



Ref: TPC/BHV/2026/PSP-27

Date: 19.05.2026

To

The Director- IA.III,
Ministry of Environment, Forest and Climate Change,
Regional Office (WCZ),
Ground Floor East Wing,
New Secretariat Building, Civil Line,
Nagpur- 440001.

Sub: Bhivpuri Off Stream Open Loop Pumped Storage Project (1000 MW) – Submission of Half Yearly (Six Monthly) Compliance Report for the period of Oct 2026- March 2026 (1st June)
Ref: Environment Clearance letter no J-12011/39/2023-IA.I (R) dated 19/05/2025.

Dear Sir,

Environment Clearance was accorded to Bhivpuri Off Stream Open Loop Pumped Storage Project (1000 MW) with reference to above cited letter. We are here by submitting Half yearly EC Compliance report for the period of Oct 2026- March 2026 (1st June) as per EIA Notification of 2006 on Parivesh Portal.

Project Details

Bhivpuri Off-Stream Open Loop Pumped Storage Project (1000 MW)

Bhivpuri Open Loop Pumped Storage Project (1000 MW) in an area of 117.41Ha in Village Sawale, Khand and Bhivpuri (camp), Sub District Mawal and Karjat, District Pune and Raigarh, Maharashtra by M/s The Tata Power Co. Ltd. – Environmental Clearance (EC)

S No.		
1	EC Identification No.	EC Identification No.
2	File No.	J-12011/39/2023-IA.I (R)
3	Clearance Type	Fresh EC
4	Category	A
5	Project/Activity Schedule No.	Included I(c) River Valley/Irrigation projects
6	Sector	River Valley and Hydroelectric Projects
7	Name of Project	Bhivpuri Off-Stream Open Loop Pumped Storage Project (1000 MW)
8	Name of Company/Organization	The Tata Power Co. Ltd.
9	Location of Project (District, State)	RAIGAD, MAHARASHTRA
10	Issuing Authority	MoEF&CC
11	Applicability of General Conditions as per EIA Notification, 2006	No

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Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



Compliance of stipulated conditions of Environmental Clearance

1 Specific EC Conditions for (River Valley/Irrigation Projects)		
S. No	EC Conditions	Response
1.1	Disposal of the excavated muck and its filling on the low-lying area with proper measures for the stabilization and greenery to minimize the impacts of the generated construction muck shall be taken up pari passu with construction work.	The dumping yards are being developed according to the prescribed procedures. A toe wall will also be suitably constructed. The excavated muck is currently being disposed of, and low-lying areas within the premises are being filled with this material.
1.2	Stabilization of muck disposal sites using biological and engineering measures shall be taken up immediately to ensure that muck does not roll down the slopes and does not pollute the natural streams and water bodies in surrounding area. The plantation on muck disposal site with local species for restoration of ecology and environment of the project site area.	Filling of low-lying areas within the premises is ongoing in a manner that safeguards against contamination of natural streams and water bodies in the vicinity. Once disposal of the muck is completed, the site will be restored using local plant species. Please Refer Annexure 1 – Approved Muck Management Plan
1.3	Necessary control measures such as water sprinkling arrangements, and construction of paved roads leading to muck disposal sites etc. shall be taken up on priority to arrest fugitive dust at all the construction sites.	Water sprinkling arrangements are being implemented during the dry season to mitigate dust emissions and maintain air quality. Please Refer Annexure 2 – Photographs of Dust Mitigation Measures/ Wheel Mounted mist guns
1.4	Solid waste generated, especially plastic waste, etc. should not be disposed of as landfill material. It should be treated with scientific approach and recycled. Use of single-use plastics may be discouraged.	Tata Power is Committed to Zero Waste to landfill. Solid waste especially plastic waste generated at site is disposed off through authorized vendor and not disposed of as landfill material. Use of single-use plastic is discouraged at site.
1.5	Muck disposal sites be decided in view of provisions of the Western Ghats Notification dated 06.07.2022.	Muck disposal sites are decided in view of provisions of the draft Western Ghats Notification dated 06.07.2022. The same is approved in line with EIA.
2 Socio-economic		
2.1	Land acquired for the project shall be suitably compensated in accordance with the prevailing guidelines of the state government and provisions under Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.	Total private land is being purchased through private negotiations for the Bhivpuri Open-Loop Off-Stream Pumped Storage Project is well within the prescribed limits as specified in the provisions of RFCTLARR, 2013 hence Rehabilitation and Resettlement is not applicable for the Project.
2.2	RO plant shall be installed in the nearby 5 villages and the maintenance shall be done by the project Authorities	Tata Power has installed two RO plants at Bhivpuri and Gaulwadi Madhyamik School, while installation work at Tapkirwadi is currently in progress. Annexure 3 for RO plants in school & media coverage of the same

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2.3	Solar panel be provided to the families living in rural areas within 10 km radius of project.	Tata Power has installed 200 solar streetlights in Bhivpuri Gram Panchayat, Humgaon Grampanchayat, Sawala, Khandi villages to date. Procurement is currently underway for an additional 125 solar streetlights and 130 solar lanterns. Refer Annexure 4 for the same
2.4	School up to 12th Standard, equipped with solar power and smart classes, shall be established to provide quality education for free education to children's from project affected villages/Tribal villages.	<p>To enhance access to quality education for children, Tata Power is implementing several initiatives such as Science Centres, BALA (Building as Learning Aid) paintings, Mini Science Centre and Lab on Bike (LOB) for beneficiaries. (~2,000). These initiatives have strengthened experiential and digital learning</p> <p>Details of the same, photos, media coverage and feedback from beneficiaries is enclosed as Annexure 5.</p> <p>The Lab on Bike concept is a mobile science laboratory designed to bring hands-on learning directly to students in remote and underserved areas. Equipped with science models, experiment kits, and interactive learning materials, it travels from school to school, enabling children to experience practical science experiments. Both These initiative fosters curiosity, improves conceptual understanding, and makes learning engaging and accessible, especially where conventional lab facilities are not available.</p> <p>Annexure 5a Photos of Mini science centre, School and Lab on bike &Media coverage of the same</p>
2.5	The compliance of above conditions shall be monitored by IRO, MoEF&CC and regularly site visit once in year. The compliance report of IRO shall be regularly submitted to MoEF&CC.	<p>Being Complied</p> <p>Noted</p>
2.6	50 bed multi-speciality hospital shall be established to cater the need of tribal population/locals. The tribal population within 10 km radius of the project shall be given free of cost medical facility.	<p>To address the healthcare needs of the tribal population in the project area, the flagship Arogya Project is being implemented. Under this initiative, regular health camps are conducted and support for non-chronic medications is provided.</p> <p>Additionally, the existing Public Health Centre at Kadav is being strengthened through the provision of essential medical equipment and infrastructure support. Improvements to hygiene facilities, including the renovation of washrooms, are currently in progress.</p> <p>Annexure 6: PHC photos and media coverage for health camps</p>
2.7	Skill development Centre shall be established within 10 km radius of the project and regular training programmes	Regular training sessions are being conducted across various skill development courses, including electrical work, plumbing, hospitality, beauty

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	for development and promotion of traditional art/products of tribal/local population.	parlour, fabric painting, Aari work, and tailoring, benefiting around 400 local participants. Annexure 7: Details of training sessions,
2.8	The area is ecologically fragile therefore Project Proponent shall ensure that safety measures as mentioned in the EMP shall be fully implemented.	Tata Power is ensuring that safety measures as mentioned in the EMP will be implemented.
3	Miscellaneous:	
3.1	After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment. The study shall be undertaken by an independent agency.	After 5 years of the commissioning of the project, Tata Power will engage an independent agency to conduct a comprehensive study to assess the project's environmental impact
3.2	Bio-Gas plant shall be installed in the Project affected area for Utilizing Cattle waste (Cow Dung) into renewable source of fuel.	Tata Power is exploring feasibility of installing Bio Gas Plant in the Project affected area for Utilizing Cattle waste (Cow Dung)
3.3	PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis.	Regarding establishing inhouse Environment Monitoring Laboratory, considering the nature of the Project and the resultant pollution caused by the construction activity presently it is considered that environmental monitoring is being conducted by NABL and QCI accredited third parties. Dedicated environmental team has been established at the site, consisting of qualified Environment Engineers overseeing Environment Management at site
3.4	PP shall procure construction material only from those Organizations having all valid legal/statutory clearances/permissions or necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and as amended thereof.	Tata Power is procuring construction material from Organizations having valid legal/ Statutory clearances for quarrying construction materials for the project as per the EIA Notification, 2006 and as amended thereof. Refer Annexure 8 for sample consent of vendor
3.5	An institutional mechanism to be developed to ensure the preference of jobs to PAFs and also a policy for preferential treatment for award of sundry works to the PAFs and their dependents	There are no Project Affected Families (PAFs) hence no preferential employment policy is applicable; however, local individuals are preferred based on their skills.
4	Environmental Management And Biodiversity Conservation	
4.1	The water of rainfall yield of self-catchment of the reservoir shall be released to downstream through body of dam/ barrage/ embankment etc.	Tata Power will release water of rainfall yield of self-catchment of the Lower reservoir to downstream through body of dam/ barrage/ embankment etc.
4.2	The water for filling of reservoir/ recoupment of evaporation and recirculation losses shall be met from a	Water towards initial one-time filling and 0.5 MCM towards recoupment of evaporation losses will also

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	source other than the rainfall yield of catchment of non-perennial stream/nallah.	to be drawn from the Thokarwadi reservoir for operation of proposed Bhivpuri PSP (1000 MW).
4.3	The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP reports. The budgetary provisions for implementation of EMP, shall be fully utilized and not to be diverted to any other purpose. In case of revision of the project cost or due to price level change, the cost of EMP shall also be updated proportionately.	The Environmental Management Plan (EMP) is prepared and shall be strictly adhered to as submitted in the EIA/EMP reports. An EMP cost has been earmarked towards implementation of environment management plan. Refer Annexure 9 for tracking of EMP expenditure
4.4	The contract clause limiting the No. of vehicles used during excavation and transportation shall followed scrupulously and the same shall informed to the ministry.	Noted
4.5	Ambient Air Quality Monitoring Stations for real time data to be installed at project site before commencement of the construction, shall be displayed at project site and its report to be submitted to IRO, MoEF&CC.	Ambient Air Quality monitoring is being monitored at site through NABL accredited lab.
4.6	No vehicle purchase shall be allowed from funds earmarked for implementation of Wildlife Conservation plan. Measures for minimizing the human-animal conflict specially for black bear and leopard be suitably incorporated in the wildlife conservation plan in consultation with State Forest Department.	Noted
4.7	10000 plants shall be planted around the muck disposal area and the survival of plants shall be submitted with the 6 monthly compliance report.	Once muck disposal sites are stabilized, plantation will be carried out around muck disposal area.
4.8	Watershed development plan prepared in consultation with ICAR/Expert Govt. institute be implemented within 10 km radius of the project. Implementation status be submitted in the 6 monthly compliance report to themiy concerned regional office of the Ministry.	Watershed Development Plan of Bhivpuri PSP has been prepared by Department of Water Resources Development & Management, Indian Institute of Technology. Please Refer Annexure 10 Water Shed Development report by IIT Roorkee
4.9	Miyavaki Forest shall be developed within 10 km radius of the project.	Miyawaki Plantation project is being developed by Tata Power at suitable land identified.
4.10	Safeguard conditions mentioned in the Western Ghats Notification S.O. 3072(E) dated 06.07.2022 be complied with.	All safeguard conditions stipulated in the draft Western Ghats Notification S.O. 3072(E) dated 06.07.2022 are strictly being complied with during the construction phase of the project
4.11	Community radio shall be established.	

