for test no. 8 is not relevant. ● ANtr/7.2/RES -01,06; Inhouse validated method. ● NT' indicates not Tested as sample failed to establish safety concerns.

**REMARKS:** As requested by the client, sample was tested for above parameters only.

Verified By

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-12A

dated 29/04/2023

Page 1 of 3

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-4	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-4	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
			<b>Quantity Received</b> 5.0 Ltr & 250 ml
			<b>Sampling Location</b> Gandalpada Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Biological Testing I. Water</b>					
1	<i>Escherichia coli</i>	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
<b>II</b>	<b>Chemical Testing I. Water</b>					
2	Alkalinity (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 23) : 1986	200	600	181.57
3	Anionic surface active agents (as MBAS)	mg/l	IS 13428 : (Annex K): 2005	0.2	1.0	BDL (DL - 0.01)
4	Colour	Hazen units	IS 3025 (Part 4) : 2021	5	15	1
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1986	0.05	No relaxation	BDL (DL - 0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	250	1000	26.14
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	43.17
8	Free residual chlorine	mg/l	IS 3025 (Part 26) : 2021	Min. 0.2	1	BDL (DL - 0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.31
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	12.58
11	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	7.26
12	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
13	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	6.92 at 25°C
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 2022	0.001	0.002	BDL (DL - 0.001)
15	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	16.27
16	Taste	-	IS 3025 (Part 8) : 1984	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	268
18	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.3
19	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	159.59

Please refer last Page for Note and Remarks.

Verified By

Snehal Raut  
Deputy Technical Manager

Authorized Signatories

Pooja Kathane  
Technical Manager

Dr. (Mrs.) S.D. Garway  
Quality Manager





Test Report

Test Report No. : ALPL/29042023/1-12A

dated 29/04/2023

Page 2 of 3

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-4 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water	
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-4	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm	<b>Sampling Location</b> Gandalpada Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>II Chemical Testing 2. Residues In Water</b>						
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL (DL - 0.01)
22	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
23	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
24	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
25	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.27
26	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
27	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
28	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.0005)
29	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
30	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
31	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)
32	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/01: 2018	0.1	No relaxation	BDL(DL-0.03)

□ Please refer last Page for Note and Remarks.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager







Test Report

Test Report No. : ALPL/29042023/1-12A

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-4 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-4	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
		<b>Quantity Received</b> 5.0 Ltr & 250 ml	
		<b>Sampling Location</b> Gandalpada Village	

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
33	<b>Pesticide Residues Organochlorine</b>					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BDL (DL - 0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
iv	Delta - HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BDL (DL - 0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	BDL (DL - 0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiii	o,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01: 2018	0.3	No relaxation	BDL (DL - 0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01: 2018	190	No relaxation	BDL (DL - 0.03)
xx	Malaaxon	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01: 2018	3	No relaxation	BDL (DL - 0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01: 2018	30	No relaxation	BDL (DL - 0.03)

**NOTE:** ● Please see watermark "Original-Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. ● Result for test no. 8 is not relevant. ● ANtr/7.2/RES-01,06,; Inhouse validated method. ● NT' indicates not Tested as sample failed to establish safety concerns.

**REMARKS:** As requested by the client, sample was tested for above parameters only. Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

*Y. S. Kombe*

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

*S. D. Garway*

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-12B

dated 29/04/2023

Page 1 of 1

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-4 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water	
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-4	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm	<b>Sampling Location</b> Gandalpada Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
1	Mineral Oil	mg/l	ANtr/7.2/RES/06: 2018	1	No relaxation	BDL (DL - 0.001)

**NOTE:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. ● Result for test no. 8 is not relevant. ● ANtr/7.2/RES -01,06.; Inhouse validated method. ● NT' indicates not Tested as sample failed to establish safety concerns.

**REMARKS:** As requested by the client, sample was tested for above parameters only.

Verified By

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

---End of Report---





Test Report

Test Report No. : ALPL/29042023/1-13A

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-5	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-5	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
			<b>Quantity Received</b> 5.0 Ltr & 250 ml
			<b>Sampling Location</b> Sunindpur Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>I</b>	<b>Biological Testing 1. Water</b>					
1	<i>Escherichia coli</i>	Per 100 ml	IS 15185 : 2016	Absent	Absent	Absent
<b>II</b>	<b>Chemical Testing 1. Water</b>					
2	Alkalinity (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 23) : 1986	200	600	157.29
3	Anionic surface active agents (as MBAS)	mg/l	IS 13428 : (Annex K) : 2005	0.2	1.0	BDL (DL - 0.01)
4	Colour	Hazen units	IS 3025 (Part 4) : 2021	5	15	1
5	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1986	0.05	No relaxation	BDL (DL - 0.005)
6	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	250	1000	21.46
7	Calcium (as Ca)	mg/l	IS 3025 (Part 40) : 1991	75	200	51.68
8	Free residual chlorine	mg/l	IS 3025 (Part 26) : 2021	Min. 0.2	1	BDL (DL - 0.1)
9	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.0	1.5	0.27
10	Magnesium (as Mg)	mg/l	IS 3025 (Part 46) : 1994	30	100	11.94
11	Nitrate (as NO <sub>3</sub> )	mg/l	APHA method 23rd edition: 2017	45	No relaxation	8.16
12	Odour	-	IS 3025 (Part 5) : 2018	Agreeable	Agreeable	Agreeable
13	pH	-	IS 3025 (Part 11) : 2022	6.5 to 8.5	No relaxation	7.13 at 25°C
14	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 2022	0.001	0.002	BDL (DL - 0.001)
15	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	200	400	18.24
16	Taste	-	IS 3025 (Part 8) : 1984	Agreeable	Agreeable	Agreeable
17	Total dissolved solids	mg/l	IS 3025 (Part 16) : 1984	500	2000	271
18	Turbidity	NTU	IS 3025 (Part 10) : 1984	1	5	0.4
19	Total hardness (as CaCO <sub>3</sub> )	mg/l	IS 3025 (Part 21) : 2009	200	600	178.23

□ Please refer last Page for Note and Remarks.

Verified By

Snehal Raut  
Deputy Technical Manager

Authorized Signatories

Pooja Kathane  
Technical Manager

Dr. (Mrs.) S.D. Garway  
Quality Manager





Test Report

Test Report No. : ALPL/29042023/1-13A

dated 29/04/2023

Page 2 of 3

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-5 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-5	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
		<b>Quantity Received</b> 5.0 Ltr & 250 ml	
		<b>Sampling Location</b> Sunindpur Village	

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
<b>II</b>	<b>Chemical Testing 2. Residues In Water</b>					
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.01	No relaxation	BDL (DL - 0.01)
21	Aluminium (as Al)	mg/l	IS 3025 (Part 2) : 2019	0.03	0.2	BDL (DL - 0.01)
22	Boron (as B)	mg/l	IS 3025 (Part 2) : 2019	0.5	2.4	BDL (DL - 0.1)
23	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	0.05	1.5	BDL (DL - 0.03)
24	Cadmium (as Cd)	mg/l	IS 3025 (Part 2) : 2019	0.003	No relaxation	BDL (DL - 0.001)
25	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	1.0	No relaxation	0.31
26	Lead (as Pb)	mg/l	IS 3025 (Part 2) : 2019	0.01	No relaxation	BDL (DL - 0.001)
27	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	0.1	0.3	BDL (DL - 0.05)
28	Mercury (as Hg)	mg/l	IS 3025 (Part 48) : 1994	0.001	No relaxation	BDL (DL - 0.0005)
29	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.01	No relaxation	BDL (DL - 0.001)
30	Total Chromium (as Cr)	mg/l	IS 3025 (Part 2) : 2019	0.05	No relaxation	BDL (DL - 0.03)
31	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	5	15	BDL (DL - 0.1)
32	Polynuclear aromatic hydrocarbon (PAH)	µg/l	ANtr/7.2/RES/01: 2018	0.1	No relaxation	BDL(DL-0.03)

□ Please refer last Page for Note and Remarks.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager





Test Report

Test Report No. : ALPL/29042023/1-13A

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-5	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-5	<b>Sample Condition</b> Sealed & Ice Preserved
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
			<b>Quantity Received</b> 5.0 Ltr & 250 ml
			<b>Sampling Location</b> Sunindpur Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
33	<b>Pesticide Residues Organochlorine</b>					
i	Alpha-HCH	µg/l	ANtr/7.2/RES/01: 2018	0.01	No relaxation	BDL (DL - 0.01)
ii	Beta HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
iii	Gamma - HCH (Lindane)	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
iv	Delta - HCH	µg/l	ANtr/7.2/RES/01: 2018	0.04	No relaxation	BDL (DL - 0.03)
v	Alachlor	µg/l	ANtr/7.2/RES/01: 2018	20	No relaxation	BDL (DL - 0.03)
vi	Aldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
vii	Dieldrin	µg/l	ANtr/7.2/RES/01: 2018	0.03	No relaxation	BDL (DL - 0.03)
viii	Butachlor	µg/l	ANtr/7.2/RES/01: 2018	125	No relaxation	BDL (DL - 0.03)
ix	p,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
x	o,p'-DDE	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xi	p,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xii	o,p'-DDD	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiii	o,p'-DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xiv	p,p'- DDT	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xv	Monocrotophos	µg/l	ANtr/7.2/RES/01: 2018	1	No relaxation	BDL (DL - 0.03)
xvi	Atrazine	µg/l	ANtr/7.2/RES/01: 2018	2	No relaxation	BDL (DL - 0.03)
xvii	Parathion methyl	µg/l	ANtr/7.2/RES/01: 2018	0.3	No relaxation	BDL (DL - 0.03)
xviii	Paraoxon methyl	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xix	Malathion	µg/l	ANtr/7.2/RES/01: 2018	190	No relaxation	BDL (DL - 0.03)
xx	Malaaxon	µg/l	ANtr/7.2/RES/01: 2018	-	-	BDL (DL - 0.03)
xxi	Ethion	µg/l	ANtr/7.2/RES/01: 2018	3	No relaxation	BDL (DL - 0.03)
xxii	Chlorpyrifos	µg/l	ANtr/7.2/RES/01: 2018	30	No relaxation	BDL (DL - 0.03)

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**REMARKS:** As requested by the client, sample was tested for above parameters only. Sample complies with IS:10500:2012, for tests conducted, indicating that it is fit for drinking purpose with respect to tested parameters.

Verified By

*Y.S. Kombe*

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

*Stamp*

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-13B

dated 29/04/2023

Page 1 of 1

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-GW-5 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Water	
<b>Sample Name</b> Ground Water	<b>Sample Source</b> Dugwell	<b>Sample Particulars</b> Sample Code-GW-5	<b>Sample Condition</b> Sealed & Ice Preserved	<b>Quantity Received</b> 5.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11:45 am to 4:45 pm	<b>Sampling Location</b> Sunindpur Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Requirement as per IS 10500 : 2012 (Drinking Water Specifications) Including Amendment No. 4		Test Result
				Acceptable Limit	Permissible Limit #	
1	Mineral Oil	mg/l	ANtr/7.2/RES/06: 2018	1	No relaxation	BDL (DL - 0.001)

**NOTE:** ● Please see watermark "Original Test Report" to confirm the authenticity of this report. ● Results shall be referred to tested sample(s) and applicable to tested parameters only. ● Test report shall not be reproduced except in full without prior written approval of Anacon Labs. ● Liability of Anacon Labs is limited to invoiced amount only. ● Non-perishable and perishable sample(s) shall be disposed off after 30 days and 15 days respectively from the date of issue of Test Report, unless specified otherwise. ● #Permissible limit in absence of an alternate source for drinking water. ● 'mg/l' is equivalent to 'ppm'. ● 'µg/l' is equivalent to 'ppb'. ● BDL- Below detection limit. ● DL- DL Indicates detection limit of instrument /method and shall be considered as 'absent'. ● Result for test no. 8 is not relevant. ● ANtr/7.2/RES -01,06; Inhouse validated method. ● NT indicates not Tested as sample failed to establish safety concerns.

**REMARKS:** As requested by the client, sample was tested for above parameters only.

Verified By

Yogesh Kombe  
Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-14

dated 29/04/2023

Page 1 of 1

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-SW-1 & 2	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Surface Water	<b>Sample Source</b> 1. Upstream 2. Downstream	<b>Sample Particulars</b> Sample Code-SW-1 & 2	<b>Sample Condition</b> Sealed & Ice Preserved
			<b>Quantity Received</b> 2.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
		<b>Sampling Location</b> 1. Sona River Upstream (SW-1) 2. Sona River Downstream (SW-2)	

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-1	SW-2
<b>I Biological Testing 1.Water</b>						
1	Coliform	MPN/100ml	IS 1622 : 1981	5000	BDL(DL-2)	BDL(DL-2)
<b>II Chemical Testing 1.Water</b>						
2	pH value	-	IS 3025 (Part 11) : 2022	6.0 to 9.0	7.97 at 25°C	8.16 at 25°C
3	Colour	Hazen units	IS 3025 (Part 4) : 1983	300	1	1
4	Dissolved Oxygen	mg/l	IS 3025 (Part 38) :1989	4.0	6.5	6.3
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17) :2022	--	BDL(DL-10)	BDL(DL-10)
6	BOD (3 days at 27°C)	mg/l	IS 3025 (Part 44) :1993	3.0	2.41	2.24
7	Chemical oxygen demand	mg/l	IS 3025 (Part 58) :2006	--	8.26	7.92
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16) : 1984	1500	531	497
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	BDL(DL-0.03)	BDL(DL-0.03)
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) :1988	600	34.76	33.91
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	400	24.18	21.62
12	Nitrate (as NO <sub>3</sub> )	mg/l	IS 3025 (Part 34) : 1988	50	12.94	11.31
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.5	0.42	0.37
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1986	0.05	BDL(DL-0.005)	BDL(DL-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) :1001	0.005	BDL(DL-0.001)	BDL(DL-0.001)
16	Anionic Detergent	mg/l	IS 13428 : 2005 Annex K	1.0	BDL(DL-0.01)	BDL(DL-0.01)
<b>Chemical Testing 2. Residues In Water</b>						
17	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.38	0.36
18	Cadmium (as Cd)	mg/l	IS 3025 (Part 41) : 1992	0.01	BDL(DL-0.1)	BDL(DL-0.1)
19	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BDL(DL-0.1)	BDL(DL-0.1)
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BDL(DL-0.05)	BDL(DL-0.05)
21	Lead (as Pb)	mg/l	IS 3025 (Part 47) : 2003	0.1	BDL(DL-0.1)	BDL(DL-0.1)
22	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	15	BDL(DL-0.1)	BDL(DL-0.1)
23	Hexa Chromium (as Cr <sup>6+</sup> )	mg/l	IS 3025 (Part 52) : 2003	0.05	BDL(DL-0.1)	BDL(DL-0.1)
24	Mercury (as Hg)	mg/l	IS : 3025 (Part 48) : 1994	--	BDL(DL-0.01)	BDL(DL-0.01)
25	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	--	BDL(DL-0.1)	BDL(DL-0.1)

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**REMARKS :** As requested by the client. sample was tested for above parameters only.

Verified By

Authorized Signatories

Mangesh Fande  
Technical Manager

Snehal Raut  
Deputy Technical Manager

Pooja Kathane  
Technical Manager

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-15

dated 29/04/2023

Page 1 of 1

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)		<b>Sample Inward No.</b> ALPL/17042023/ENV-91-SW-3 & 4	<b>Analysis Start</b> 18/04/2023
		<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
			<b>Report Issue Date</b> 29/04/2023
			<b>Sample Category</b> Water
<b>Sample Name</b> Surface Water	<b>Sample Source</b> 1. Upstream 2. Downstream	<b>Sample Particulars</b> Sample Code-SW-3 & 4	<b>Sample Condition</b> Sealed & Ice Preserved
			<b>Quantity Received</b> 2.0 Ltr & 250 ml
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Date</b> 13/04/2023	<b>Sampling Time</b> 11.45 am to 4.45 pm
		<b>Sampling Location</b> 1. Karo River Upstream (SW-3) 2. Karo River Downstream (SW-4)	

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Standards as per IS 2296:1992 Class C	Test Result	
					SW-3	SW-4
<b>I Biological Testing 1.Water</b>						
1	Coliform	MPN/100ml	IS 1622 : 1981	5000	BDL(DL-2)	BDL(DL-2)
<b>II Chemical Testing 1.Water</b>						
2	pH value	-	IS 3025 (Part 11) : 2022	6.0 to 9.0	7.82 at 25°C	7.91 at 25°C
3	Colour	Hazen units	IS 3025 (Part 4) : 1983	300	1	1
4	Dissolved Oxygen	mg/l	IS 3025 (Part 38) : 1989	4.0	6.4	6.3
5	Total Suspended Solid (as TSS)	mg/l	IS 3025 (Part 17) : 2022	--	BDL(DL-10)	BDL(DL-10)
6	BOD (3 days at 27°C)	mg/l	IS 3025 (Part 44) : 1993	3.0	2.52	2.41
7	Chemical oxygen demand	mg/l	IS 3025 (Part 58) : 2006	--	9.17	8.76
8	Total Dissolved Solids (TDS)	mg/l	IS 3025 (Part 16) : 1984	1500	684	709
9	Copper (as Cu)	mg/l	IS 3025 (Part 2) : 2019	1.5	BDL(DL-0.03)	BDL(DL-0.03)
10	Chloride (as Cl)	mg/l	IS 3025 (Part 32) : 1988	600	38.17	39.72
11	Sulphate (as SO <sub>4</sub> )	mg/l	IS 3025 (Part 24) : 2022	400	21.43	18.73
12	Nitrate (as NO <sub>3</sub> )	mg/l	IS 3025 (Part 34) : 1988	50	13.71	12.81
13	Fluoride (as F)	mg/l	IS 3025 (Part 60) : 2008	1.5	0.46	0.51
14	Cyanide (as CN)	mg/l	IS 3025 (Part 27) : 1986	0.05	BDL(DL-0.005)	BDL(DL-0.005)
15	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	IS 3025 (Part 43) : 1001	0.005	BDL(DL-0.001)	BDL(DL-0.001)
16	Anionic Detergent	mg/l	IS 13428 : 2005 Annex K	1.0	BDL(DL-0.01)	BDL(DL-0.01)
<b>Chemical Testing 2. Residues In Water</b>						
17	Iron (as Fe)	mg/l	IS 3025 (Part 2) : 2019	0.5	0.42	0.38
18	Cadmium (as Cd)	mg/l	IS 3025 (Part 41) : 1992	0.01	BDL(DL-0.1)	BDL(DL-0.1)
19	Selenium (as Se)	mg/l	IS 3025 (Part 56) : 2003	0.05	BDL(DL-0.1)	BDL(DL-0.1)
20	Arsenic (as As)	mg/l	IS 3025 (Part 37) : 2022	0.2	BDL(DL-0.05)	BDL(DL-0.05)
21	Lead (as Pb)	mg/l	IS 3025 (Part 47) : 2003	0.1	BDL(DL-0.1)	BDL(DL-0.1)
22	Zinc (as Zn)	mg/l	IS 3025 (Part 2) : 2019	15	BDL(DL-0.1)	BDL(DL-0.1)
23	Hexa Chromium (as Cr <sup>+6</sup> )	mg/l	IS 3025 (Part 52) : 2003	0.05	BDL(DL-0.1)	BDL(DL-0.1)
24	Mercury (as Hg)	mg/l	IS : 3025 (Part 48) : 1994	--	BDL(DL-0.01)	BDL(DL-0.01)
25	Manganese (as Mn)	mg/l	IS 3025 (Part 2) : 2019	--	BDL(DL-0.1)	BDL(DL-0.1)

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**REMARKS :** As requested by the client. sample was tested for above parameters only.

Verified By

Authorized Signatories

Mangesh Fande  
Technical Manager

Snehal Raut  
Deputy Technical Manager

Pooja Kathane  
Technical Manager

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----







Test Report

Test Report No. : ALPL/29042023/1-16

dated 29/04/2023

Page 1 of 3

Issued To : <b>M/s Kalamang Iron Mine</b> (M/s TATA Steel Limited)	Sample Inward No.	ALPL/17042023/ENV-91-S--1	Analysis Start	18/04/2023
	Inward Date	17/04/2023	Analysis End	24/04/2023
			Report Issue Date	29/04/2023
			Sample Category	Soil
Sample Name Soil	Sampling Date : 13/04/2023 Sampling Time : 11.45 am to 4.45 pm		Quantity Received	1 Kg
Sample Collected By Anacon Representative Mr. Sovan Giri		Sampling Location S1-Mines Lease Area		

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	Infiltration rate	mm/hr	Lab-SOP	18.96
2	Bulk density	g/cm <sup>3</sup>	Lab-SOP	1.633
3	Water holding capacity	%	Anqd-Che2b5	20.87
4	Particle size distribution			
	Sand	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	72.23
	Silt	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	10.23
	Clay	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	17.54
5	Texture	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Sandy Loam
6	pH (1:2.5 Aq. Extract) at 25°C	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	6.38 at 25°C
7	Electrical Conductivity (1:2.5 Aq. Extract)	µs/cm	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	250
8	Water soluble Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	492.9
9	Water soluble Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	271.2
10	Water soluble Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	286.5
11	Water soluble Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	55.6
12	Water soluble Chloride (as Cl)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	139.4
13	Water soluble Sulphate (as SO <sub>4</sub> )	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	49.2

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Verified By

Snehal Raut

Deputy Technical Manager

Mangesh Fande

Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

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Test Report

Test Report No. : ALPL/29042023/1-16

dated 29/04/2023

Page 2 of 3

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S--1 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S1-Mines Lease Area

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
14	Exchangeable Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	260.1
15	Exchangeable Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	55.0
16	Exchangeable Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	403.2
17	Exchangeable Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	226.5
18	Sodium adsorption ratio	-	By Calculation	2.57
19	Total Organic matter	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.37
20	Total Organic Carbon	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.22
21	Available Nitrogen (as N)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	116.8
22	Available Phosphorous (as P)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	13.01
23	Available Potassium (as K)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	120.32
24	CEC	meq/100g	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	13.52

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Verified By

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

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Test Report

Test Report No. : ALPL/29042023/1-16

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S--1	<b>Analysis Start</b> 18/04/2023
	<b>Inward Date</b> 17/04/2023	<b>Analysis End</b> 24/04/2023
		<b>Report Issue Date</b> 29/04/2023
		<b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S1-Mines Lease Area

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
25	Total Arsenic (As)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
26	Available Boron (B)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.21
27	Total Cadmium (Cd)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
28	Total Chromium (Cr)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	34.83
29	Available Copper (Cu)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	3.483
30	Total Lead (Pb)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
31	Total Nickel (Ni)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
32	Total Cobalt (Co)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	5.866
33	Available Iron (Fe)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	1.827
34	Available Manganese (Mn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	7.210
35	Available Zinc (Zn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.967
36	Total Selenium (Se)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent

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**Remarks:**As requested by the client, sample was tested for above parameters only.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-17

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-2 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S2-Mines Lease Area

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	Infiltration rate	mm/hr	Lab-SOP	19.15
2	Bulk density	g/cm <sup>3</sup>	Lab-SOP	1.502
3	Water holding capacity	%	Anqd-Che2b5	17.73
4	Particle size distribution			
	Sand	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	48.84
	Silt	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	10.80
	Clay	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	40.36
5	Texture	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Sandy Clay
6	pH (1:2.5 Aq. Extract) at 25°C	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	5.82 at 25°C
7	Electrical Conductivity (1:2.5 Aq. Extract)	µs/cm	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	630
8	Water soluble Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	825.3
9	Water soluble Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	285.36
10	Water soluble Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	492.6
11	Water soluble Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	69.2
12	Water soluble Chloride (as Cl)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	146.2
13	Water soluble Sulphate (as SO <sub>4</sub> )	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	44.95

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Verified By

Snehal Raut  
Deputy Technical Manager

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

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Test Report

Test Report No. : ALPL/29042023/1-17

dated 29/04/2023

Page 2 of 3

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-2 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S2-Mines Lease Area

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
14	Exchangeable Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	446.6
15	Exchangeable Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	68.7
16	Exchangeable Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	677.2
17	Exchangeable Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	256.2
18	Sodium adsorption ratio	-	By Calculation	3.77
19	Total Organic matter	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.70
20	Total Organic Carbon	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.40
21	Available Nitrogen (as N)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	211
22	Available Phosphorous (as P)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	28.33
23	Available Potassium (as K)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	351.71
24	CEC	meq/100g	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	22.95

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Verified By

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager





Test Report

Test Report No. : ALPL/29042023/1-17

dated 29/04/2023

Page 3 of 3

Issued To : <b>M/s Kalamang Iron Mine</b> (M/s TATA Steel Limited)	Sample Inward No.	ALPL/17042023/ENV-91-S-2	Analysis Start	18/04/2023
	Inward Date	17/04/2023	Analysis End	24/04/2023
			Report Issue Date	29/04/2023
			Sample Category	Soil
Sample Name Soil	Sampling Date : 13/04/2023 Sampling Time : 11.45 am to 4.45 pm		Quantity Received 1 Kg	
Sample Collected By Anacon Representative Mr. Sovan Giri		Sampling Location S2-Mines Lease Area		