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4.12	Relocation of trees will be attempted strictly in consultation with Forest Department.	Relocation of trees is attempted strictly in consultation with Forest Department
Standard EC Conditions for (River Valley/Irrigation projects)		
1	Statutory Compliance	
1.1	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.	Bhivpuri PSP has received Stage I forest clearance vide letter FP/MH/HYD/IRRIG/447097/2023 dated 12.05.2025. Please refer Annexure 11 for Stage I Forest Clearance. Stage II Forest Clearance is received on 04.11.2025 Refer annexure 11 a for the same Final Diversion order vide FLD-1924/CR-215/F-10 issues by Goernment of Maharashtra Revenue and forest department dated 05.03.26. please refer annexure 11b for the same
1.2	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Bhivpuri PSP does not fall in any protected areas like Wildlife Sanctuary/National Parks etc. there is no Sanctuary, National Park or Tiger Trail within 10 Km of project area. Nearest protected area from project area is Bhimashankar Wildlife Sanctuary, at arial distance of 10.37 Km. therefore said proposal does not require Wildlife approval. Please Refer the Annexure 12 - Approval for Biodiversity and Wildlife conservation plan from PCCF (Maharashtra) mentioning no clearance required from NBW.
1.3	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of Schedule-I species in the study area).	Schedule-I Specie Conservation Plan approval letter from State Forest Department. Please Refer the Annexure 12 Approval for Biodiversity and Wildlife conservation plan from PCCF (Maharashtra) mentioning no clearance required from NBW.
1.4	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.	The consent to establish is granted for Bhivpuri PSP dated 13.01.25. Please Refer Annexure 13 - MPCB Consent to Establish
1.5	NOC shall be obtained from National Commission of Seismic Design Parameters (NCSDS) of CWC	NOC is received from National Commission of Seismic Design Parameters (NCSDP) of CWC. Please Refer Annexure 14 -Approval document.

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1.6	Necessary approval of CEA shall be obtained for those projects having the project cost more than Rs. 1,000 crores.	All necessary approvals from CEA are in place Please Refer Annexure 15 – CEA Approval document.
2	Air Quality Monitoring And Preservation	
2.1	Regular monitoring of various environmental parameters viz., Water Quality, Ambient Air Quality and Noise levels as per the CPCB guidelines at designated locations shall be carried out on monthly basis and a detailed database of the same shall be prepared and recorded. This shall be used as a baseline data for post construction EIA / Monitoring purposes.	Regular monitoring of various environmental parameters as per the CPCB guidelines at designated locations will be carried out on monthly basis and a detailed database of the same shall be prepared and recorded. This shall be used as a baseline data for post construction EIA / Monitoring purposes. Please Refer Annexure 16 for Environment Monitoring Reports
2.2	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed standards.	Necessary control measures like water sprinkling to control dust, water Gun machines have been installed to further reduce dust levels. Please Refer Annexure 17 Photos of APC at site
2.3	Necessary control measures such as water sprinkling arrangements, etc. be taken up to arrest fugitive dust at all the construction sites.	Necessary control measures like water sprinkling to control dust, water Gun machines have been installed to further reduce dust levels. Refer Annexure 18 for Water Sprinkling arrangement at site
2.4	Conjunctive use of surface water to be planned in the project to check water logging as well as to increase crops productivity. The field drains shall be connected with natural drainage system (if applicable).	This condition is not applicable since project is PSP
2.5	Remodelling of existing natural drains (link drains) and connecting them with irrigated land through constructed field drains, collector drains, etc. are to be ensured on priority basis (if applicable).	This condition Not applicable
2.6	Before impounding of the water, Cofferdams for both at the upstream and downstream are to be decommissioned as per EIA/EMP report so that once the project is commissioned; cofferdam should not create any adverse impact on water environment including the rock mass and muck used for the Cofferdam.	Once project is commissioned, Before impounding of the water, Cofferdams for both at the upstream and downstream will be decommissioned as mentioned in EIA/EMP report So that Cofferdam should not create any adverse impact on water environment.
2.7	As the reservoir will be acting as balancing reservoir and there would be fluctuation of water level during peaking period, efforts be made to reduce impact on aquatic life including impacts during spawning period both at the upstream and downstream of the project.	Not Applicable, as the project is an Off-Stream Pumped Storage Project and not a run-off river project.

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2.8	Water depth sensors shall be installed at suitable locations to monitor e-flow. Hourly data to be collected and converted to discharge data. The Gauge and Discharge data in the form of Excel Sheet be submitted to the Regional Office, MoEF & CC and to the CWC on weekly basis.	Not Applicable, as the project is an Off-Stream Pumped Storage Project and not a run-off river project.
2.9	Mixed irrigation shall be practised and necessary awareness be given to all the farmers and trained in the use of such systems. Proper crops selection shall be carried out for making irrigation facility more effective (if applicable).	Training programs on efficient irrigation techniques and water management practices in the villages will be organized as a implementation measure for Water Shed development plan
2.10	On Farm Development (OFD) works like landscaping, land levelling, drainage facilities, field irrigation channels and farm roads, etc. should be taken up in phased manner prior to the start of irrigation in the entire command area. The Command Area Development Plan should be strictly implemented as proposed in the EIA/EMP report (if applicable).	This condition is not applicable since project is PSP
3.	Noise Monitoring And Prevention	
3.1	All the equipment likely to generate high noise shall be appropriately enclosed or inbuilt noise enclosures be provided so as to meet the ambient noise standards as notified under the Noise Pollution (Regulation and Control) Rules, 2000, as amended in 2010 under the Environment Protection Act (EPA), 1986.	All the equipment generating high noise are appropriately enclosed so as to meet the ambient noise standards as notified under the Noise Pollution (Regulation and Control) Rules, 2000, as amended in 2010 under the Environment Protection Act (EPA), 1986.
3.2	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	The ambient noise levels conform to the standards prescribed under E(P)A Rules, 1986 viz.75 dB(A) during day time and 70 dB(A) during night time. Refer Annexure 19 Noise monitoring reports
4	Catchment Area Treatment Plan	
4.1	Catchment Area Treatment (CAT) Plan as proposed in the EIA/EMP report shall be implemented in consultation with the State Forest Department and shall be implemented in synchronization with the construction of the project	Catchment Area Treatment (CAT) Plan is developed as a part of EMP and same will be implemented in consultation with the State Forest Department ; in sync with the construction of the project. Please Refer Annexure 20 – CAT Plan.
5	Waste Management	
5.1	Muck disposal be carried out only in the approved and earmarked sites. The dumping sites shall be located sufficiently away from the HFL of the river. Efforts be made to reuse the muck for construction	Muck disposal is being carried out only in the approved and earmarked sites. Generated Muck is used internally for construction and other filling purposes and balanced will disposed of at the designated disposal sites. Once the muck disposal is

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	and other filling purposes and balanced be disposed of at the designated disposal sites. Once the muck disposal sites are inactive, proper treatment measures like both engineering and biological measures be carried out so that sites are stabilized quickly.	complete, proper treatment measures as mentioned in EMP (Engineering and biological measures) will be carried out for site stabilization.
5.2	Solid waste management should be planned in details. Land filling of plastic waste shall be avoided and instead be used for various purposes as envisaged in the EIA/EMP reports. Efforts be made to avoid one time use of plastics.	Solid waste management plan is being developed. Efforts be made to avoid single use plastic use at site.
6	Green Belt And Wildlife Management	
6.1	Based on the recommendation of Cumulative Impact Assessment and Carrying capacity study of river basin or as per the ToR conditions or minimum 15% of the average flow of four consecutive leanest months, whichever value is higher, shall be released as environmental flow.	Not Applicable, as the project is an Off-Stream Pumped Storage Project and not a run-off river project.
6.2	Detailed information on species composition particular to fish species from previous study/literature be inventoried and proper management plan shall be prepared for insitu conservation in the streams, tributaries of river and the main river itself for which adequate budget provision be made and followed strictly.	While conducting EIA, For the documentation of fish fauna in the project area, experimental fishing was carried out in Andhra and Indrayani River. Fish fauna has been recorded from Thokarwadi reservoir as well as the river.
6.3	Wildlife Conservation Plan approved by the Chief Wildlife Warden shall be implemented in consultation with the local State Forest Department.	Detailed Wildlife Conservation Plan approved by the Chief Wildlife Warden will be implemented in consultation with the local State Forest Department.
6.4	To enrich the habitat of the project site, plantation shall be raised as envisaged in the EIA/EMP report. Plantation to be developed along the periphery of the reservoir in multi-layers with local indigenous species in consultation with the local State Forest Department.	To enrich the habitat of the project site, plantation shall be raised as envisaged in the EIA/EMP report.
6.5	Compensatory afforestation programme shall be implemented as per the plan approved.	Compensatory afforestation programme is being implemented as per the plan approved.
6.6	Fish ladder/pass as envisaged in the EIA/EMP report shall be provided for migration of fishes. Regular monitoring of	Not Applicable, as the project is an Off-Stream Pumped Storage Project and not a run-off river project.