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
25	Total Arsenic (As)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
26	Available Boron (B)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.19
27	Total Cadmium (Cd)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
28	Total Chromium (Cr)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	28.44
29	Available Copper (Cu)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	2.387
30	Total Lead (Pb)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
31	Total Nickel (Ni)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
32	Total Cobalt (Co)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	7.128
33	Available Iron (Fe)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	2.335
34	Available Manganese (Mn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	9.311
35	Available Zinc (Zn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.886
36	Total Selenium (Se)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent

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**Remarks:** As requested by the client, sample was tested for above parameters only.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----

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Test Report

Test Report No. : ALPL/29042023/1-18

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-3 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S3-Guali Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	Infiltration rate	mm/hr	Lab-SOP	18.37
2	Bulk density	g/cm <sup>3</sup>	Lab-SOP	1.643
3	Water holding capacity	%	Anqd-Che2b5	19.15
4	Particle size distribution			
	Sand	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	40.98
	Silt	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	40.23
	Clay	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	16.79
5	Texture	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Loam
6	pH (1:2.5 Aq. Extract) at 25°C	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	6.57 at 25°C
7	Electrical Conductivity (1:2.5 Aq. Extract)	µs/cm	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	210
8	Water soluble Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	658.35
9	Water soluble Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	322.8
10	Water soluble Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	435.2
11	Water soluble Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	94.38
12	Water soluble Chloride (as Cl)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	155.0
13	Water soluble Sulphate (as SO <sub>4</sub> )	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	46.31

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Verified By

Snehal Raut  
Deputy Technical Manager

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

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Test Report

Test Report No. : ALPL/29042023/1-18

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-3 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S3-Guali Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
14	Exchangeable Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	373.0
15	Exchangeable Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	92.7
16	Exchangeable Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	494.9
17	Exchangeable Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	258.0
18	Sodium adsorption ratio	-	By Calculation	3.47
19	Total Organic matter	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.45
20	Total Organic Carbon	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.26
21	Available Nitrogen (as N)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	124.5
22	Available Phosphorous (as P)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	19.46
23	Available Potassium (as K)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	287.42
24	CEC	meq/100g	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	13.24

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Verified By

Snehal Raut  
Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

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Test Report

Test Report No. : ALPL/29042023/1-18

dated 29/04/2023

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Issued To : <b>M/s Kalamang Iron Mine</b> (M/s TATA Steel Limited)	Sample Inward No.	ALPL/17042023/ENV-91-S-3	Analysis Start	18/04/2023
	Inward Date	17/04/2023	Analysis End	24/04/2023
			Report Issue Date	29/04/2023
			Sample Category	Soil
Sample Name Soil	Sampling Date : 13/04/2023 Sampling Time : 11.45 am to 4.45 pm		Quantity Received 1 Kg	
Sample Collected By Anacon Representative Mr. Sovan Giri		Sampling Location S3-Guali Village		

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
25	Total Arsenic (As)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
26	Available Boron (B)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.22
27	Total Cadmium (Cd)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
28	Total Chromium (Cr)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	19.65
29	Available Copper (Cu)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	3.772
30	Total Lead (Pb)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
31	Total Nickel (Ni)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
32	Total Cobalt (Co)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	5.684
33	Available Iron (Fe)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	1.682
34	Available Manganese (Mn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	8.682
35	Available Zinc (Zn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.960
36	Total Selenium (Se)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent

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**Remarks:**As requested by the client, sample was tested for above parameters only.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----





Test Report

Test Report No. : ALPL/29042023/1-19

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-4 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S4-Kalamong Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	Infiltration rate	mm/hr	Lab-SOP	20.36
2	Bulk density	g/cm <sup>3</sup>	Lab-SOP	1.509
3	Water holding capacity	%	Anqd-Che2b5	18.19
4	Particle size distribution			
	Sand	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	45.23
	Silt	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	21.54
	Clay	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	33.23
5	Texture	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Clay Loam
6	pH (1:2.5 Aq. Extract) at 25°C	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	5.34 at 25°C
7	Electrical Conductivity (1:2.5 Aq. Extract)	µs/cm	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	375
8	Water soluble Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	719.55
9	Water soluble Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	410.4
10	Water soluble Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	577.8
11	Water soluble Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	96.2
12	Water soluble Chloride (as Cl)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	134.3
13	Water soluble Sulphate (as SO <sub>4</sub> )	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	53.09

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Verified By

Snehal Raut  
Deputy Technical Manager

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

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Test Report

Test Report No. : ALPL/29042023/1-19

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-4 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S4-Kalamong Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
14	Exchangeable Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	528.8
15	Exchangeable Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	95.4
16	Exchangeable Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	632.4
17	Exchangeable Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	363.7
18	Sodium adsorption ratio	-	By Calculation	4.26
19	Total Organic matter	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.73
20	Total Organic Carbon	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.42
21	Available Nitrogen (as N)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	226.26
22	Available Phosphorous (as P)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	25.39
23	Available Potassium (as K)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	347.13
24	CEC	meq/100g	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	29.65

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Verified By  
  
Snehal Raut  
Deputy Technical Manager

Authorized Signatory  
  
Dr. (Mrs.) S.D. Garway  
Quality Manager





Test Report

Test Report No. : ALPL/29042023/1-19

dated 29/04/2023

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Issued To : <b>M/s Kalamang Iron Mine</b> (M/s TATA Steel Limited)	Sample Inward No. ALPL/17042023/ENV-91-S-4 Inward Date 17/04/2023	Analysis Start 18/04/2023 Analysis End 24/04/2023 Report Issue Date 29/04/2023 Sample Category Soil
Sample Name Soil	Sampling Date : 13/04/2023 Sampling Time : 11.45 am to 4.45 pm	Quantity Received 1 Kg
Sample Collected By Anacon Representative Mr. Sovan Giri		Sampling Location S4-Kalamong Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
25	Total Arsenic (As)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
26	Available Boron (B)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.27
27	Total Cadmium (Cd)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
28	Total Chromium (Cr)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	27.72
29	Available Copper (Cu)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	1.982
30	Total Lead (Pb)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
31	Total Nickel (Ni)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
32	Total Cobalt (Co)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	9.567
33	Available Iron (Fe)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	1.787
34	Available Manganese (Mn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	7.881
35	Available Zinc (Zn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.987
36	Total Selenium (Se)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent

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**Remarks:** As requested by the client, sample was tested for above parameters only.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----

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Test Report

Test Report No. : ALPL/29042023/1-20

dated 29/04/2023

Page 1 of 3

<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-5 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S5-Sagasahi Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	Infiltration rate	mm/hr	Lab-SOP	22.15
2	Bulk density	g/cm <sup>3</sup>	Lab-SOP	1.526
3	Water holding capacity	%	Anqd-Che2b5	14.93
4	Particle size distribution			
	Sand	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	38.26
	Silt	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	19.38
	Clay	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	42.36
5	Texture	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Clay
6	pH (1:2.5 Aq. Extract) at 25°C	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	5.49 at 25°C
7	Electrical Conductivity (1:2.5 Aq. Extract)	µs/cm	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	328
8	Water soluble Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	229.5
9	Water soluble Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	236.4
10	Water soluble Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	415.6
11	Water soluble Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	82.5
12	Water soluble Chloride (as Cl)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	107.2
13	Water soluble Sulphate (as SO <sub>4</sub> )	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	47.22

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Verified By

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Deputy Technical Manager

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Test Report

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dated 29/04/2023

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<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S5-Sagasahi Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
14	Exchangeable Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	383.3
15	Exchangeable Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	81.7
16	Exchangeable Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	218.2
17	Exchangeable Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	216.6
18	Sodium adsorption ratio	-	By Calculation	4.60
19	Total Organic matter	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.82
20	Total Organic Carbon	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.48
21	Available Nitrogen (as N)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	259.7
22	Available Phosphorous (as P)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	28.65
23	Available Potassium (as K)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	358.47
24	CEC	meq/100g	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	23.23

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Verified By

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

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Test Report

Test Report No. : ALPL/29042023/1-20

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-5 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S5-Sagasahi Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
25	Total Arsenic (As)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
26	Available Boron (B)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.24
27	Total Cadmium (Cd)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
28	Total Chromium (Cr)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	33.98
29	Available Copper (Cu)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	4.081
30	Total Lead (Pb)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
31	Total Nickel (Ni)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
32	Total Cobalt (Co)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	6.664
33	Available Iron (Fe)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	2.664
34	Available Manganese (Mn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	8.720
35	Available Zinc (Zn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	1.082
36	Total Selenium (Se)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent


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**Remarks:** As requested by the client, sample was tested for above parameters only.

Verified By

  
Mangesh Fande  
Technical Manager

Authorized Signatory

  
Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----

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Test Report

Test Report No. : ALPL/29042023/1-21

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-6 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S6-Gandalpada Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	Infiltration rate	mm/hr	Lab-SOP	19.63
2	Bulk density	g/cm <sup>3</sup>	Lab-SOP	1.498
3	Water holding capacity	%	Anqd-Che2b5	16.19
4	Particle size distribution			
	Sand	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	40.36
	Silt	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	29.38
	Clay	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	30.26
5	Texture	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Clay Loam
6	pH (1:2.5 Aq. Extract) at 25°C	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	5.81 at 25°C
7	Electrical Conductivity (1:2.5 Aq. Extract)	µs/cm	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	629
8	Water soluble Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	719.4
9	Water soluble Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	234.72
10	Water soluble Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	436.4
11	Water soluble Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	88.11
12	Water soluble Chloride (as Cl)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	139.2
13	Water soluble Sulphate (as SO <sub>4</sub> )	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	52.28

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Verified By

Snehal Raut  
Deputy Technical Manager

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

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Test Report

Test Report No. : ALPL/29042023/1-21

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-6 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S6-Gandalpada Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
14	Exchangeable Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	398.6
15	Exchangeable Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	87.2
16	Exchangeable Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	601.6
17	Exchangeable Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	214.0
18	Sodium adsorption ratio	-	By Calculation	3.61
19	Total Organic matter	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.91
20	Total Organic Carbon	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.53
21	Available Nitrogen (as N)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	188.9
22	Available Phosphorous (as P)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	31.59
23	Available Potassium (as K)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	289.3
24	CEC	meq/100g	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	21.92

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Verified By

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager





Test Report

Test Report No. : ALPL/29042023/1-21

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-6 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S6-Gandalpada Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
25	Total Arsenic (As)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
26	Available Boron (B)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.26
27	Total Cadmium (Cd)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
28	Total Chromium (Cr)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	21.12
29	Available Copper (Cu)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	4.310
30	Total Lead (Pb)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
31	Total Nickel (Ni)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
32	Total Cobalt (Co)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	9.168
33	Available Iron (Fe)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	2.812
34	Available Manganese (Mn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	6.811
35	Available Zinc (Zn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.968
36	Total Selenium (Se)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent

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**Remarks:**As requested by the client, sample was tested for above parameters only.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----

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Test Report

Test Report No. : ALPL/29042023/1-22

dated 29/04/2023

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-7 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S7-Sunindpur Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
1	Infiltration rate	mm/hr	Lab-SOP	20.85
2	Bulk density	g/cm <sup>3</sup>	Lab-SOP	1.563
3	Water holding capacity	%	Anqd-Che2b5	20.87
4	Particle size distribution			
	Sand	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	60.36
	Silt	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	14.01
	Clay	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	25.36
5	Texture	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Sandy Clay Loam
6	pH (1:2.5 Aq. Extract) at 25°C	-	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	6.17 at 25°C
7	Electrical Conductivity (1:2.5 Aq. Extract)	µs/cm	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	792
8	Water soluble Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	792.45
9	Water soluble Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	417.12
10	Water soluble Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	516.8
11	Water soluble Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	94.33
12	Water soluble Chloride (as Cl)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	156.0
13	Water soluble Sulphate (as SO <sub>4</sub> )	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	48.27

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Verified By

Snehal Raut  
Deputy Technical Manager

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

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<b>Issued To :</b> M/s Kalamang Iron Mine (M/s TATA Steel Limited)	<b>Sample Inward No.</b> ALPL/17042023/ENV-91-S-7 <b>Inward Date</b> 17/04/2023	<b>Analysis Start</b> 18/04/2023 <b>Analysis End</b> 24/04/2023 <b>Report Issue Date</b> 29/04/2023 <b>Sample Category</b> Soil
<b>Sample Name</b> Soil	<b>Sampling Date :</b> 13/04/2023 <b>Sampling Time :</b> 11.45 am to 4.45 pm	<b>Quantity Received</b> 1 Kg
<b>Sample Collected By</b> Anacon Representative Mr. Sovan Giri		<b>Sampling Location</b> S7-Sunindpur Village

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
14	Exchangeable Sodium (as Na)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	458.2
15	Exchangeable Potassium (as K)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	93.2
16	Exchangeable Calcium (as Ca)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	634.4
17	Exchangeable Magnesium (as Mg)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	345.0
18	Sodium adsorption ratio	-	By Calculation	3.70
19	Total Organic matter	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	1.15
20	Total Organic Carbon	%	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.67
21	Available Nitrogen (as N)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	297
22	Available Phosphorous (as P)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	40.15
23	Available Potassium (as K)	Kg/hect	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	303.3
24	CEC	meq/100g	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	19.84

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Verified By

Snehal Raut

Deputy Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway

Quality Manager





Test Report

Test Report No. : ALPL/29042023/1-22

dated 29/04/2023

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Issued To : <b>M/s Kalamang Iron Mine</b> (M/s TATA Steel Limited)	Sample Inward No.	ALPL/17042023/ENV-91-S-7	Analysis Start	18/04/2023
	Inward Date	17/04/2023	Analysis End	24/04/2023
			Report Issue Date	29/04/2023
			Sample Category	Soil
Sample Name Soil	Sampling Date : 13/04/2023 Sampling Time : 11.45 am to 4.45 pm		Quantity Received 1 Kg	
Sample Collected By Anacon Representative Mr. Sovan Giri		Sampling Location S7-Sunindpur Village		

**TEST RESULTS**

S.N.	Test Parameter	Measurement Unit	Test Method	Test Result
25	Total Arsenic (As)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
26	Available Boron (B)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.16
27	Total Cadmium (Cd)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
28	Total Chromium (Cr)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	16.89
29	Available Copper (Cu)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	3.487
30	Total Lead (Pb)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
31	Total Nickel (Ni)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent
32	Total Cobalt (Co)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	7.942
33	Available Iron (Fe)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	1.968
34	Available Manganese (Mn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	9.250
35	Available Zinc (Zn)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	0.891
36	Total Selenium (Se)	mg/Kg	Method Manual, Soil testing in India (Department of agriculture & corporation, Govt of India)	Absent

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**Remarks:**As requested by the client, sample was tested for above parameters only.