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	this facility be carried out to ensure it effectiveness.	
7	Public Hearing And Human Health Issues	
7.1	Resettlement & Rehabilitation plan be implemented in consultation with the State Govt. as approved by the State Govt.	The entire private land identified for the project falls in Khand and Sawale revenue villages of Mawal Tehsil of Pune District of Maharashtra. None of them is getting displaced due to the project from the above land procurement. Hence Resettlement & Rehabilitation plan is not required
7.2	Budget provisions made for the community and social development plan including community welfare schemes shall be implemented in toto.	Budget provisions made for the community and social development plan including community welfare schemes are being implemented.
7.3	Preventive measures viz. fuming and spraying of mosquito control shall be done in and around the labour colonies, affected villages, stagnated pools, etc. Provisions be made to not to create any stagnated pools to avoid creation of breeding grounds of the vector borne diseases.	After commissioning of labor colony Fuming & spraying of mosquito control and fuming in the camp office, labour colonies and stagnated pools
7.4	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Provision for housing of construction labour with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. is being provided. The housing being temporary will be removed after the completion of the project. Annexure 21 : Photos of labor colony
7.3	Labour force to be engaged for construction works shall be examined thoroughly and adequately treated before issuing them work permit. Medical facilities shall be provided at the construction sites.	Labour force being engaged for construction works is being examined thoroughly and adequately treated if required before issuing them work permit. Dedicated and equipped medical centre is established for site Annexure 22: Photos of medical centre at site Annexure 22 a. Photos of Healthcare camps for labours
8	Risk Mitigation And Disaster Management	
8.1	Early Warning Telemetric system shall be installed in the upper catchment area of the project for advance intimation of flood forecast.	As this project is pumped storage project and is not located at any river course, so the early warning telemetric system is not envisaged.
8.2	Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities	Drilling and blasting are done by licensed explosive agent after obtaining required approvals from respective DC. Additionally, each blast is being monitored by CWPRS (The Central Water and Power Research Station) & CIMFR (Central Institute of Mining and Fuel Research) Refer Annexure 23 for Blasting permission.

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8.3	Emergency preparedness plan be made for any eventuality of the dam failure and shall be implemented as per the Disaster Management Plan.	Emergency preparedness plan is developed as a part of EMP. The same is attached here with Annexure 24
8.4	Stabilization of muck disposal sites using biological and engineering measures shall be taken up to ensure that muck does not roll down the slopes and shall be disposed safely and that it does not pollute the natural streams and water bodies in surrounding area. The engineering measures for the muck disposal arrangements be evolved after carrying out required slope stability analysis.	Once muck disposal is complete, Stabilization of muck disposal sites using measures as mentioned in EMP (biological and engineering measures) will be taken up to ensure that muck does not roll down the slopes and does not pollute the natural streams and water bodies in surrounding area.
8.5	Catchment area treatment plan shall be prepared and sufficient fund shall be provided for afforestation, rim plantation, pasture development, nursery development.	Catchment area treatment plan is developed as a part of EMP ion, rim plantation, pasture development, nursery development. Please Refer the Annexure 25- CAT Plan .
9	Corporate Environment Responsibility	
9.1	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30th September, 2020, as applicable, regarding Corporate Environment Responsibility.	Tata Power will comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30 th September 2020, as applicable, regarding Corporate Environment Responsibility.
9.2	Skill mapping be undertaken for the youths of the affected project area and based on the skill mapping, necessary trainings to the youths be provided for their long-time livelihood generation	Skill mapping will be undertaken for the youths of the affected project area and based on the skill mapping, necessary trainings to the youths be provided for their long-time livelihood generation.
9.3	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation/violation of the environmental / forest / wildlife norms/conditions and / or shareholders/ stake holders. The copy of the board resolution in this	Tata Power has a Board-approved Environment Policy, supported by a formal commitment document. The policy outlines organizational responsibilities and governance for environmental management. The document is available on the company's website under Company Resource Center. Website link: www.tatapower.com . Please refer Annexure 26 for Tata Power's Environment Policy

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Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567

	regard shall be submitted to the MoEF&CC as a part of six-monthly report.	
9.4	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	A separate Environmental Cell with qualified Environment Professionals is established both at the project and company head quarter level. Environment department reports to senior Executive, who directly reports to the top management of the organization.
9.5	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	Detailed EMP is prepared along with responsibility matrix. The same is included in EIA. Year wise progress report will be submitted to Ministry/Regional Office along with the Six-Monthly Compliance Report. Annexure 27: EMP responsibility matrix
9.6	Post EIA and SIA be prepared for the project through a third party and evaluation report be submitted to the Ministry after five years of commissioning of the project.	After five years of commissioning of the project, EIA and SIA will be prepared through a third party and evaluation report be submitted to the Ministry.
9.7	Multi Disciplinary Committee (MDC) be constituted with experts from Ecology, Forestry, Wildlife, Sociology, Soil Conservation, Fisheries, NGO, etc. to oversee implementation of various environmental safeguards proposed in EIA/EMP report during construction of the project. The monitoring report the Committee shall be uploaded in the website of the Company.	Multi Disciplinary Committee (MDC) is constituted with three independent experts from Ecology, Forestry and fisheries have identified. EMP is shared with experts for review.
9.8	Formation of Water User Association/Co-operative be made involvement of the whole community be ensured for discipline use of available water for irrigation purposes	Noted
10	Miscellaneous	
10.1	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two	Environment Clearance is updated at Tata Power website for display. Advertisement regarding grant of EC for project was published in Marathi News Papers: Dainik Krushival Raigad Times ,Loksatta (Pune) and English News Paper Indian Express

	local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	(Mumbai) and Indian Express (Pune) on 23.05.25. Please Refer Annexure 28 – Environment Clearance Advertisement Copy.
10.2	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	The copies of the environmental clearance are submitted to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government. Please Refer Annexure 29 – Environment Clearance Submission acknowledgement Copy.
10.3	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Status of compliance of the stipulated environment clearance conditions, is being displayed on Tata Power's website and updated the same on half-yearly basis. Previous compliance of Environment Clearance for the period of April 2025 Sept 2025 submitted by in December 2025 is available at Tata Power's website URL : https://www.tatapower.com/sustainability/resource-centre/environmental-compliance-tab
10.4	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Noted
10.5	The project proponent shall submit the environmental statement for each financial year in Form- V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Noted
10.6	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Noted. The date of financial closure and final approval of the project will be informed to the Regional Office as well as the Ministry by Tata Power

19/05

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10.7	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Tata Power will strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
10.8	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Tata Power will abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and Expert Appraisal Committee.
10.9	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Noted
10.10	Concealing factual data or submission of false/fabricated data may result in revocation of this Environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Tata Power will not Conceal factual data or submit false/fabricated data that may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
10.11	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted
10.12	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted
10.13	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Noted
10.14	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	Noted

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10.15	Any appeal against this EC 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.	Noted
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Regards,



Kumar Pritam

(Chief – Hydro Projects)

Enclosed: All the annexures.

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Section 10.6

MUCK MANGEMENT PLAN

10.6 MUCK MANAGEMENT PLAN

The muck generated from various project activities during the construction of the PSP may adversely affect the environment if not properly managed. The generated muck volume, if not properly disposed, can destroy the landscape and increase the atmospheric particulate matter. The proposed project Bhivpuri PSP (1000 MW) consists of utilising the Existing Thokarwadi Reservoir in Mawal Taluka of Pune District as upper reservoir powerhouse is in Karjat Taluka of Raigad District of Maharashtra State. Project involves construction of new lower Reservoir near Hungaon village, Karjat taluka, Raigad district in Maharashtra state along with other project components.

The proposed is likely to generate large volume of muck of which some quantity will be utilizable, and the remaining muck volume needs to be rehabilitated at appropriate dumping sites in a technically and ecologically sound manner. Map showing location of Muck dumping site is given in Figure 10.6.

10.6.1 Quantity of Material to be Excavated

The construction activities of the project would generate muck from excavation of various project structures. The total quantity of 50,07,191 Cum (8,55,965 Cum soil and 41,51,226 Cum rock) muck is likely to be generated from excavation for various components. The component-wise quantity of muck to be generated and quantity of muck to be disposed are given at Table 10.15.

However, after the utilization of muck (bout 30.0 lakh cum) for different project components, the total quantity after considering swelling factor of muck to be disposed of works out to 27,84,642 cum. The entire excavated material is proposed to be dumped at 5 pre-identified dumping sites over a combined area of 41.0 ha area with a total capacity of 44,00,000 cum muck to be accommodated. Location of pre-identified site which has been identified specifically for this purpose as shown in Figure 10.6.

Table 10.15: Muck to be generated from various components of the project

S. No.	Component	Quantity in Cum	
		Soil	Rock
1	Coffer Dam	67,657	28,996
2	Lower Reservoir	5,34,873	21,39,491
3	Pressure Tunnel	2,498	47,455
4	Tail race tunnel	1,338	25,422
5	Buried Penstock	38,250	2,16,752
6	Head Race Tunnel	9,367	1,77,973
7	Adits & Adit Portals	6,940	39,328
8	Surge Shaft	10,602	42,409
9	Powerhouse	47,416	9,00,905
10	Lower & Upper Intake	1,18,688	4,74,753
11	Cable Tunnel	371	3,337
12	Butterfly Valve Chamber	7,494	29,975
13	Pithead Yard	10,470	24,431
Total		8,55,965	41,51,226

S. No.	Component	Quantity in Cum	
		Soil	Rock
	Excavated material to be used for rockfill and aggregate	5,13,579	24,90,736
	Balance quantity of Muck to be dumped	3,42,386	16,60,490
	Swell Factor	0.83	0.70
	Balance quantity of Muck to be dumped	4,12,513	23,72,129
	Total quantity of Muck to be dumped		27,84,642

10.6.2 Muck Disposal Site

Keeping the above requirement and vicinity of the excavation sites in view, excavated muck is to be dumped in pre-identified 5 disposal sites with a total area of about 41.0 ha and capacity has been worked as 33,73,000 cum (Table 10.16). The disposal site was identified taking into consideration availability of suitable area, minimum distance from generation sites.

Table 10.16: Muck to be generated from various components of the project

Dumping site	Area in m ²	Capacity of Dumping Site (cum)
Dumping Area 1-North of Lower Reservoir	36,000	4,32,000
Dumping Area 2: East of Lower Reservoir	64,000	4,00,000
Dumping Area 3: South of Lower Reservoir	31,500	3,16,000
Dumping Area 4: South of Lower Reservoir	28,500	3,25,000
Dumping Area 5: South of Lower Reservoir	2,50,000	19,00,000
Total	410,000	33,73,000

10.6.2.1. Criteria for Selection of Dumping Site

The following points were considered and followed as guidelines for finalization of the areas to be used as dumping sites:

- The dumping sites have been selected as close as possible to the project area to avoid long-distance transport of muck.
- The site is free from any landslides or creep and care has been taken that the sites do not have a possibility of toe erosion and slope instability.
- There is no active channel or stream flowing through the dumping sites.
- The site is away from human settlement areas.

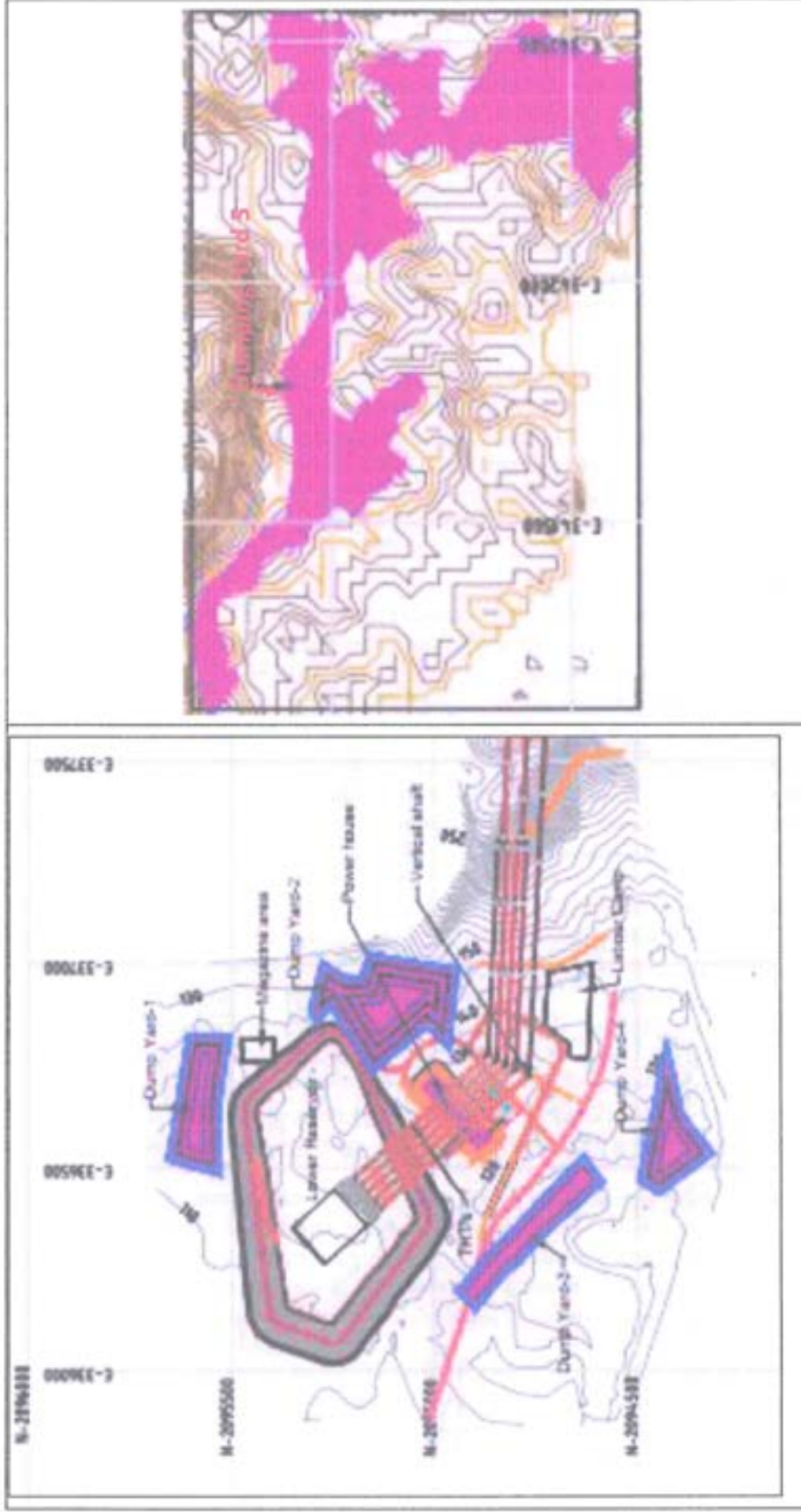
The identification of muck disposal areas was done in line with the topographic and site-specific conditions as specified above.

10.6.2.2. Methodology of Dumping

The muck that needs disposal would be piled at ϕ (angle of repose) maximum of 30° at the proposed dumping site. The description regarding the stabilization of the stacked material along the proposed roads has been discussed in the following paragraphs.

The options like dumping muck in stages and allowing it to consolidate/settle through the monsoon, compacting the dumped muck with Bulldozer movement, zoning of the dump judiciously to ensure the stability of 30° slope under all superimposed conditions will be explored and utilized. The main objectives of process of muck dumping and restoration of these muck disposal sites are:

- to protect and control soil erosion;
- to create greenery in the muck disposal area;



a. Muck Disposal Sites located near Lower reservoir

b. Muck Disposal Sites located near Upper reservoir

Figure 10.6: Layout Map Showing Location of Muck Dumping Sites



- to improve and develop the sites into recreational site;
- to ensure maximum utilization of muck for the construction purpose;
- to develop the muck disposal site/ dumping yard to blend with the surrounding landscape.
- to minimize damages due to the spoilage of muck in the project area.

In Bhivpuri PSP, a scientific approach and methodology was followed for identification of the dumping site. All possible alternate sites were inspected and examined before rejecting or selecting any site. The dumping site is characterized by:

- i) low vegetation cover,
- ii) the populated /settlement areas are away from the dumping site and therefore will have least impact on human settlements, and
- iii) the identified muck site is close to the area of generation to avoid hazards related to transport of muck for long distances and minimizing traffic problems.
- iv) the identified muck sites are close to the sites from where muck is to be generated to avoid hazards related to transport of muck to long distances.

a) Dumping Process

The generated muck will be carried in dumper trucks covered with heavy duty tarpaulin properly tied to the vehicle in accordance with best international practices. All precautionary measures will be followed during the dumping of muck. All dumpers will be well maintained to avoid any chances of loose soil from being falling during transportation. All routes will be periodically wetted with the help of sprinklers prior to the movement of dumper trucks. Dumping would be avoided during the high-speed wind, so that suspended particulate matters (SPM) level could be maintained. Further, dumping will be avoided during heavy traffic. After the dumping the surface of dumps will be sprayed with water with the help of sprinklers and then compacted.

A retaining wall has been proposed to hold the muck on the lower part of the dumping site and shall be constructed prior to dumping of muck. Loose muck would be compacted layer-wise. The height of Gabion Wall is proposed to be 6m on average. The muck brought by dumpers will be spread in layers behind the wire crate walls and then compacted by rollers till the top level is achieved. The retaining wall shall be laid with proper berm and the muck dumped behind it in layers and compacted by rollers. The process shall be repeated up to 50 cm level below the desired height which shall be laid with good soil for providing grass cover. At a regular vertical interval of 1.5 m and 3.0 m c/c masonry drains (catch water drains) shall be provided to drain off the rainwater. Proper fencing of the entire area will be done.

The muck disposal area will ultimately be covered with fertile soil and suitable plants will be planted adopting suitable bio-technological measures. The project authorities would ensure that the dumping yards blend with the natural landscape by developing the site with gentle slope, patches of greenery in and around them. These sites can also be developed later as recreational parks and tourist spots with sufficient greenery by planting trees.

The Rehabilitation plan of muck dumping sites includes engineering and biological measures. Most of the total unused excavated muck would be placed at an angle of repose to avoid any slippage of the muck at the proposed dumping sites. Slopes would be broken up by creating benches across the slope. This will be done to provide stability to the slopes and also to

provide ample space for planting trees which would further help in holding and consolidating the material stacked at different sites. As stated earlier, efforts will be made to dispose of the muck within short distances from sites of its generation.

The capacity/volume of the muck dumping sites is more than the volume of the muck to be disposed. All measures would be adopted to ensure that the dumping of muck does not cause injury or inconvenience to the people or the property around the area. The spillage of muck into the river at any site would be prevented by making concrete retaining walls to retain the muck pile. It shall be ensured that dumping is carried out at a minimum distance of 30 m away from the active riverbank. The top surface would be levelled and graded after the capacity of any dumping site is exhausted. The top surface will be covered with soil and grass seeding will be ensured to promote vegetation cover.

10.6.3 Rehabilitation of Muck Disposal Site

The Rehabilitation plan of muck dumping site includes engineering and biological measures. The project authorities would ensure that the dumping yards blend with the natural landscape to develop the site with patches of greenery in and around it. The site can also be developed later as a recreational park or any other purpose with sufficient greenery by planting ornamental plants. The muck dumping site would be developed as Eco-Park which would not only help in rehabilitation of disposed muck site but also help in propagating biodiversity conservations measures. The following engineering and biological measures have been proposed for the development of spoiled areas.

10.6.3.1. Engineering Measures

For stacking of dumped material, and mainly to avoid spillage of muck beyond the acquired boundary of muck disposal area, RR masonry retaining wall is proposed to be built before dumping of any material on the site.

The methodology consists in developing the formation width is half cutting and half filling, so that the materials obtained from cutting are utilized in filling. The excavation on the hill side will be done to get a stable slope for the materials encountered. At places breast wall, gabion walls shall be done in natural slope to retain filled material, particularly where there is problem of retaining the slope.

- i) **Retaining Wall:** Total area of land for dumping of muck is 41.0 ha i.e., which can accommodate about 44.0 lakh cum. Considering the topographical condition of site provision of retaining wall has been made around the proposed muck disposal sites. The retaining wall shall have RCC base of 100mm thick and a width of about 3.0 m. The masonry wall is proposed with weeping pipes with PVC pipes of 100mm for drainage. The leveling & Sloping would be done after dumping the material after every cycle and simultaneously improving the drainage of the disposal site.
- ii) **Compaction and Levelling:** Compaction is an engineering measure, which would reduce bulk density of the muck thereby optimizing the use of muck disposal area and would make it suitable for the plantation and other biological measures. The top surface would be levelled and graded to make the alternative use. The muck will be spread in layers of 500-700 mm thick layers. Top surface would be levelled and graded to make the alternative use. On top a

layer of soil would be spread to make the land suitable for plantation. The total cost for the process of compaction is Rs. 350.00 lakh.

- iii) **Fencing:** Fencing is a bio-engineering measure. After rehabilitation of muck the dumping area need protection for some time from disturbing by human and domestic animals. For this reason, fencing around the muck deposited is required. Barbed wire strands with two diagonal strands, clamped to wooden/ concrete posts placed at 3 m distance are proposed around the dumping piles. Project authorities will establish temporary wind barriers around 3 sides of dumps close to the settlements.