Verified By

Mangesh Fande  
Technical Manager

Authorized Signatory

Dr. (Mrs.) S.D. Garway  
Quality Manager

-----End of Report-----



N.R. Sl. No. 1339  
Date 31/3/23.

ଓଡ଼ିଶା ओडिशा ODISHA

N 094316

Before the Notary Public Barbil, Dist-Keonjhar, Pdisha.

**AFFIDAVIT**

I, Atul Kumar Bhatnagar, son of S.S Bhatnagar, aged 53 years, resident of Bungalow no- 28, Top Camp, PO: Noamundi- 833217, Dist: Singbhum (West), Jharkhand presently holding the post of General Manager (OM&Q), Tata Steel Limited is authorized signatory on behalf of M/s Tata Steel Limited, Kalamang West (Northern part) Iron Ore Block for filing application/ affidavit in connection with Environment Clearance, Consent to Establish, Consent to Operate, Hazardous Waste Authorization, Bio Medical Waste Authorization, do hereby solemnly affirm and undertake the following:

1. That, Environment Clearance is obtained for Kalamang West (Northern Part) Iron Ore Block from State Environment Impact Assessment Authority (SEIAA), Orissayide SEIAA File No. 55807/89-MINB1/06-2022 dated 18.10.2022.
2. That, production is not started and as per EC dated 18.10.2022 we will ensure Desilting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted.

That I, Atul Kumar Bhatnagar (Deponent) hereby read the above facts and submission and have understood the same and signing the undertaking on 31<sup>st</sup> day of March 2023.

  
DEPONENT  
General Manager  
Ore Mines & Quarries  
TATA STEEL

**VERIFICATION**

I, Atul Kumar Bhatnagar the deponent do verify that the contents of this Affidavit are true to the best of my knowledge and belief

Verified on this 31<sup>st</sup> day of March 2023 at Barbil.

31-3-23  
Anoja Manjari Mishra  
ADVOCATE & NOTARY  
Regd. No. ON/37/2012  
BARBIL, Dist: Keonjhar (ODISHA)

  
DEPONENT  
General Manager  
Ore Mines & Quarries  
TATA STEEL

Sl. No. 1180

Date 27-3-23

Value 100

Purpose A/c

Name TATA Steel Ltd, A.K. Bhatnagar.

Address Naarmundi (H)



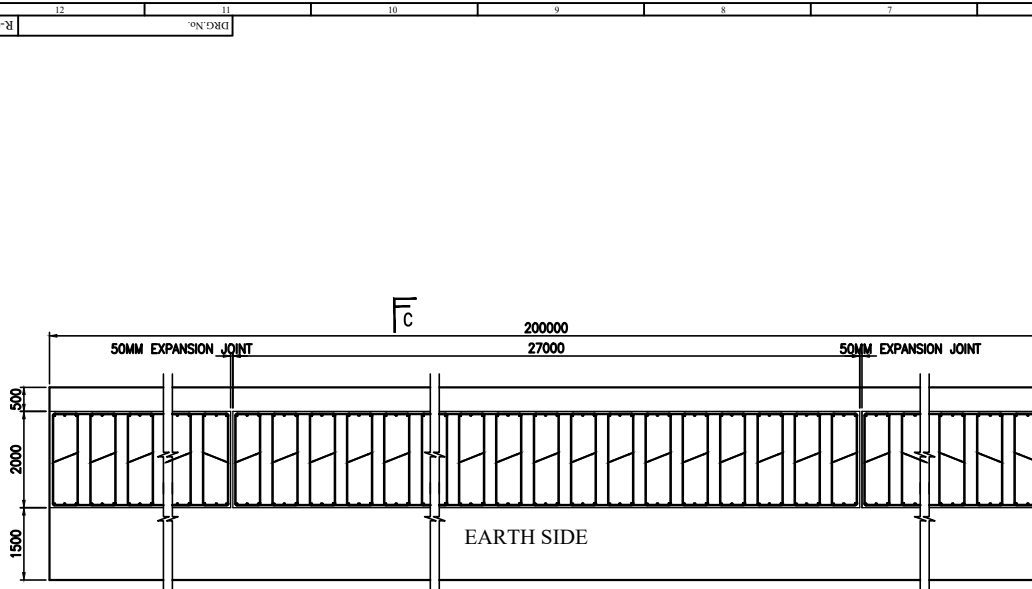
*G. S. Mishra*

Gopish Mishra  
Stamp Vendor  
Champa

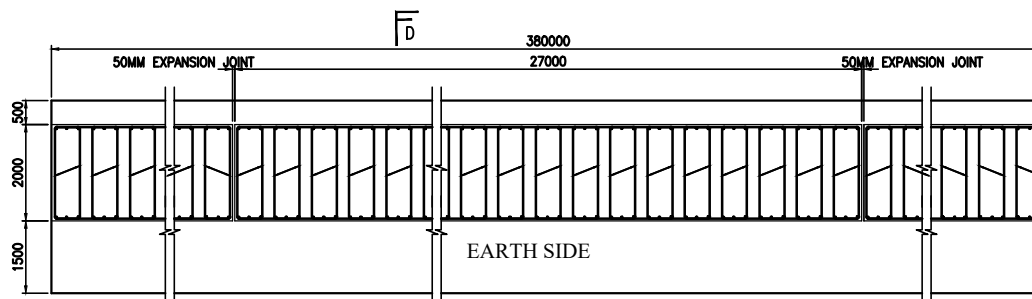
*[Signature]*

General Manager  
Ore Mines & Quarries  
TATA STEEL

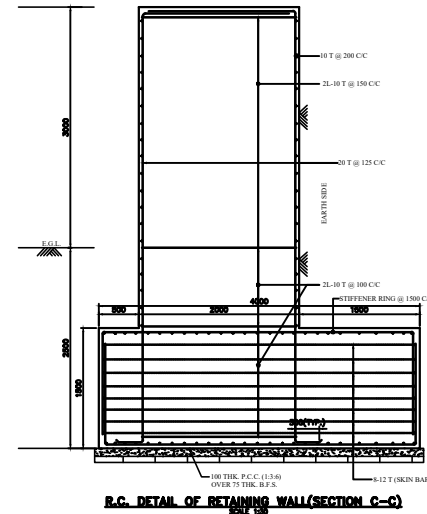




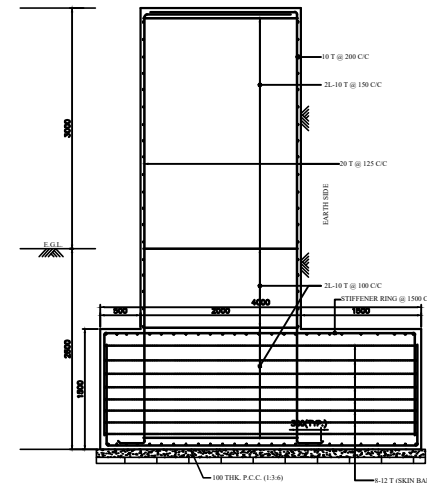
**PLAN OF RETAINING WALL**  
SCALE 1:50



**PLAN OF RETAINING WALL**  
SCALE 1:50



**R.C. DETAIL OF RETAINING WALL(SECTION C-C)**



**R.C. DETAIL OF RETAINING WALL(SECTION D-D)**

- Notes:-**
1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE MENTIONED.
  2. ANY AMBIGUITY IN THE DIMENSIONS SHOULD BE IMMEDIATELY BROUGHT TO THE NOTICE OF THE CONSULTANT BEFORE COMMENCING ARCHITECTURAL DRAWINGS.
  3. THIS DRAWING IS TO BE READ ALONG WITH ALL RELEVANT ARCHITECTURAL DRAWINGS.
  4. ALL GRADE OF CONCRETE 100 UNTILL & UNLESS MENTIONED
  5. ALL MATERIALS SHALL CONFORM TO RELEVANT IS CODES.
  6. FOR STEEL GRADE Fe 500 AS PER IS 1786-2008.
  7. ALL CHAIRS ARE 10T AND TO BE PROVIDED WHEREVER REQUIRED.
  8. ALL SPACER BARS ARE 10T @ 300 C/C AND TO BE PROVIDED
  9. LAPS, SPLICES & BOND LENGTH SHOULD BE 50 D WHERE 'D' IS DIA OF BAR.
  10. MINIMUM CLEAR COVER TO MAIN REINFORCEMENT IS AS FOLLOWS:
- | MEMBER         | TOP | BOTTOM | SIDE |
|----------------|-----|--------|------|
| a. FOR         | 50  | 50     | 50   |
| b. R.C.C. WALL | 50  | 50     | 50   |

STRUCTURAL ENGINEERS <b>MITA SAHA</b> A.M.I.(INDIA) M.E. (STRUCTURE) CHARTERED ENGINEERS A.M. 70916 S		PROPOSED DESIGN OF RETAINING WALL AT VARIOUS LOCATION OF KALMANNGA IRON ORE MINES.		TATA STEEL LIMITED		M/C SYMBOL			
		CLIENTS : TATA STEEL LTD. ARCHITECT: INDRANIL BAKSI & ASSOCIATES, CE-14, SALT LAKE CITY, KOLKATA-700064 Ph.No.-9038008615/9231559776 Email ID-indranilbks7@gmail.com		SCALE: 1:100 DRG NO.-IB/MAK/KALMANNGA/RETAING WALL/WD/01 CONTENTS: DETAIL OF RETAINING WALL		DEPARTMENT EQUIP/AREA DETAIL		KALAMANNGA WEST (NORTHEN PART) IRON ORE MINES DETAIL OF RETAINING WALL	
DRAWN BY- GH CHECKED BY- MS		REVISION: 00 APPROVED BY- MS		DATE-12.04.2023		DATE DRN CHD. APP.		SIGN MATERIAL SCALE WEIGHT IN KG SHEET No SHEET SIZE REV	
No. DATE REVISION DRN PROCESS CIVIL ELEC I&E MECH APP. DRG.NO. REFERENCES NOTES				ANGLE OF PROJECTION		DRG.No.			





To,

The Divisional Forest Officer,  
Bonal Forest Division,  
Bonal.

Ref. No. JCO/13/133/118

Date: 7<sup>th</sup> June' 2022

Sub: Submission of Site-Specific Wildlife Conservation Plan for Kalamang (West) Northern Part Iron Ore Block of M/s Tata Steel Limited.

Dear Sir,

As per the Terms of Reference (ToR) condition no. XI and standard condition no. 19 issued by State Environment Impact Assessment Authority (SEIAA), Odisha vide ref no. 22/SEIAA, dated 15<sup>th</sup> January 2021 for grant of fresh Environmental Clearance, a Site Specific Wildlife Conservation Plan has been prepared in respect of Kalamang (West) Northern Part Iron Ore Block of M/s Tata Steel Limited and we are submitting the same for your kind perusal.

We request your good self to kindly examine and forward it to Regional Chief Conservator of Forest, Rourkela Circle for onward transmission to Principal Chief Conservator of Forest-cum-Chief Wildlife Warden, Odisha for necessary approval.