The muck is proposed to be filled in layers properly compacted. The estimated cost for the engineering measures has been given in Table 10.17. In addition, catch water drains are also proposed to be built and levelling of soil would also be done after dumping the material on every cycle and simultaneously improving the drainage of the disposal site. The estimated cost of engineering measures would be Rs. 3206.37 lakh.

Table 10.17: Estimated Cost of Engineering Measures

S. No.	Particular	Quantity	Unit Rate	Cost (In Lakh)
1	Earthwork for foundation (Cum)	20500	300	61.50
2	PCC 100 mm Thick M10 Grade Concrete (Cum)	6360	4500	286.20
3	R.R. Masonry (Cum)	63600	3500	2226.00
4	Weep Holes with PVC Pipe 100 mmØ @1.5m C/C Vertically & Horizontally	141333	200	282.67
5	Compacting and land levelling, etc.		LS	350.00
	Total cost (In Lakhs)			3206.37

10.6.2.3. Biological Measures

Top surface area of about 40.0 ha of muck dumping area will be restored and will be treated for the purpose of plantation. Vegetation cover controls the hydrological and mechanical effects on soils and slopes. Therefore, biological measures are essential to stabilize the loose slope and to control soil erosion. To implement the biological measures in dumping area the following activities would be considered. The biological measures include the following:

- i) **Soil treatment:** Muck dumped at various sites is not considered to be nutrient rich, excavated muck from underground components generally lacks nutrients and therefore is difficult to re-vegetate. However, if no attempts to vegetate the slopes are made, the muck could slide lower down during rain and may eventually wash off. In order to make it suitable for the plantation it will be provided bio treatment. Bio-fertilizer technique developed by National Environmental Engineering Research Institute (NEERI) can be adopted in the proposed project.

The traditional methods of afforestation of these areas would be supplemented with the use of fungus, i.e. Vesicular Arbuscular Mycorrhizae (VAM) and nitrogen fixing bacteria that form partnership with plant roots. The seeding of plants would be inoculated with VAM and nitrogen fixing bacteria before planting. It has been found that plants inoculated with bio-fertilizers grow at faster rate especially in the medium where the soil/rock is devoid of nutrients.

- ii) **Plantation:** The plantation of indigenous plant species of high ecological and economic value which can adapt to local habitat will be undertaken with 550-600 plants per hectare depending upon the canopy cover required. Major tree species which would be planted are listed in Table 10.18 below.

The muck dumping site would be developed as Eco-Park which would not only help in rehabilitation of disposed muck site but also help in propagating biodiversity conservations measures. The landscaping and restoration plan for development of Eco-Park and green belt over restored muck dumping sites will be implemented with help of landscaping experts and in consultation with State Horticulture Department as well as concerned Forest Division

The dumping areas are very small; therefore, a separate nursery would not be required. Saplings for plantation should be procured from existing forest department nursery. Nearly 1-2 years old saplings would be used for the plantation. Grasses and herbaceous species would be used in the inter space of tree and shrub species. They will help in providing the continuous chain of support in retaining debris, reinforcing soil and increasing the infiltration capacity of the area. After the process of compaction dumping site will be available for the plantation. In consultation with the forest department as well as horticultural department.

Table 10.18: List of Plant species proposed to be planted on restored muck dumping sites

S. No.	Family	Scientific Name	S. No.	Family	Scientific Name
1	Anacardiaceae	<i>Mangifera indica</i>	18	Meliaceae	<i>Chukrasia tabularis</i>
2	Anonaceae	<i>Polyalthia longifolia</i>	19	Meliaceae	<i>Melia azedarach</i>
3	Apocynaceae	<i>Nerium indicum</i>	20	Moraceae	<i>Ficus sp.</i>
4	Combretaceae	<i>Anogeissus pendula</i>	21	Myrtaceae	<i>Syzygium sp.</i>
5	Combretaceae	<i>Terminalia sp.</i>	22	Ochnaceae	<i>Ochna obtusata</i>
6	Euphorbiaceae	<i>Jatropha curcas</i>	23	Rubiaceae	<i>Anthocephalus cadamba</i>
7	Fabaceae	<i>Acacia sp.</i>	24	Rubiaceae	<i>Mitragyna parvifolia</i>
8	Fabaceae	<i>Albizia sp.</i>	25	Rubiaceae	<i>Morinda pubescens</i>
9	Fabaceae	<i>Cassia fistula</i>	26	Rutaceae	<i>Aegle marmelos</i>
10	Fabaceae	<i>Dalbergia sp.</i>	27	Sapotaceae	<i>Madhuca indica</i>
11	Fabaceae	<i>Bauhinia sp.</i>	28	Acanthaceae	<i>Justicia adhatoda</i>
12	Fabaceae	<i>Senna montana</i>	29	Apocynaceae	<i>Nerium indicum</i>
13	Lamiaceae	<i>Tectona grandis</i>	30	Euphorbiaceae	<i>Jatropha curcas</i>
14	Magnoliaceae	<i>Magnolia champaca</i>	31	Poaceae	<i>Dendrocalamus strictus</i>
15	Malvaceae	<i>Bombax ceiba</i>	32	Sapindaceae	<i>Dodonaea viscosa</i>
16	Meliaceae	<i>Azadirachta indica</i>	33	Verbenaceae	<i>Vitex negundo</i>
17	Meliaceae	<i>Toona ciliata</i>			

The estimated cost of biological measures to restore the dumping sites would be Rs. 193.25 lakh. This cost includes the cost of turfing slopes, preparation of ground, spreading of manure, etc., providing 5 cm of soil cover and transportation and carriage. It also includes the cost of fencing, irrigation, watch and ward, etc. (see Table 10.19).

Table 10.19: Total financial outlay for the biological measures at dumping sites

S. No.	Particulars	Quantity (Ha)	Rate/ ha (in Rs.)	Amount (Rs. in lakh)
1	Site preparation (Levelling and spreading of fertile soil)	41	2,00,000	82.00
2	Block Plantation	41	1,25,000	51.25
3	Cost of RCC fence post and B/Wire around Plantation site		Lumpsum	25.00

S. No.	Particulars	Quantity (Ha)	Rate/ ha (in Rs.)	Amount (Rs. in lakh)
4	Misc. (watering, transport, etc.)	-	Lumpsum	20.00
5	Maintenance for 5 years	5	3,00,000	15.00
	Total			193.25

10.6.4 Financial Requirement

The estimated cost of the relocation and rehabilitation of excavated material is given in Table 10.20. The total cost of these measures will be Rs. 3399.62 lakh.

Table 10.20: Financial requirements for implementation of Muck Disposal Plan

S. No.	Item	Amount (Rs.in lakh)
1.	Engineering measures	3206.37
2.	Biological measures	193.25
	Total	3399.62


Deputy Conservator of Forest
Pune Forest Division, Pune




Abhijeet Patil
For, The Tata Power Co. Ltd.

Water Sprinkling to reduced Fugitive Emission



Mist Gun



RO plant at Gaulwadi School



Media coverage for activity



TATA POWER LAUNCHES SOCIAL WELFARE INITIATIVES IN BHIVPURI

Tata Power reaffirmed its commitment to inclusive growth near its 1,000 MW Pumped Storage Project site with the launch of a suite of social welfare initiatives spanning education, skill development and healthcare at Gaulwadi Madhyamik Vidyalaya, Bhivpuri, Karjat. Around 1,600 students will benefit from enhanced learning infrastructure, the new science laboratory, multipurpose hall and RO plant at Gaulwadi Madhyamik Vidyalaya.

Installation of Solar Street Lights in project area



Distribution of Solar Lanterns





Project Completion Report

Setup of Mini Science Centre with BALA Painting and Capacity Building Program

Supported by: Tata Power

Location: Bhivpuri-Pune

Implemented by: ALIG Educational and Welfare Society.

1. Executive Summary

The project for the **Setup of Eight Mini Science Centre with BALA Painting and Capacity Building Programs** was implemented in Bhivpuri and Khandi, Maharashtra with the support of Tata Power. The initiative aimed to strengthen science education and create an engaging learning environment for students through interactive science exhibits, creative educational wall paintings, and training programs for teachers and students.

The Mini Science Centre was established to provide students with **hands-on exposure to scientific concepts through interactive models and demonstrations**. To further enhance the learning environment, **BALA (Building as Learning Aid) paintings** were created on school walls.



(Z.P. School Ambot)

In addition, **training sessions for teachers and students** were conducted to build capacity in activity-based science learning and encourage the effective use of the Mini Science Centre and BALA installations.

The project has successfully completed installation of science exhibits, development of BALA educational artwork, and implementation of training sessions. The centre now serves as a vibrant learning hub for nearby schools and communities.

2. Background and Rationale

Schools in rural and semi-urban areas often face limitations in terms of laboratory facilities and experiential learning resources. Students mostly rely on textbook-based learning without opportunities to explore scientific principles through practical activities.

Recognizing this gap, Tata Power supported the creation of a **Mini Science Centre along with BALA-based educational infrastructure** to promote activity-based learning and scientific curiosity among students in Bhivpuri and surrounding areas.

The project integrates three important components:

- Interactive science learning
- Educational infrastructure through BALA
- Capacity building for teachers and students

This integrated approach ensures that the benefits of the science centre are effectively utilized and sustained.



(Z.P. School Bhivpuri)

3. Project Objectives

Primary Objectives

1. Establish **Eight Mini Science Centre with interactive exhibits.**
2. Promote **hands-on science learning for students.**
3. Enhance school infrastructure through **BALA educational paintings.**
4. Build **teacher capacity for activity-based science teaching.**

Secondary Objectives

- Encourage curiosity and scientific thinking among students
- Improve engagement in science and mathematics
- Provide visual learning tools across the school campus
- Strengthen community awareness about science education

4. Project Location

The project was implemented at:

📍 Bhivpuri Village

Taluka: **Karjat**

District: **Raigad**

State: **Maharashtra**

The area lies close to **Pune** and serves several nearby rural schools.



(Z.P. School Karalewadi)

5. Project Components

5.1 Mini Science Centre Setup

A dedicated Mini Science Centre was established with **interactive models and learning exhibits** demonstrating key concepts in science.

Major Exhibits Installed

Major Exhibits Installed

- Simple Machines (Levers, Pulleys)
 - The ball seesaw - Delivered and installation completed
 - Double track Slop (Balance Scale) - Delivered and installation completed
- Optical Illusion Panel
 - Holographic 3D projector - Delivered and installation completed
 - Mini Projector - Models were returned and in transit
- Periscope Model
 - Microscope Model - Delivered and installation completed
 - Magnetic Field Demonstration
 - Maglev Pen - Models were returned and in transit
 - Magnetic Stick Building Block - Delivered and installation completed

- Electricity Circuit Models
 - Coin Eating Robot - Delivered and installation completed
 - Aircraft carrier catapult -Delivered and installation completed
 - Voice Controlled Mechanical Dog - Delivered and installation completed
- Solar Energy Demonstration
 - DIY 4-in-1 STEM Kit, DIY Solar Science Experiment Kit - Delivered and installation completed
 - Working Solar System - Delivered and installation completed
 - Solar System Puzzle -Delivered and installation completed
- Mathematical Puzzles and Logic Games
 - Money Bank - Models were returned and in transit
 - Zenga - Delivered and installation completed
 - Balance & Stability STEM Kit - Models were returned and in transit

The centre provides **hands-on learning opportunities** where students can interact with exhibits and understand scientific principles through observation and experimentation.



(Z.P. School Khandi)

5.2 BALA (Building as Learning Aid) Painting

To transform the school environment into a **continuous learning space**, BALA paintings were developed across the school premises.

Key Features of BALA Implementation

- Educational wall paintings in classrooms and corridors
- Science and mathematics concepts illustrated visually
- Geometry and number games on walls
- Environmental awareness themes

These paintings convert ordinary school spaces into **interactive educational tools**, enabling students to learn even outside the classroom.

5.3 Teacher Training Program

Training workshops were conducted for teachers to help them integrate **activity-based science learning** into classroom teaching.

Training Topics

- Effective use of Mini Science Centre exhibits
- Conducting simple science experiments
- Activity-based teaching methods
- Use of BALA resources in daily teaching
- Student engagement techniques

Teachers were encouraged to use the centre as a **regular teaching support facility** rather than occasional demonstration space.



(Z.P. School Kusur)

5.4 Student Training and Orientation

Students were introduced to the Mini Science Centre through guided sessions and demonstrations.

Activities Conducted

- Science demonstrations
- Hands-on experiment sessions
- Interactive science quizzes
- Educational games related to BALA paintings

These sessions helped students develop **curiosity, observation skills, and critical thinking**.

6. Implementation Process

The project was executed in multiple stages:

Phase 1: Planning and Assessment

- Site visit and needs assessment
- Identification of space for science centre
- Planning of BALA artwork themes
- Coordination with school authorities

Phase 2: Infrastructure Preparation

- Painting and interior setup
- Installation preparation for exhibits

Phase 3: Exhibit Installation

- Fabrication and delivery of science models
- Installation of Science Models
- Setup of demonstration area

Phase 4: BALA Painting Implementation

- Design of educational artwork
- Painting of walls, and corridors
- Development of interactive learning spaces

Phase 5: Training Programs

- Teacher training workshops
- Student orientation and activity sessions
- Demonstration-based learning sessions



(Z.P. School Mandavane)

7. Beneficiaries

The project benefits the following groups:

Beneficiary Group Estimated Numbers

School Students 400-500 approx. Annually

Teachers 18+

Students from nearby schools in the Bhivpuri and Karjat region regularly visit the Mini Science Centre.

8. Outcomes and Impact

Improved Learning Environment

- Interactive exhibits encourage hands-on learning
- BALA paintings make the entire school a learning space

Enhanced Teacher Capacity

- Teachers gained new methods for teaching science
- Increased use of practical demonstrations

Student Engagement

- Students show greater interest in science and mathematics
- Improved understanding of scientific concepts

Community Impact

- Increased awareness of science education
- Encouragement of curiosity and innovation among youth



(Z.P. School Nilshi)

9. Monitoring and Evaluation

Project monitoring includes:

- Visitor registers at the science centre
- Feedback from teachers and students
- School participation records
- Periodic evaluation of exhibit usage

Regular review will ensure continued effectiveness of the facility.

10. Sustainability Plan

To ensure long-term sustainability:

- Teachers will regularly use the Mini Science Centre in lessons
- School administration will maintain exhibits
- New activities and demonstrations will be periodically introduced
- Continued engagement with nearby schools will be encouraged



(Z.P. School Vaijanath)

11. Acknowledgement

We extend our sincere gratitude to **Tata Power** for their valuable support in establishing the **Mini Science Centre and BALA learning infrastructure** in **Bhivpuri**. Their commitment to education and community development has significantly contributed to enhancing learning opportunities for students in the region.

We also thank the school administration, teachers, students, and local community members for their cooperation and participation in successfully implementing the project.



स्वाच्छ स्वस्थ परिसर, आरोग्य निरोमी भिरेतर

रायगड जिल्हा परिषद प्राथमिक शाळा, आंबोट

ता. कर्जत, जि. रायगड.

E.M.I.S. No. : 0200401

जायक क्र. :

सारे शिकुया, पुढे जाऊया

दिनांक :

Date: 09-03-2026

To,
The Manager, CSR
Tata Power, Bhivpuri,
Pune, Maharashtra.

Subject: Setup of Mini Science Centre.

Dear Sir,

We would like to express our sincere appreciation and gratitude for your valuable support in the establishment of the Mini Science Centre at our school. Your encouragement and initiative have played a significant role in enhancing the learning environment for students.

As part of this initiative, the lab has been equipped with BALA (Building as Learning Aid) paintings on all four walls, 35 STEM-based Science Models with Visual Learning Backdrops, a dedicated Storage Rack, and orientation sessions for teachers and students on the effective use of the science models. These resources will significantly strengthen experiential and activity-based learning among students and help cultivate scientific curiosity and understanding.

Thank you,

Principal


मुख्याध्यापक
रा.नि.प. शाळा-आंबोट
ता. कर्जत जि. रायगड



Date: 14/03/2026

To,
The Manager, CSR
Tata Power, Bhivpuri,
Pune, Maharashtra.

Subject: Setup of Mini Science Centre.

Dear Sir,

We would like to express our sincere appreciation and gratitude for your valuable support in the establishment of the Mini Science Centre at our school. Your encouragement and initiative have played a significant role in enhancing the learning environment for students.

As part of this initiative, the lab has been equipped with BALA (Building as Learning Aid) paintings on all four walls, 45 STEM-based Science Models with Visual Learning Backdrops, a dedicated Storage Rack, and orientation sessions for teachers and students on the effective use of the science models. These resources will significantly strengthen experiential and activity-based learning among students and help cultivate scientific curiosity and understanding.

Thank you,

Principal

Bhadelay

मुकुटाध्यापक

जिल्हा परिषद प्राथमिक शाळा सांडी
ता-भाकळ जिल्हा-पुणे



रायगड जिल्हा पारिषद प्राथमिक शाळा, कराळेवाडी

ता. कर्जत, जि. रायगड.

UDISE CODE : 27240220101

E-mail Id. : rzpkaralewadi@gmail.com



सारे शिकुया, पुढे जाऊया

दिनांक : 11/3/2026

To.

The Manager, CSR

Tata Power, Bhiwari

Pune, Maharashtra

Subject :- Setup of Mini science Centre

Dear sir

We would like to express our sincere appreciation and gratitude for your valuable support in the establishment of mini science centre at our school your encouragement and initiative have played a significant role in enhancing the learning environment for students

As part this initiative, the lab has been equipped with BALA (Building as Learning Aid) paintings on all four walls, 35 STEM-based science models with visual Learning Backdrops, a dedicated storage rack, and orientation sessions for teachers and students on the effective use of the science models. These resources will significantly strengthen experiential and activity-based learning among students and help cultivate scientific curiosity and understanding

Thank you

मुकुंदराव
रा. वि. प. शाळा, कराळेवाडी
ता. कर्जत, जि. रायगड

स्वच्छ शूंदर परिसर, आरोग्य निरोधी निरंतर

स्थापना १९९६



रायगड जिल्हा परिषद प्राथमिक केंद्रशाळा, वैजनाथ

ता. कर्जत, जि. रायगड.
UDISE NO. : 27240214501
सारे शिकुया, पुढे जाऊवा

पत्रांक क्र. :



दिनांक : 10/03/2026

To
The Manager CSR
Tata Power, Bhivpuri,
Pune Maharashtra.

Subject:- Setup of Mini Science Centre.

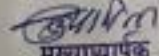
Dear Sir,

We would like to express our sincere appreciation and gratitude for your valuable support in the establishment of the mini science at our school. Your encouragement and initiative have played a significant role in enhancing the learning environment for student.

As part of this initiative, the lab has been equipped with BALA (Building as Learning Aid) paintings on all our four walls, US system-based science Models with Visual Learning Backdrops, a dedicated storage Rack, and orientation sessions for teachers and students on the effective use of the science models. These resources will significantly strengthen experiential and activity based learning among students and help cultivate scientific curiosity and understanding.

Thank you.

Principal


मुख्याध्यापक
रा.जि.प.केंद्र शाळा वैजनाथ
ता. कर्जत जि. रायगड



स्वच्छ सुंदर परिसर, आरोग्य निरोधी निरंतर

रायगड जिल्हा परिषद प्राथमिक शाळा, भिवपुरी

ता. कर्जत, जि. रायगड.

E.M.I.S. No. : 0202701

सारे शिकुया, पुढे जाऊया

जावक क्र. :

To

The Manager, CSR
Tata power, Bhiupuri
Pune. Maharashtra

Subject - setup of Mini Science center.

Dear sir,

We would like to express our science appreciation and gratitude for your valuable support in the establishment of the mini science center at our school. Your encouragement and initiative have played a significant role in enhancing the learning environment for students.

As part of this initiative, the lab has been equipped with BOLA (Building as Learning Aid) paintings on all four walls, 35 STEM-based science models





स्वच्छ सुंवर परिसर, आरोग्य निरोगी निरंतर

रायगड जिल्हा परिषद प्राथमिक शाळा, भिवपुरी

ता. कर्जत, जि. रायगड.

E.M.I.S. No. : 0202701

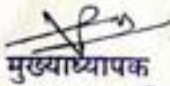
सारे शिकुया, पुढे जाऊया

जावक क्र. :



with visual learning backdrops, a dedicated storage rack and orientation sessions for teachers and students on the effective use of the science models. These resources will significantly strengthen experiential and activity-based learning among students and help cultivate scientific curiosity and understanding.

Thank you


मुख्याध्यापक

रा.जि.प.प्रा. शाळा भिवपुरी

ता. कर्जत, जि. रायगड

Principal

Date:14/03/2026

To,
The Manager, CSR
Tata Power, Bhivpuri,
Pune, Maharashtra.