Thanking you,

Yours faithfully,  
F: Tata Steel Limited

  
Chief (Kalamang & Gandhalpada Project)

Encl: As above

Copy to: Divisional Forest Officer, Keonjhar for kind information

Received  
one copy  
Plan.  
@Rourkela  
8.6.22

**TATA STEEL LIMITED**

Mines Division Joda Keonjhar Odisha 758 034 India  
Tel 91 7440037036

Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001  
Tel 91 22 66658282 Fax 91 22 66657724

Corporate Identity Number L27100MI11907PLC000260 Website www.tatasteel.com



**UNDERTAKING**

Ref. No.: MD/ENV/578/130/2023

Dated: 11.04.2023

**TO WHOM IT MAY CONCERN**

With reference to Environmental Clearance obtained for Kalamang West (Northern Part) Iron Ore Block from State Environment Impact Assessment Authority (SEIAA), Orissa vide SEIAA File No. 55807/89-MINB1/06-2022 dated 18.10.2022 (EC Identification no. EC22B001OR117596) stipulated standard condition no. B. VIII. (i), we undertake that we are committed for periodical occupational health check-up of the employee and the local people through an occupational health expert as per the detailed action plan.

A handwritten signature in blue ink, appearing to be 'D. M.' or similar, written over a faint circular stamp.

**Chief (Kalamang & Gandhalpada Project)**

**Tata Steel Limited**

**Chief (Kalamang &  
Gandhalpada Project)  
Tata Steel Limited**

**TATA STEEL LIMITED**

Mines Division Joda Keonjhar Odisha 758 034 India  
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# ANNUAL REPORT OF KALAMANG UNIT FY 2022 – 2023

Corporate Social Responsibility  
Tata Steel Foundation, Kalamang



Tata Steel Foundation carries out different CSR activities in its operational area of Kalamang . Its core CSR interventions include Education , Health , Sustainable Livelihoods, Empowerment & Sports , Infrastructure & Ethnicity.

# INTRODUCTION

Community has been an integral part of our CORPORATE processes from inception of our organization. Along with the community participation the long journey of Tata Steel has been guided by the principles of value, responsibility, and ethics. With the progress of the organization these principles have become stronger and driven us to champion the cause of Corporate Social Responsibility.

The operations of Tata Steel is at Kalamang and Gandhalpada project area. The different CSR initiatives are undertaken around the peripheral villages of our operational area.

The initiatives cater different services to 28 revenue villages. More than 17471 populations are benefited through the different CSR initiatives. The endeavours of our initiatives are centered in the improvement in Human Development Index (HDI).

The initiatives are undertaken on core dimensions of Health, education, and livelihoods with support of infrastructure, skill development, sports and environment. The programmes and projects are designed after need assessment of the community by key stake holder engagement, walk through surveys, and regular feedback from stakeholders. All our operations including CSR initiatives are undertaken with highest degree of sensitivity to society and environment.

**SPORTS**

**PUBLIC HEALTH**

**EDUCATION**

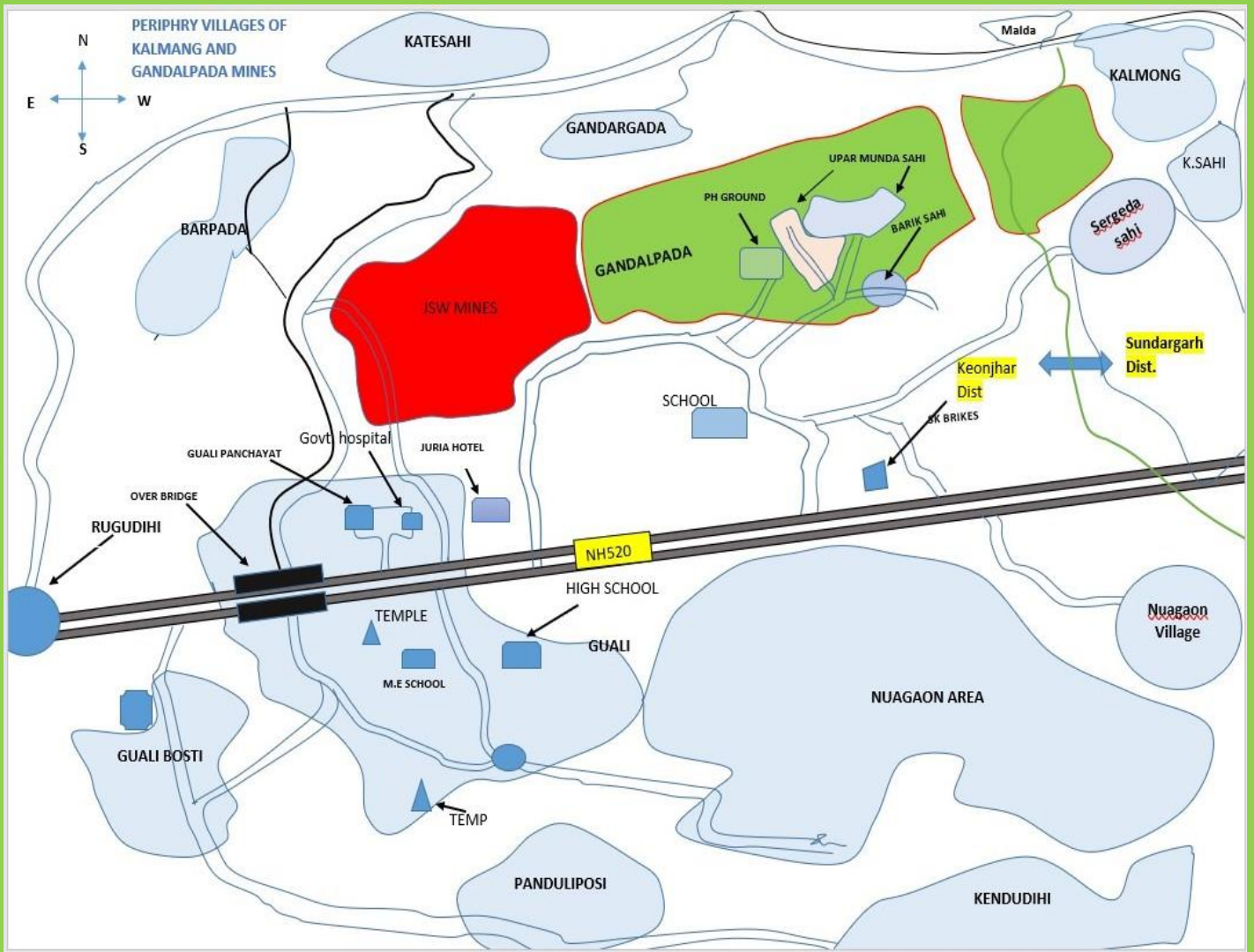
**ETHNICITY**

**WATER & CIVIL  
INFRASTRUCTURE**

**LIVELIHOOD**

**KAMLMANG AND GANDALPADA UNIT  
PROJECT VILLAGES DEMOGRAPHY**

Sl No.	GP NAME	REVENUE VILLAGE	VILLAGE	WADS	HOUSEHOLD	POPULATION	REMARKS
1	GUALI	KENDUDIHI	KENDUDIHI	WAD NO-01	72	254	
2			KENDUDIHI	WAD NO-02	177	565	
3	GUALI	PANDULIPOSI	PANDULIPOSI	WAD NO-03	143	821	
4			PANDULIPOSI	WAD NO-04			
5	GUALI	GUALI	GUALI	WAD NO-05	107	697	
6			GUALI	WAD NO-06	146	700	
7			GUALI	WAD NO-07			
8	GUALI	NUAGAON	NUAGAON	WAD NO-08	158	616	
9			NUAGAON	WAD NO-09	93	455	
10	GUALI	GANDALPADA	GANDALPADA	WAD NO-10	110	660	
11	GUALI	BHUYANBARPADA	BHUYANBARPADA	WAD NO-11	145	680	
12	LAIAPADA	TOPADIHI	TOPADIHI	WAD NO-03	139	700	
13	LAIAPADA	LAIAPADA	LAIAPADA	WAD NO-04	122	820	
14			LAIAPADA	WAD NO-05			
15	LAIAPADA	BHUYANROADKALA	BHUYAN ROADKALA	WAD NO-06	103	491	
16	LAIAPADA	KOLHARROADKALA	KOLHA ROADKALA	WAD NO-07	121	614	
17	LAIAPADA	KATESAHI	KATESAHI	WAD NO-08	110	636	
18	LAIAPADA		KATESAHI	WAD NO-09			
19	LAIAPADA	CHORMALDA	CHORMALDA	WAD NO-10	142	645	
20			CHORMALDA	WAD NO-11			
21	MALDA	KALMANG	KALMANG	WARD NO-1	341	1351	
22				WARD NO-2			
23	MALDA	KANUSAHI	KANUSAHI	WARD NO-1	47	249	
24	MALDA	MALDA	MALDA	WARD NO-2	147	564	
25				WARD NO-3			
26	MALDA	MALDA	KAKARPANI	WARD NO-2&3			
27			BASTI MALDA				
28	MALDA	GIDEI	GIDEI	WARD NO-4	45	226	
29	MALDA	KENAVETA	KENAVETA	WARD NO-5	129	553	
30	MALDA	DEOJHAR	DEOJHAR	WARD NO-5	51	223	
31	MALDA	MONDAJODA	MONDAJODA	WARD NO-8	47	215	
32	MALDA	PATABEDA	PATABEDA	WARD NO-5	152	704	
33	MALDA	SANIDPUR	SANIDPUR	WARD NO-9	253	948	
34	MALDA	BADINDPUR	BADINDPUR	WARD NO-10	162	699	
35	KASIRA	SEGASAHI	SERGEDASAHI	WARD NO- 8	68	384	
36	KASIRA	BHANJAPALI	BHANJAPALI	WARD NO-9&10	211	803	
37	KASIRA	RENGALBEDA	RENGALBEDA	WARD NO-5	127	633	
38	KASIRA	NARANPOSI	NARANPOSI	WARD NO-2	98	565	
<b>TOTAL HOUSE HOLD AND POPULATION</b>					<b>3766</b>	<b>17471</b>	



**Social Map of Kalamang and Gandhalpada Project**

# OPERATIONAL AREA

**TATA STEEL FOUNDATION KALAMANG CSR AREA**

**District :2- Sundargarh & Keonjhar**

**Blocks: 2- Joda & Koida**

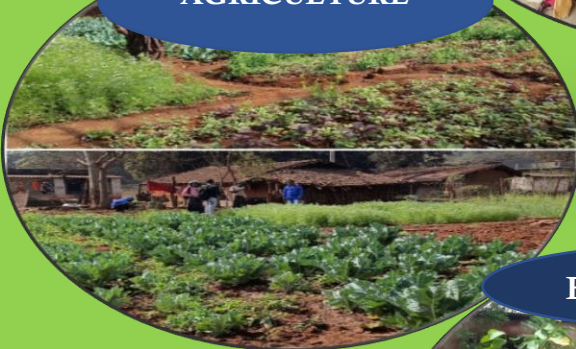
**Gram Panchayat: 4(Malda, Kasira,Loidapada& Guali)**

**Revenue Villages: 28**

## EMPOWERMENT



## AGRICULTURE



## HEALTH



## ENVIRONMENT



# HEALTH

Many villages around Kalamang operational area are located in difficult hilly terrain. The roads conditions make it more difficult for the poor people to access even the primary health care services. In its Indian operations, Tata



Steel Foundation continued to provide curative and preventive healthcare services to improve levels of health amongst the community. To create access of quality health care services for the community Tata Steel Foundation has adopted a comprehensive and

integrated approach. The primary health care services are provided through PHU having experienced doctors and paramedical staffs. The services help in identification of diseases at an early stage, prevent complications and timely referral. Regular health camps including specialized health camps in remote corners create access of health care for the much deserving vulnerable groups. Regular health awareness programs help in capacity building of the community and improved health seeking behaviour. The Tata Steel hospital Joda is one of the well-equipped hospitals of the district having most of the specialized services including **ICU facilities**. The poor BPL patients are provided free health care services which include indoor services, medicines, operation cost, food etc. while the APL and general patients are provided the medical services with very low and affordable cost. In case of illness not manageable at TATA STEEL HOSPITAL Joda the poor and BPL patients are provided the highly





specialized health care services at TATA MAIN HOSPITAL Jamshedpur including transportation facilities to TMH.

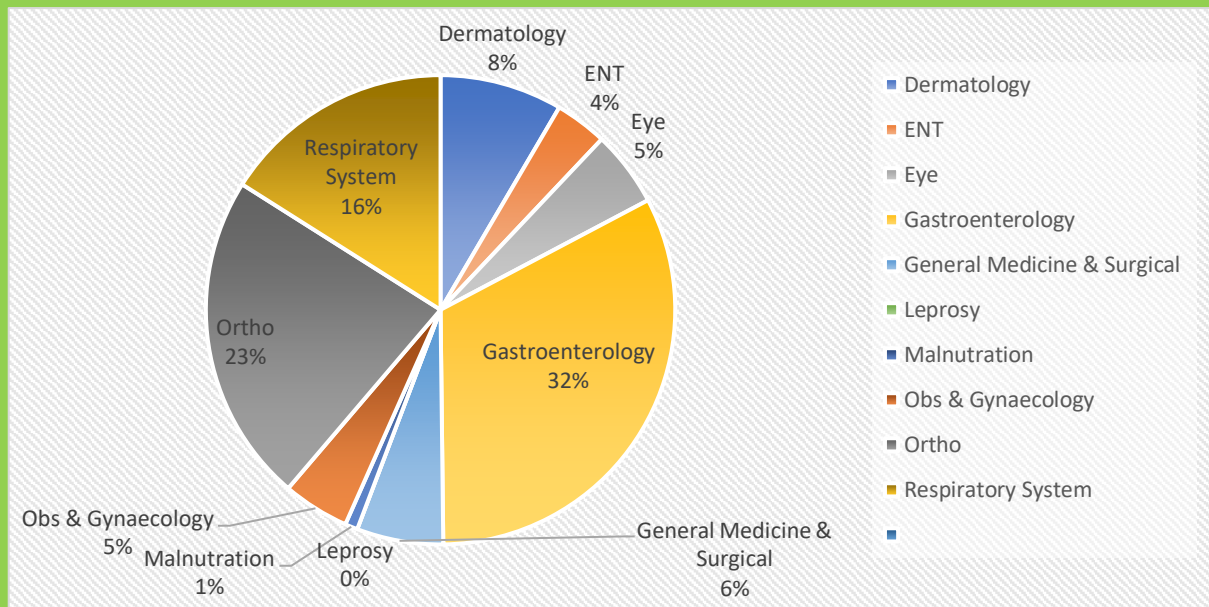
#### **OUR CONTINUOUS EFFORTS HAVE BEEN:**

- To improve the health facilities in the villages around business operations.
- Act as strengthening agency and bridge gap between the government health facilities.
- Awareness generation and promotion of good health practices and hygiene in the peripheral villages.
- Population stabilization programme.
- Awareness generation drive about HIV/AIDS, malaria, and other diseases.
- Community driven celebration of theme-based days like World Health Day, World AIDS Day, World Population Day, etc.
- Distribution of medicine to the peripheral villages.

#### **HEALTH**

- TSF Kalamang Unit have Provided medical facility to 191 nos of patients, on a case-to-case basis in Tata Central Hospital, Joda from periphery areas of Kalamang .
- 4,526 nos of patients were treated through Mobile Medical Units in this year.
- Treated 4 no cataract operation of Gandhalpada village.
- Total 16 persons with disability have been provided certificates with the help of govt official at Gandhalpada.

## DISEASE PROFILE OF KALAMANG UNIT.



### HEATH AWARENESS DRIVES

Waterborne diseases are conditions (meaning adverse effects on human health, such as death, disability, illness, or disorders) caused by pathogenic micro-organisms that are transmitted in water. These diseases can be spread while bathing, washing, drinking water, or by eating food exposed to contaminated water. They are a pressing issue in rural areas. While diarrhoea and vomiting are the most commonly reported symptoms of waterborne illness, other symptoms can include skin, ear, respiratory, or eye problems. Lack of clean water supply, sanitation, and hygiene (WASH) are major causes for the spread of waterborne diseases in a



community. Our main aim is to reduce number of deaths caused by waterborne diseases through awareness session in the Schools and with the community of the periphery areas .

## CASE STORY OF CHARIBA MUNDA



Chariba Munda wife of Dina Munda who is 25 years old housewife staying with her husband in Kanhusahi(Ghodabudani) village ward no-1, under Malda Panchayat, Dist- Sundergarh , She has 2 children and her Husband Mr. Dina Munda working under Triveni Earth Movers Pvt Ltd. as a Helper and his monthly income is 10,000.

The people of Kanhusahi Village and his family believe in Blind Faith, and prefer to be cured by worship instead of going to the Hospital . Because they are tribal and uneducated people who didn't trust any mining companies and were afraid that they would forcefully take away their rightful land due to which Tata Steel's FRA

was failed twice. Even after getting Ambulance and Hospital facilities from Tata Steel, they were opposing going to the Hospital. After sometime when they started mingling with the employees of Tata Steel Foundation regularly they came to know about the Ethics of Tata Steel and agreed with our thoughts.

A few months back Chariba Munda was 4 months pregnant and was always ill due to which she was brought to Joda TISCO Hospital for check-up for her poor health where after checking the doctor recommended to get admitted in the hospital and informed that the child that was in her womb has been destroyed because of not getting the test done on time due to which she continuously faced illness. During her treatment, food and medication were taken care by the nurse and the other staffs and after few days of treatment she started recovering and then got discharged.

After recovering completely, she and her family is very grateful to TSF for the medical support provided to Chariba Munda. By TSF support and God grace today Chariba Munda is living a stable and healthy life. After that all the people of the village feel the importance of getting the check-up done in the Hospital along with worshiping. After that change, we were able to win their trust and after a lot of efforts the FRA of Tata Steel is become successful.

# EDUCATION

## JYOTI FELLOWSHIP PROGRAM

Tata Steel Foundation has Launched the Jyoti Fellowship Scholarship Program to provide Scholarship opportunities for the students of periphery area. The Jyoti Fellowship Program works as a one-stop platform for ST(Schedule Tribe) and SC(Schedule castes) Categories of students can apply as per their eligibility, who require financial assistance. In the FY( 2022 to 2023) total 77 Students has been privileged with this Jyoti Fellowship Program of the Kalamang Unit with the support of Tata steel Foundation .



Scholarship helps students to pay for education and It helps in Empowering academic and career goals by removing the financial barrier. These money allow students to receive an

education that they would not otherwise be able to obtain.

## SKILL DEVELOPMENT COURSE

TSF also helping the youth to grow by developing their skill through NIIT Foundation in Guali. The basic eligibility criteria for the program is 10<sup>th</sup> and 12<sup>th</sup> pass. Here there is ample opportunity for youth to enhance their social and emotional well-being, and help them become more well-rounded individuals. From Dec-22 to till now 174 youths are getting benefited through this program.



Skill Development can be defined as the process of :

- Identifying a person's knowledge and skill gaps.
- It aims to empower the youth by offering necessary skills and training to increase their chances of getting jobs in various sectors.
- This is also boosts and individual's productivity and knowledge .

## LIVELIHOOD AGRICULTURE

As Odisha rapid economic expansion has tried to include the rural population, which is concentrated in places where rain-fed agriculture is the primary source of income. Poverty remains, however, access to productive resources such as land, water, improved inputs and technologies, and microfinance, as well as drought and other natural calamities. Low literacy and skills conspire to keep people in poverty, prohibiting them from claiming their basic rights or engaging in extra activities that would earn the money and help them create assets.

It not just about poverty alleviation. It's most important for people to stand on their feet and develop on their own. A lot of times, people in rural communities have the knowledge, but there are not enough opportunities for them to apply their knowledge. There are various ways in which people can earn their livelihood in rural areas. Rural areas are those areas which are not yet that much developed as per the modern technology.

Tata Steel Foundation endeavours to provide sustainable livelihood solutions with tribal and marginalised communities in the form of focussed interventions in agriculture, skill Development as well as enterprise development. TSF Kalamang Unit has been facilitating to empower women and community through various socio-economical activities in it periphery villages. As a part of income generation activities the SHG's of the area were promoted with mushroom cultivation, kitchen garden and badi making. The interested SHG members & individuals were engaged in the activity.

### **Women Empowerment Objectives:**

The objectives of the programmes were:

- To provide a holistic training on Institution Building of SHG which will include SHG management , Book Keeping Credit linkage and leadership skills.
- To make these SHGs and the members independent and empowered with minimum hand holding as possible.
- To provide women an opportunity to earn income through self-employment through various income generation activities.

## MUSHROOM CULTIVATION

This year total 164 beneficiaries have made profit by cultivating 1303 beds of Oyster Mushroom. Cultivation of this mushroom on commercial basis would be more profitable as compared to white button mushroom as capital cost are low. The cultivation of this variety of mushroom is very simple and economical in rural areas where raw materials and facilities required are easily available. After cultivating 1303 mushroom beds, the total income of beneficiaries is Rs 3,90,900/- after selling at the rate Rs 150 per kg.

In which Maa Tarini SHG of Kendudihi village Guali Gram panchayat, earn a good profit by cultivating 188 beds of mushrooms. They have invested 4,136Rs/- for 188 mushroom spawn bottles and earned 54,000 after selling 376 kg mushroom at the rate of 150 per kg .



### **Kitchen Gardening:**

Kitchen Gardens provide environmentally sound opportunities for waste disposal. Composting is commonly used for household wastes including kitchen waste, paper, and even animal waste, which are used to enrich the soil and also it gives dual benefits of food and income generation . This year total 395 beneficiaries received kitchen gardening facilities from TSF in Kalamang Unit periphery areas.

- The Kitchen Garden method is not expensive.
- Will get a regular and handy supply of good quality vegetables.
- Produce from the kitchen garden is very rich in nutritional content.
- The vegetables in the kitchen garden contain all kinds of vitamins and minerals.

## Case Study of Rangadhar Munda



Rangadhar Munda Lives in Guali Village(Ward no-6) under Guali Gram panchayat ,Joda Block of Kendujhar District ,with his family of seven members. He is 40 Years old and grew up in a family of Farmer's. He has 3 brothers and he is older than 3 of them. Because his father Sriram Chandra Munda was also a farmer, his family relies mostly on farming for their diets and livelihood.

Rangadhar Munda is not educated because of the poor economic condition of his family. He was started working under KJS Ahluwalia Group as a Daily Wage Labourer for 10 years and his monthly earning was 3000 to 8000 including the farming earning. After 2 and ½ years when the Mining Company was closed due to that his earning was not sufficient to run his family. So he started growing Egg plants , Seasonal Vegetables, Tomatoes etc in 60 decimal land after a small investment of buying seed's worth Rs.2000, then he started selling vegetables worth around 200 in a day and he started earning 5000 to 6000 in a month but that much money was not enough to run his family.



He is connected with Tata Steel Foundation from 8 months and earned a better amount by using vegetable seeds and support he got from Tata Steel Foundation and now his monthly income ranges from 8000 to 9000 and he was also honoured in Noamundi Flower and Vegetable Show through TSF, after that he was further inspired that he was very much looking forward to advance farming training which TSF will provide further .



# SKILL DEVELOPMENT

## Outdoor Leadership Programs:



On this year 2 Out Door Leadership Camp(OLC) to Tumung, Jamshedpur and Remali Dam, Bramhanipal conducted for Youths with an objective to inculcate leadership quality among the rural youths and to develop their interpersonal skills, to find new innovative ways of developing.



## Exposure Visits Programs :

3 nos of Exposure Visits organized for the community on this year. Main Objective behind exposure visit is to learn from the experience of others outside your own community, by direct interaction to bring everyone in a common platform for better coordination in future, which will ultimately help women's for their own growth.



## Placement Drive to Tata Electronics:



Women rights are Human rights, but in rural areas it becomes more unpredictable and chaotic, the rights of women and girls are being reduced, restricted and reserved. Empowering women and girls is the only way to protect their rights and make sure they can realize their full potential. With the help and guidance of TSF, 5 12<sup>th</sup> pass Girls qualified for Tata Electronics from Kalamang Unit among them 4 girls are employed. It is a good opportunity for the young females of rural areas to build their carrier and to grow self-dependence in them. This is for the first time that 4 female candidates took decision to go out for their carrier building form this area.

## LMV & HMV Training:

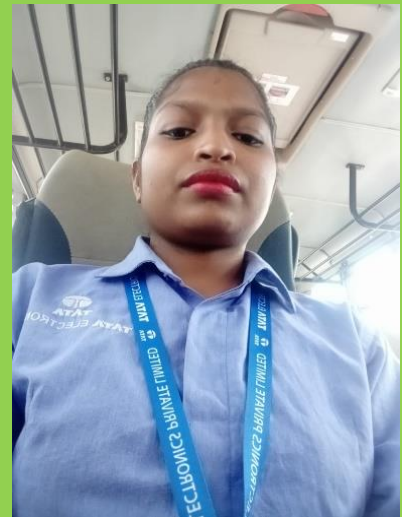


This year 48 youth for LMV and 9 youth for HMV have been Trained in this Light Motor Vehicle and Heavy Motor Vehicle training program through the assistance of Tata Steel Foundation from Kalamang area.