Subject: Setup of Mini Science Centre.

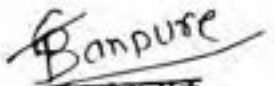
Dear Sir,

We would like to express our sincere appreciation and gratitude for your valuable support in the establishment of the Mini Science Centre at our school. Your encouragement and initiative have played a significant role in enhancing the learning environment for students.

As part of this initiative, the lab has been equipped with BALA (Building as Learning Aid) paintings on all four walls, 45 STEM-based Science Models with Visual Learning Backdrops, a dedicated Storage Rack, and orientation sessions for teachers and students on the effective use of the science models. These resources will significantly strengthen experiential and activity-based learning among students and help cultivate scientific curiosity and understanding.

Thank you,

Principal


मुख्याध्यापक
त्रि. प. प्राथमिक शाळा.
हनुमूर, ता. मावळ जि. पुणे

Date:

To,
The Manager, CSR
Tata Power, Bhivpuri,
Pune, Maharashtra.

Subject: Setup of Mini Science Centre.

Dear Sir,

We would like to express our sincere appreciation and gratitude for your valuable support in the establishment of the Mini Science Centre at our school. Your encouragement and initiative have played a significant role in enhancing the learning environment for students.

As part of this initiative, the lab has been equipped with BALA (Building as Learning Aid) paintings on all four walls, 45 STEM-based Science Models with Visual Learning Backdrops, a dedicated Storage Rack, and orientation sessions for teachers and students on the effective use of the science models. These resources will significantly strengthen experiential and activity-based learning among students and help cultivate scientific curiosity and understanding.

Thank you,

Principal


मुख्याध्यक्ष
शि.प.प्रा.प. शाळा मिलशी
ता. भिवपूर, जि. पुणे

12. Conclusion

The establishment of the Mini Science Centre, combined with BALA educational infrastructure and capacity-building programs, has created a **dynamic and engaging learning ecosystem** for students.

This initiative has strengthened science education by promoting **experiential learning, visual engagement, and teacher empowerment**. With continued use and support, the centre will remain a valuable resource for nurturing **scientific curiosity and innovation among students** in the Bhivpuri region.

*****END*****

Annexure 5a

Photos of Education initiatives and media clips

Science exhibition





Mini Science Centre



ग्रामीण विद्यार्थ्यांसाठी टाटा पॉवरचा विज्ञान मेळावा उपक्रम



। रायगड टाइम्स ।

उरण । ग्रामीण भागातील विद्यार्थ्यांमध्ये विज्ञानाविषयी आवड निर्माण करण्यासाठी टाटा पॉवरने खांडी व भिवपुरी परिसरातील दोन शाळांमध्ये विज्ञान मेळाव्यांचे आयोजन केले. या उपक्रमात ८०० हून अधिक विद्यार्थी आणि सुमारे ५० शिक्षकांनी सहभाग घेतला.

मालेगाव (खांडी परिसर) येथील सेवाधाम ट्रस्ट आश्रमशाळा तसेच भिवपुरी परिसरातील गौळवाडी माध्यमिक शाळेत हे कार्यक्रम पार पडले. राष्ट्रीय विज्ञान दिनाच्या औचित्याने आयोजित करण्यात आलेल्या या मेळाव्यांना टाटा पॉवरच्या 'क्लब एनर्जी' उपक्रमाची प्रेरणा मिळाली आहे.

या मेळाव्यात विद्यार्थ्यांनी विज्ञान प्रतिकृती प्रदर्शन, पोस्टर स्पर्धा, प्रश्नमंजुषा, निबंध लेखन, रांगोळी स्पर्धा आणि पथनाट्य अशा विविध उपक्रमांमध्ये उत्साहाने सहभाग घेतला. या माध्यमातून नूतनीकरणक्षम ऊर्जा, पर्यावरण संवर्धन आणि तंत्रज्ञानाचा जबाबदारीने वापर यांसारख्या विषयांवर विद्यार्थ्यांनी आपले विचार मांडले. मालेगाव येथील कार्यक्रमात ४०० हून अधिक विद्यार्थी आणि ३० शिक्षक सहभागी झाले होते. सुमारे ५० विद्यार्थ्यांनी ऊर्जा व तंत्रज्ञानाशी संबंधित विज्ञान प्रकल्प सादर केले. रांगोळी स्पर्धेतही विद्यार्थ्यांनी विज्ञान आणि पर्यावरणाचे विषय सजंनशीलतेने मांडले.

खांडी, मालेगाव, भिवपुरी परिसरात टाटा पॉवर कंपनीतर्फे विज्ञान मेळावा उत्साहात

कर्जत : पुढारी वृत्तसेवा

द्वितीय पायलीन विद्यार्थ्यांमध्ये विज्ञान महत्वाची ओढ निर्माण करणाऱ्यासाठी टाटा पॉवर कंपनीने वेगवेगळे उपक्रम राबवत आहे. याचाच एक भाग म्हणून कंपनीने पुढारी वृत्तातल्या खांडी मालेगाव आणि भिवपुरी परिसरात संवसारात्मक विज्ञान मेळावे आयोजित केले होते. मालेगाव येथील मंत्रालय ट्रस्ट आराम शाळा आणि गौडवाडी प्राथमिक शाळा येथे हे कार्यक्रम पार पाडले. विज्ञानाशी संबंधित कृतीशील उपक्रम आणि प्रकल्पानेच याप्रमाणेनून संकेतो विद्यार्थी यामध्ये सहभागी झाले होते.

शासने विद्यार्थ्यांमध्ये ऊर्जा वजन, शक्तीसह आणि पर्यावरणसह नवनिर्मितीस प्रोत्साहन देण्यासाठी टाटा पॉवरच्या कर्मचारी वृत्ती उपक्रमानेही याचवेळी आयोजित केलेच यासाठी या शाळांना ऊर्जा मेळा आणि साधने ऊर्जा मेळा या संकल्पनांमुळे या मोहिमेची वेगळी मिळालेली होती. मालेगाव येथील मंत्रालय ट्रस्ट आराम शाळेत पार पाडलेल्या या कार्यक्रमात ४०० हून अधिक विद्यार्थी आणि ३० शिक्षक सहभागी झाले होते. सुमारे ५० विद्यार्थ्यांनी ऊर्जा, शक्तीसह आणि



दैनंदिन जिव्हातेशी संबंधित संकल्पना स्पष्ट करणाऱ्या विद्यार्थ्यांचा प्रतिक्रमी सादर केल्या. टाटा पॉवर कंपनीमध्ये १० विद्यार्थ्यांनी सहभाग घेऊन विज्ञान आणि पर्यावरणामध्ये विविध कार्यक्रमांचे मांडले. मालेगावच्या पोलीस पदवारीनेही या कार्यक्रमात वेग दिली. त्यांनी विद्यार्थ्यांशी संवाद साधून त्यांच्यातील विज्ञानासाठी आसलेला उत्साह आणि नवनिर्मितीचे बीज रोवले.

गौडवाडी गावातील गौडवाडी माध्यमिक शाळेत पार पाडलेल्या विज्ञान मेळाव्यात ४०० हून अधिक विद्यार्थी आणि २० शिक्षकांनी उपस्थाने सहभाग घेतले. सुमारे ५० विद्यार्थ्यांनी प्रत्युक्त, पुढारीवृत्तसह ऊर्जा आणि शक्तीसह पदवी संशोधन विभागात आयोजित विज्ञानसह

प्रतिक्रमी सादर केल्या. विद्यार्थ्यांचे प्रत्युक्त, विविध लेखन आणि वेगळे संकल्पनासाठी सहभाग घेतले. याप्रमाणे विद्यार्थ्यांनी त्यांची विज्ञानात आणि आवडत सहभागात मजद झाली. प्रत्युक्त आणि संशोधनाचा कळवढात काल या विद्यार्थ्यांनी प्रश्न उत्तर परीक्षांमध्ये विद्यार्थ्यांचे विज्ञानाच्या मजतीने पर्यावरणसह आसलेले कर्मी लोडवडा घेतले. याचा विचार आरामसह प्रत्युक्त केले.

या उपक्रमांचेच भाग म्हणून, टाटा पॉवर कंपनी द्वारेही पारलिय विज्ञान दिवस आणि कृतीशील शिक्षणात सहभागीने प्रोत्साहन देत आहे. यामुळे विद्यार्थ्यांमध्ये विज्ञानसहर्तची विज्ञान, सर्वसंगीतता आणि आनंदसहसा सहान बघणाऱ्यांमधून निर्माण होण्यास मदत होत आहे.

टाटा पॉवरने खांडी आणि भिवपुरी येथील दोन शाळांमधील ८०० हून अधिक विद्यार्थी आणि ५० शिक्षकांसाठी विज्ञान मेळाव्याचे आयोजन केले

तहल्ल्या संस्थाकार, प्रतिनिधी

द्वितीय पायलीन विद्यार्थ्यांमध्ये विज्ञानमहत्वाची ओढ निर्माण करणाऱ्यासाठी टाटा पॉवर कंपनीने वेगवेगळे उपक्रम राबवत आहे. याचाच एक भाग म्हणून कंपनीने पुढारी वृत्तातल्या खांडी आणि भिवपुरी परिसरात संवसारात्मक विज्ञान मेळावे आयोजित केले होते. मालेगाव (खांडी परिसर) येथील मंत्रालय ट्रस्ट आराम शाळा आणि गौडवाडी प्राथमिक शाळा (भिवपुरी परिसर) येथे हे कार्यक्रम पार पाडले. विज्ञानाशी संबंधित कृतीशील उपक्रम आणि प्रकल्पानेच याप्रमाणेनून संकेतो विद्यार्थी यामध्ये सहभागी झाले.



ही मोहिमे 'पारंपरिक विज्ञान दिनच्या' अर्थिकांचे आयोजित करण्यात आले होते. शासने विद्यार्थ्यांमध्ये ऊर्जा वजन, शक्तीसह आणि पर्यावरणसह नवनिर्मितीस प्रोत्साहन देण्यासाठी टाटा

पॉवरच्या 'क्लब एनर्जी' (Club Energy) उपक्रमाचाही इतरही आयोजित केलेच यासाठी या शाळांना ऊर्जा मेळा आणि साधने ऊर्जा मेळा या संकल्पनांमुळे या मोहिमेची वेगळी मिळालेली होती. या

मेळाव्यांचे विद्यार्थी आणि शिक्षकांसाठी विज्ञान आणि संशोधनसह नवनिर्मितीस वरदान म्हणून उपक्रमांचे आयोजित केले. याचवेळी विविध उपक्रमांच्या भाग म्हणून मुलांमधील दैनंदिनता, पुढारी आणि संस्था संशोधनासह बीज रोवता प्रोत्साहन दिले.