## Case Story of Bharati Patra

Bharati Patra is a 20 years old (+2(Arts)) student who aspires to achieve greater heights in life. She belongs to a Tribal Community Guali Village, Dist-Kendujhar in State of Odisha, those who think that it is not appropriate for girls to work outside and earn for the family. Where she lives with her mother (Chamani Patra), 2 elder brothers, her elder sister in law and a five years old nephew, when she was 7 years old, after the death of her Father (Ganesh Patra) in 2016, her two elder brothers took all the responsibility of the house from a young age, narrate in brief the fateful accident that change her life forever. Prior to that, her mother and father worked as laborers in mines and ran their family, so she grew up in difficulties since childhood.

Her family's monthly earning is up to 20,000 but it is not sufficient according to her family needs but somehow, she completed her 12<sup>th</sup> in the year of 2021 from Junior College, Koira. She was always trying to find some way to get some job to prove herself and now she is working in Tata Electronics at Tamil Nādu with assistance and guidance of the TSF employees. She doesn't have any work experience before her 12<sup>th</sup> examination, she never experienced any kind of Job role in any criteria but now she is working Independently and earning across 15,000 per month. Now probably she can able to fulfil her dreams and her family needs.



There are many girls like Bharati Patra want to work to become self-dependent but their families do not allow them because of the mentality of the society. For the first time 4 girls from this area will set an example to work independently even though they are just 12<sup>th</sup> qualified with assistance of Tata Steel Foundation .

## ENVIRONMENT



Environment Awareness Programs and plantation Drives in Schools, Villages of periphery areas.



World Breast Feeding Day Awareness Programs in Kalamang, Guali, Kendudihi and Gandhalpada village.



Women Empowerment Programs



Assistance for Badi Unit

# ETHNICITY



International Literacy Day



Independence Day



World Indigenous Day



Kolhan New Year Celebration



Celebration of Birsa Jayanti



Mage Parab Celebration



Children's Day Celebration



National Youth Day Celebration

## SPORTS



Football Tournament at kalamang



Football Tournament at



Cricket Tournament at Kalamang



Football Tournament at Segasahi

## RURAL INFRASTRUCTURE

### Solar Street Light:

Total 141 Nos Solar Street Light Installed under 3 Gram Panchayats of Kalmang Unit Malda GP, Guali GP and Kashira GP.

**Status:** Completed

**Villages:** Kanhusahi(17nos), Kalamang(14nos), Malda(7nos), Malda Basti(3nos), Chormalda(15nos), Guali(22nos), Nuagaon(13nos), Panduliposi(5nos), Kend udihi(10nos), Gandhalpada(5nos), Rengalbe da (15nos), Narayanaposi(15nos).



## Drinking Water Projects



Access of safe drinking water is one of the millennium development goals to be achieved. The quality and safety of drinking water is still a major concern for the rural poor. This is more so for the poorest and marginalized community both in the urban and rural areas. They spend considerable time and energy for fetching and carrying water from a long distance. Many are still dependent on river; stream etc. for their drinking water needs.

Due to the non-availability of safe drinking water there is a considerable water born disease load particularly on the poor section of the society. After a detailed analysis of the survey the villages which were having the difficulties of access of safe drinking water TSF providing drinking water through deep bore wells, Overhead tank and pipelines.

Total 24 nos of Solar Deep Bores with Structure have been installed in needed places of Kalamang Unit.



### Solar Drinking Water Structure: 24 nos

**Status:** Completed

- Kanhusahi-1 Deepbore with Solar structure and pipeline extention, 9 standposts.
- Kalmong- 8 Deepbores with Solar structure and Pipeline extention, 30 standposts.
- Malda- 2 Deepbores With Solar structure and pipeline extention, 10 standposts.
- Basti Malda- 2 Solar Deepbores with Structure and 10 standposts.
- Kakarpani -1 Solar Deepbore with structure and 5 standposts.
- Gandhalpada - 4 Solar Deepbores with structure.
- Guali - 2 Solar Deepbores with structure.
- Nuagoan – 1 solar deepborewell
- Sargedasahi & Segasahi-2
- Kendudihi -1 Solar Deepbore with structure.

## CIVIL INFRASTRUCTURE

### Changing Room:



**Status :** Completed

**Place :** Gandhalpada & kanhusahi

**Nos :** 5nos

### Construction of Road & Drain



**Status:** Completed

- CC Road construction work is completed at Guali(300 meters)
- CC Road at Malda(150 meters).
- Laying of 300 meters Paver Block road at kanhusahi .
- Construction of 50 meters Drain line.

## Construction of Club house & School Class Room:



Place : Gandhalpada

Status : Work in Progress

- Construction of club house and Class room extension work is in Progress.

## Water Harvesting Project



- Place : Gandhalpada
- Status : Completed
- 6 Nos pond in Gandhalpada Village .



**LIVES TOUCH FY22-23 AT KALAMANG**

<b>Month</b>	<b>Activity</b>	<b>Village</b>	<b>No of Beneficiary</b>
<b>HEALTH</b>			
April(2022)	Medical Referral Case	Joda Tisco Hospital	6
May(2022)	Medical Referral Case	Joda Tisco Hospital	28
May(2022)	MMU(Mobile Medical Unit)	All Operational Area	842
June(2022)	Medical Referral Case	Joda Tisco Hospital	16
June(2022)	MMU(Mobile Medical Unit)	All Operational Area	724
July(2022)	Medical Referral Case	Joda Tisco Hospital	14
July(2022)	MMU(Mobile Medical Unit)	All Operational Area	483
14-07-2022	Awareness on Preventive Health & water Borne Diseases	Primary School,Gandhalpda,Guali Ashram School, Kanhusahi Primary School,Kalmang High School & Kalmang Primary School .	305
01-08-2022	Health Awareness Program	SSVM, Katesahi	210
03-08-2022	Breast Feeding Day	Gandhalpda Village	16
Aug(2022)	Medical Referral Case	Joda Tisco Hospital	15
September(2022)	Medical Referral Case	Joda Tisco Hospital	13
October(2022)	Medical Referral Case	Joda Tisco Hospital	39
November(2022)	Medical Referral Case	Joda Tisco Hospital	22
November(2022)	MMU(Mobile Medical Unit)	All Operational Area	505
10-12-2022	Ante- Natal Check up Program	Basudevpur CHC	19
December(2022)	Medical Referral Case	Joda Tisco Hospital	9
December(2022)	MMU(Mobile Medical Unit)	All Operational Area	441
January(2023)	Medical Referral Case	Joda Tisco Hospital	9
January(2023)	MMU(Mobile Medical Unit)	All Operational Area	806
February(2023)	Medical Referral Case	Joda Tisco Hospital	8
February(2023)	MMU(Mobile Medical Unit)	All Operational Area	464
10-02-2023	Fire Safety Training Program	Guali Basti	46
March(2023)	Medical Referral Case	Joda Tisco Hospital	12
March(2023)	MMU(Mobile Medical Unit)	All Operational Area	261
<b>Total lives touch in Health</b>			<b>5313</b>
<b>EDUCATION</b>			
June(2022)	Non - Formal Education(Tution Class)	Kanhusahi Village	20
July(2022)	Non - Formal Education(Tution Class)	Kanhusahi Village	20
August(2022)	Non - Formal Education(Tution Class)	Kanhusahi Village	20
05-09-2022	Teacher's Day Celebration	Kanhusahi Primery School	33
Septamber(2022)	Non - Formal Education(Tution Class)	Kanhusahi Village	20

	Feliciation Program of	Saraswati Sishu Vidyamandir,	
09-09-2022	Maritorious Students	Katesahi	17
20-09-2022	Young Talent Search Program	Guali Ashram School & Nilachala High School, Guali Kalmang High School & SSVM, Katesahi	150
30-10-2022	Examination of Jyoti Fellowship Program	SSVM, Katesahi	75
October(2022)	Non - Formal Education(Tution Class)	Kanhusahi Village	20
November(2022)	Non - Formal Education(Tution Class)	Kanhusahi Village	19
14-11-2022	Children's Day Celebration	Kanhusahi Village	54
01-12-2022	World Aids Day Awareness Program	Kalmang High School	131
December(2022)	Non - Formal Education(Tution Class)	Kanhusahi Village	30
December(2022)	NIIT Education	NIIT Centre, Guali	51
January(2023)	Non - Formal Education(Tution Class)	Kanhusahi Village	20
02-01-2023	NIIT Inauguration Program	NIIT Centre, Guali	135
February(2023)	Non - Formal Education(Tution Class)	Kanhusahi Village	20
February(2023)	NIIT Education	NIIT Centre, Guali	34
20-02-2023	Children's Festival Celebration	Guali Ashram School	257
03-03-2023	Celebration of Birth Anniversery of Jamsetji Tata	NIIT Centre, Guali	27
13-03-2023	Jyotifellowship Faliciation Program at Joda	From Nilachal High School, Guali Ashram School	41
March(2023)	Non - Formal Education(Tution Class)	Kanhusahi Village	20
March(2023)	NIIT Education	NIIT Centre, Guali	28
	<b>Lives touch in Education</b>		<b>1242</b>
<b>ETHNICITY</b>			
15-09-2022	Independence Day	Gandhalpda Village & Gandhalpda Primary School	191
08-09-2022	World Literacy Day	Guali Village	120
09-09-2022	Worl Indigenious Day	Gandhalpada Village	700
November(2022)	Celebration of Birsha Jayanti	Gandhalpada Village	400
24-11-2022	Kolhan New Year	Koira, Kadodia Village	900
12-01-2023	National Youth Day	Gandhalpada Village	50
26-01-2023	Republic Day	In all School's of Operational Area	1874
15-02-2023	Mage Parab at Kendudihi Village	Kendudihi Village	1500
19-02-2023	Mage Parab at Nuagaon Village	Nuagaon Village	1000
22-03-2023	International Women's Day Celebration	Malda Village	200
	<b>Lives touch in Ethnicity</b>		<b>6935</b>
<b>ENVIRONMENT</b>			
05-06-2022	World Environment Day Celebration	At Loidapada Panchayat Office	35

13-07-2022	Awareness on Environment & Climate Change	Primary School Kalmang & Primary School Malda, Guali Ashram School, Kanhusahi Primary School & Nuagaon Primary School.	250
05-08-2022	Awareness on Environment & Climate Change	Kalmang High School	173
09-08-2022	Plantation Drive	Gandhalpda Village	300
September(2022)	Plantation Awareness program	Katesahi, Kanhusahi, kalmang & Guali Village	423
	<b>Lives touch in Environment</b>		<b>1075</b>
<b>LIVELIHOOD AGRICULTURE</b>			
11-08-2022	Promotion of Fish Farming	Kalmang, Gandhalpda & Nuagaon Farmer's	16
September(2022)	Gardening Equipment Distribution	Kanhusahi Village	35
October(2022)	Kitchen Gardening	Villages under Guali & Malda Panchayat	395
December(2022)	Mushroom Cultivation	Kendudihi, Gandhalpad & Guali Village	150
January (2023)	Mushroom Cultivation	Kanhusahi, Kalmang, Guali & Katesahi Village	133
February(2023)	Mushroom Cultivation	Villages under Guali & Malda Panchayat	164
	<b>Lives touch in Livelihood Agriculture</b>		<b>893</b>
<b>LIVELIHOOD EMPOWERMENT</b>			
13-06-2022	Empowerment Program	With S.H.G Members of Guali Village	75
08-06-2022	SHG Empowerment Programs	With S.H.G Members of Guali & gandhalpda Village	53
16-08-2022	Empowerment Program	Gandhalpada Village	20
	<b>Lives touch in Livelihood Empowerment</b>		<b>148</b>
<b>SKILL DEVELOPMENT</b>			
15-07-2022	World Youth Skill Day	Guali Club	58
19-07-2022	Out Door Leadership Camp	With the Ypuh of Kalmang & Gandhalpada Village	28
23-09-2022	Tata Electronics Placement Drive	From Guali & Topadihi Village	5
14-02-2023	Heavy Motor Vehicle Training Program	Youth Of Kalmang & Guali Village	8
23-02-2023	Model Career Skill Development Program	Gandhalpada Village	56
18-03-2023	Out Door Leadership Camp	Youth of Kalmang ,Kanhusahi & Malda Village	22
	<b>Lives touch in Skill development</b>		<b>177</b>
<b>SPORTS</b>			
18-12-2022	Footbal Tournament	Kalmang Village	500
21-12-2022	Footbal Tournament	Gandhalpada Village	500
13-01-2023	Football Tournament	Segasahi Village	800
14-02-2023	Cricket Tournament	Gendargoda Village	500
	<b>Lives touch in Sports</b>	<b>Sports Village</b>	<b>2300</b>
	<b>Total lives ouch FY22-23</b>	<b>FY Village</b>	<b>18083</b>

Financial Spend Status : FY'23 : Kalmong			346.95	258.25	-88.69
Vertical	GL Code	GL Description	Annual Plan (A)	Actual till date (B)	Deviation (C=B-A)
DRINKING WATER	5010003	Installation of piped drinking water supply system	1.00	0.29	-0.71
	5010004	Installation and repair of deep bores	0.25	0.98	0.73
	5010005	Installation and repair of hand tube wells	0.50	-	-0.50
	5010009	Solar powered drinking water project	95.00	78.95	-16.04
<b>DRINKING WATER Total</b>			<b>96.75</b>	<b>80.23</b>	<b>-16.52</b>
Public Health	5020009	Provide fin assist-waivers for needy, case-to-case	5.00	2.55	-2.45
	5020021	Kitchen Garden	3.00	1.80	-1.20
	5020026	Public Health Initiatives in Proximate Communities	17.38	18.77	1.38
<b>Public Health Total</b>			<b>25.38</b>	<b>23.12</b>	<b>-2.26</b>
AGRICULTURE	5030001	Water Harvesting structures (ponds)	27.00	11.36	-15.64
	5030003	Promote second crops	1.00	-	-1.00
	5030004	Livelihood Agri allied, Livo, Diary, Poultry	5.00	1.40	-3.60
	5030005	Capacity Building of Farmers Institutions	7.00	2.91	-4.09
	5030008	Promote horticulture in wastelands and dry land crops	3.00	2.58	-0.42
<b>AGRICULTURE Total</b>			<b>43.00</b>	<b>18.25</b>	<b>-24.75</b>
SKILL DEVELOPMENT	5040001	Sponsorship to Trainees for various vocational courses	1.00	-	-1.00
	5040002	Skill Development Programmes	6.00	2.21	-3.79
<b>SKILL DEVELOPMENT Total</b>			<b>7.00</b>	<b>2.21</b>	<b>-4.79</b>
EDUCATION	5050002	Fellowship programme	3.00	0.38	-2.62
	5050005	Support for Schools/Institutions (educational infrastructure)	16.43	19.10	2.67
	5050013	Spoken English & Soft Skill Development	15.01	15.01	0.00
<b>EDUCATION Total</b>			<b>34.43</b>	<b>34.48</b>	<b>0.05</b>
Empowerment	5060001	Women Empowerment Programmes	5.00	3.05	-1.95
	5060002	Business Development of SHGs	5.00	2.43	-2.57
<b>Empowerment Total</b>			<b>10.00</b>	<b>5.47</b>	<b>-4.52</b>
Environment	5070003	Renewable Energy (Solar Light)	30.00	29.43	-0.56
<b>ENVIRONMENT Total</b>			<b>30.00</b>	<b>29.43</b>	<b>-0.56</b>
Ethnicity	5080002	Preserve & Promote Art and Culture	4.50	3.89	-0.62
	5080008	Stakeholder Meeting	2.00	1.68	-0.32
<b>ETHNICITY Total</b>			<b>6.50</b>	<b>5.57</b>	<b>-0.93</b>
Sports	5100005	Organising sports tournaments and coaching camps	5.00	2.47	-2.53
	5100009	Organising outdoor and leadership camps	3.50	2.85	-0.65
<b>SPORTS Total</b>			<b>8.50</b>	<b>5.32</b>	<b>-3.18</b>
INFRASTRUCTURE	5130001	Infrastructural support for Rural Development	30.00	6.21	-23.79
	5130002	Construction and maintenance of drain and roads	40.00	26.56	-13.44
<b>INFRASTRUCTURE Total</b>			<b>70.00</b>	<b>32.77</b>	<b>-37.23</b>
Hr Project Cost	EC Overheads	EC Overheads Cost	0.62	-	-0.62
	5140401	Capital Expenditure (Assets)	-	6.48	6.48
	5140011	I T Development Expe	-	1.30	1.30
	Wages	Wages	14.77	13.62	-1.15
<b>HR PROJECT COST Total</b>			<b>15.39</b>	<b>21.40</b>	<b>6.01</b>
<b>Grand Total</b>			<b>346.95</b>	<b>258.25</b>	<b>-88.69</b>

# Feedback of PRI members and Key stakeholder about CSR Kalamang & Gandhalpada project

**Kabindra Naik**  
Chairperson Joda Block

Joda Block, Joda  
Kanchhara, Odisha - 756238  
Mob: 9372603695, 7094458379

Date: 24.03.2023

To: The Unit Lead Tata Steel Foundation  
Sub: Appreciation Letter

Dear Sir,  
This is to state that I am Mr. Kabindra Naik Chairperson of Joda block appreciate you for providing us solar based drinking water, solar light, kitchen & garden construction of CC Road, School building, boundary work, for providing fruit bearing plants providing tent on food for community based program, medical facility and mushroom cultivation, duck raising, boat making machine, education support, Jyoti Fellowship programme, USho development, pond, skill development programme etc. in our Joda block. we are grateful for such development work and believe that Tata Steel Foundation will continue to help us in our need in future.

**Kabindra Naik**  
Chairperson  
Panchayat Samiti  
Joda

**ଗ୍ରାମ ପଞ୍ଚାୟତ କାର୍ଯ୍ୟାଳୟ, ଗୁଆଲି**  
ପା/ପୋ: ଗୁଆଲି, ଥାନା: ଗୁରୁବିହି, ଜିଲ୍ଲା - ଜେଜୁରଦା, ଓଡ଼ିଶା - ୭୫୮୦୩୫

Date: 24.03.23

To: The Unit Lead Tata steel Foundation  
sub: Appreciation Letter

Dear Sir,  
This is to state that I am Mr. bidyadhar Naik Sarpanch of Guili gram panchayat appreciate you for providing us Solar based drinking water facility, solar light, kitchen garden construction of CC Road School building, boundary work, for providing fruit bearing plants, providing tent and food for community based program, medical facility at doorstep support for mushroom cultivation and duck raising boatmaking machin, Jyoti fellowship program, USho development etc. in our gram panchayat. we are grateful for such developmental work and believe that Tata steel founda will continue to help us in our need in future.

**Bidyadhar Naik**  
Sarpanch  
Guili Gram Panchayat  
Guili

**OFFICE OF THE MALDA GRAM PANCHAYAT**  
A/Po: Malda, Block-Koida, Dist- Sundergarh (Odisha), Pin-770048  
Mob: 9437124158, 9237347103, email: sarpanchmaldagp2022@gmail.com

Date: 24/3/23

To: The unit head Tata steel Foundation Kalamang & Gandhalpada  
Sub: (Appreciation Letter)

Respected Sir,  
ମୁଁ ଗୁଆଲି ଗ୍ରାମପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି ଯେଉଁଠି ଆପଣଙ୍କୁ ଗୁଆଲି ଗ୍ରାମପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଦାୟିତ୍ୱ ଦିଆଯାଇଛି, ଆପଣଙ୍କୁ ଆପଣଙ୍କ ଦାୟିତ୍ୱରେ ରଖିବା ପାଇଁ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି। ଆପଣଙ୍କୁ ଆପଣଙ୍କ ଦାୟିତ୍ୱରେ ରଖିବା ପାଇଁ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି। ଆପଣଙ୍କୁ ଆପଣଙ୍କ ଦାୟିତ୍ୱରେ ରଖିବା ପାଇଁ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି।

**Sarpanch**  
Malda G.P.

To: The tata steel foundation  
Kalamang and gandhal pada

Unit head  
Respected Sir

ମୁଁ ଗୁଆଲି ଗ୍ରାମ ପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି ଯେଉଁଠି ଆପଣଙ୍କୁ ଗୁଆଲି ଗ୍ରାମପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଦାୟିତ୍ୱ ଦିଆଯାଇଛି, ଆପଣଙ୍କୁ ଆପଣଙ୍କ ଦାୟିତ୍ୱରେ ରଖିବା ପାଇଁ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି।

**Biswanath Patra**  
Ward Member  
Ward No. 2, Kalamang  
G.P. Malda

07/26/04/2023  
Kalamang  
Malda G.P.  
Sundash Gosh

To: The unit head Tata steel Foundation,  
Kalamang and Gandhalpada  
Sub: (Appreciation letter)

Respected sir,  
ମୁଁ ଗୁଆଲି ଗ୍ରାମ ପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି ଯେଉଁଠି ଆପଣଙ୍କୁ ଗୁଆଲି ଗ୍ରାମପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଦାୟିତ୍ୱ ଦିଆଯାଇଛି, ଆପଣଙ୍କୁ ଆପଣଙ୍କ ଦାୟିତ୍ୱରେ ରଖିବା ପାଇଁ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି।

**Ward Member**  
Kalamang Ward No-1  
Malda G.P.  
**Sudhakar Patra**

To: The Unit Lead Tata Steel Foundation  
Sub: Application letter.

Respected Sir  
ମୁଁ ଗୁଆଲି ଗ୍ରାମ ପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି ଯେଉଁଠି ଆପଣଙ୍କୁ ଗୁଆଲି ଗ୍ରାମପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଦାୟିତ୍ୱ ଦିଆଯାଇଛି, ଆପଣଙ୍କୁ ଆପଣଙ୍କ ଦାୟିତ୍ୱରେ ରଖିବା ପାଇଁ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି।

**Chakra Munda W. No.2 Ward/Kalamang**  
**Selai Munda**  
**Rabinandan Munda**  
**Jaya Munda**  
**ପଞ୍ଚାୟତ ସମିତି**  
**Pandu Panthoi**  
**Gangur Lujuan**  
**Sambhu Panthoi**

To: The Unit Lead Tata Steel Foundation  
Sub: Appreciation Letter

Respected sir,  
ମୁଁ ଗୁଆଲି ଗ୍ରାମ ପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି ଯେଉଁଠି ଆପଣଙ୍କୁ ଗୁଆଲି ଗ୍ରାମପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଦାୟିତ୍ୱ ଦିଆଯାଇଛି, ଆପଣଙ୍କୁ ଆପଣଙ୍କ ଦାୟିତ୍ୱରେ ରଖିବା ପାଇଁ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି।

**Deepa Lahare**  
**Bimala Lohar**

**Depranigiri Naik**  
**Purna/ Whak**  
**Rankajini Naik**  
**Sita Naik**  
**Bina Pansi Naik**  
**Peabacini Naik**  
**Rekha Naik**  
**Akash Naik**  
**Padma Naik**  
**Puja Naik**

To: The Unit Lead Tata Steel Foundation  
sub- Appreciation Letter

Respected sir,  
ମୁଁ ଗୁଆଲି ଗ୍ରାମ ପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି ଯେଉଁଠି ଆପଣଙ୍କୁ ଗୁଆଲି ଗ୍ରାମପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଦାୟିତ୍ୱ ଦିଆଯାଇଛି, ଆପଣଙ୍କୁ ଆପଣଙ୍କ ଦାୟିତ୍ୱରେ ରଖିବା ପାଇଁ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି।

**Depranigiri Naik**  
**Purna/ Whak**  
**Rankajini Naik**  
**Sita Naik**  
**Bina Pansi Naik**  
**Peabacini Naik**  
**Rekha Naik**  
**Akash Naik**  
**Padma Naik**  
**Puja Naik**

To: The Unit Lead Tata Steel Foundation  
sub- Appreciation Letter

Respected sir,  
ମୁଁ ଗୁଆଲି ଗ୍ରାମ ପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି ଯେଉଁଠି ଆପଣଙ୍କୁ ଗୁଆଲି ଗ୍ରାମପଞ୍ଚାୟତର ସରପଞ୍ଚ ଭାବରେ ଦାୟିତ୍ୱ ଦିଆଯାଇଛି, ଆପଣଙ୍କୁ ଆପଣଙ୍କ ଦାୟିତ୍ୱରେ ରଖିବା ପାଇଁ ଆପଣଙ୍କୁ ଅନୁରୋଧ କରୁଛି।

**Depranigiri Naik**  
**Purna/ Whak**  
**Rankajini Naik**  
**Sita Naik**  
**Bina Pansi Naik**  
**Peabacini Naik**  
**Rekha Naik**  
**Akash Naik**  
**Padma Naik**  
**Puja Naik**



**Expenditure Related to PH Commitments**

<b>Sl.No</b>	<b>PH Commitment Items</b>	<b>Budget Expended (In Lakhs)</b>
1	Solar powered drinking water project	78.95
2	Construction of ponds/ Repair of canals	15.26
3	Skill Development Programmes	2.21
4	Support for Schools/Institutions (educational infrastructure)	19.72
5	Spoken English & Soft Skill Development	15.01
6	Provision of Solar lighting & illumination facility	47.59
7	Public health- Mobile Medical Unit & TMH	21.32
8	Bus Facility for School Students	24.00
9	Plantation of Fruit bearing Plant	3.00
10.	11 Deep boring facility in Village	132
11.	Jyoti Education Fellowship	3.46
12.	Ultrasound Machine for Koira Hospital	27.00
	<b>Total (Till FY'23)</b>	<b>389.52</b>

**Environment Management Organization Structure- Kalamang West Iron Ore Block**