विद्यार्थ्यांची विज्ञान प्रतिक्रमीने पारलिय, फोटा वजन, प्रत्युक्त, विविध लेखन, वैज्ञानिक विषयांशील टाटा पॉवर आणि कळवढा सह अनेक उपक्रमांचेच सहभाग घेतले. या उपक्रमांमुळे विद्यार्थ्यांनी पुढारीवृत्तसह ऊर्जा, पर्यावरण संरक्षण आणि जिव्हातानेच

नवनिर्मितीस वरदान म्हणून उपक्रमांचे आयोजित केले. याचवेळी विविध उपक्रम आयोजित करण्यात आले.

मालेगाव येथील मंत्रालय ट्रस्ट आरामशाळेत पार पाडलेल्या या कार्यक्रमात ४०० हून अधिक विद्यार्थी आणि ३० शिक्षक सहभागी झाले होते. सुमारे ५० विद्यार्थ्यांनी ऊर्जा, शक्तीसह आणि दैनंदिन जिव्हातानेच संबंधित संकल्पना स्पष्ट करणाऱ्या विद्यार्थ्यांचे विज्ञानाच्या मजतीने पर्यावरणसह आसलेले कर्मी लोडवडा घेतले. याचा विचार आरामसह प्रत्युक्त केले.

Medical Facility: Strengthening of Medical Infrastructure at Kadav







Health Camps for Employees & Workers





Publication: Karjat Live

[Link](#)



भिवपुरीच्या टाटा पॉवर प्रकल्पाने जपली सामाजिक बांधिलकी; भिवपुरी, कुशवली आणि खांडी येथील ४०० हून अधिक नागरिकांनी घेतला आरोग्य शिबिराचा लाभ

कर्जत ग्रामीण (अग्रलेख वृत्तसेवा) - कर्जत भिवपुरीच्या टाटा पॉवर प्रकल्पाने नुकत्याच घेतलेल्या आरोग्य तपासणी शिबिराचा कर्जतच्या भिवपुरी, कुशवली आणि खांडी परिसरातील सुमारे ४०० हून अधिक नागरिकांनी लाभ घेतला. प्रकल्पाच्या सामाजिक बांधिलकी फंडातून करण्यात आलेल्या या उपक्रमामुळे ग्रामीण भागातील आरोग्यसेवेला आपखीन बळकटी मिळाल्याची भावना लाभधारक ग्रामस्थांनी व्यक्त केली आहे. टाटा पॉवरच्या या कार्यक्रमाच्या निमित्ताने प्रकल्पाने खऱ्या अर्थाने सामाजिक बांधिलकी जपली असून भविष्यात देखील अशाच प्रकारचे प्रकल्प राबविले जाणार असल्याचे या निमित्ताने स्पष्ट करण्यात आले आहे. ग्रामीण भागातील सर्वसामान्य नागरिकांचे जीवनमान उंचावणे याबरोबरच समाजाच्या शेवटच्या घटकापर्यंत आरोग्यसेवा पोहोचवण्याचा प्रयत्न या निमित्ताने टाटा पॉवरच्या माध्यमातून करण्यात आला आहे. डिसेंबर महिन्यात विविध तारखांना वेगवेगळ्या ठिकाणी ही आरोग्य शिबिरे घेण्यात आली त्यामध्ये भिवपुरी येथे आयोजित पहिल्या शिबिराचा त्या



परिसरातील ९९ नागरिकांनी लाभ घेतला. या शिबिरात नेत्र तपासणी, अस्थी घनता तपासणी तसेच कान-नाक-घसा (ईएनटी) सल्ला व तपासणी अशा विविध निदान व सल्ला सेवा उपलब्ध करून देण्यात आल्या होत्या यावेळी काही नागरिकांमध्ये मोतीबिंदूसंबंधित समस्या आढळून आल्या, ज्यांना पुढील उपचारांसाठी संदर्भित करण्यात आले आहे. तर इतरांना तयार चष्मे देण्यात आले तसेच ऑस्टिओपोरोसिस व ऑस्टिओपेनिया शंसारूणा अस्थीविकारांबाबत वैद्यकीय मार्गदर्शन देखील या निमित्ताने करण्यात आले आहे. त्यानंतर कुशवली आणि खांडी येथे शिबिरे आयोजित करण्यात आलेल्या अशाच प्रकारच्या शिबिरात आली.

ज्यामध्ये अनुक्रमे १८४ आणि १२४ नागरिकांनी सहभाग घेतला. विशेष बाब म्हणजे, कुशवली येथे संध्याकाळच्या सत्राची व्यवस्था करण्यात आली होती, ज्यामुळे रोजंदारीवर काम करणारे व कामकानात व्यस्त असलेले नागरिकही सहभागी होऊ शकले. यामुळे उपक्रमाचा परिसरात मोठा बोलबाला देखील झाला.

सर्व शिबिरांमध्ये नेत्र तपासणी व चष्मांचे प्रिन्टिपान, अस्थीविकारांचे लवकर निदान करण्यासाठी अस्थी घनता चाचण्या, तसेच कान-नाक-घसा (ईएनटी) तपासणीसह आवश्यक सल्ला व औषधे नागरिकांना उपलब्ध करून देण्यात आली. उपचारांबरोबरच, प्रतिबंधात्मक आरोग्यसेवा आणि आजारांचे वेळेवर निदान यांचे महत्त्व पटवून देण्यामध्येही या शिबिरांनी महत्त्वाची भूमिका बजावली. टाटा पॉवर प्रकल्पाने राबविलेल्या या आरोग्यदायी उपक्रमाबद्दल परिसरातील नागरिकांमधून समाधान व्यक्त केले जात असून प्रकल्पाने जास्तीत जास्त प्रमाणात अशाच प्रकारचे सामाजिक उपक्रम राबवावेत अशी अपेक्षा या शिबिरातील नागरिकांकडून व्यक्त केली जात आहे.

भिवपुरीच्या टाटा पॉवर प्रकल्पाने जपली सामाजिक बांधिलकी

(TATAS TAATA)

करजत | करजत, उद्युक्तपुत्रीय विष्णुपुत्री
केवेल टाटा वीव प्रकल्पानेवरील सामाजिक
बांधिलकीने विविध आरोग्य कल्पना आलेल्या
आरोग्य तपासणी विविधता विष्णुपुत्री, कुसवली व
खांडी परिसरातील ४०० हून अधिक नागरिकांनी
लाभ घेतला. विशेष महत्त्वात विविध तपासणी
आरोग्य कल्पना आलेल्या या विविधतांमध्ये
नासिकाकडारी घेवून घेतलाली, आरोग्य तपास
तपासणी वगैरे वजन-पेज-पेज (हैप्टरी) तपासणी
व वैद्यकीय तपास केल्यात आला.

विष्णुपुत्री येथे आलेल्या विविध विविधता ११
नागरिकांनी लाभ घेतला. तर कुसवली व खांडी
येथे आरोग्य विविधतांमध्ये आणुवणे १८४ व १२४
नागरिक तपासणी घेतले होते. खांडी नागरिकांनी
कोलेक्टोरलाच्या वैद्यकीयतरे विविधता घेतले आणुव
त्यांना पुढील तपासणीतही मदतीत कल्पनात
आले. तर तपासणी करत चर्चे केल्यात आले.
आरोग्यकल्पनाकडारी तपासणी घेवून घेतले
कल्पनात आले. विशेष महत्त्वात कुसवली येथे
तपासणीतल्या खांडी तपासणी केल्यात कल्पनात
व वैद्यकीय तपास केल्यातला नागरिकांनीही
सहाय्य घेतला. या आरोग्यतरे उद्युक्तपुत्रीय
विष्णुपुत्रीय नागरिकांनी तपासणी घेतली.



करजत परिसरातील भिवपुरी, कुसवली आणि खांडी
येथे डिसेंबर २०२५ मध्ये टाटा पॉवरने आयोजित
केलेल्या आरोग्य शिविरांमधून ४०० पेक्षा अधिक
नागरिकांना मोफत आरोग्य तपासणीचा लाभ मिळाला.

डोळे, हाडे आणि कान-नाक-घसा तपासण्यांमुळे अनेक
आजार वेळेत ओळखता आले, तर गरजू रुग्णांना औषधे
व चर्चे देण्यात आले.
समुदायाच्या आरोग्य आणि जीवनमान उंचावण्यासाठी
टाटा पॉवरची ही एक छोटी पण महत्त्वाची पायले ठरली.

Annexure 7: Training / Skill development media coverage

Electrician Training



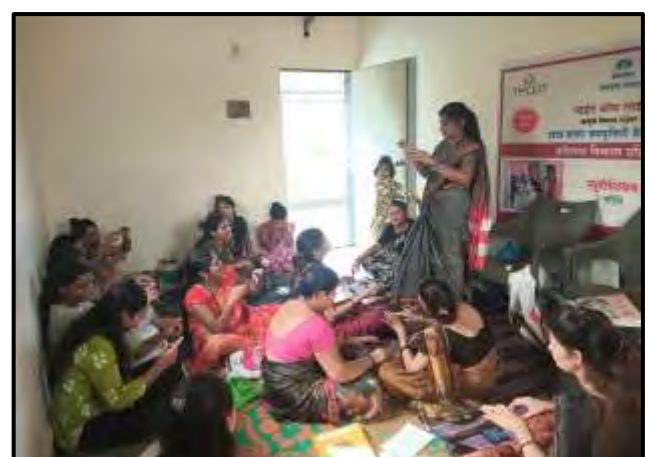
Plumbing Training



Hospitality Training



Beauty parlour Training



Fabric Painting Training



Aari work Training



Tailoring Training





महिला सक्षमीकरण, उद्योजकता विकास कार्यक्रम उत्साहात टाटा पॉवर कंपनीतर्फे आयोजन

देहूरोड, ता. २७ : टाटा पॉवर कंपनीने औद्योगिक सामाजिक उत्तरदायित्व (सीएसआर) प्रकल्पांतर्गत महिला सक्षमीकरण व उद्योजकता विकास कार्यक्रम उत्साहात राबविला. आंदर मावळातील अतिदुर्गम आदिवासी भागातील सावळा, खांडी व कुसूर येथे कार्यक्रम घेण्यात आले.

एक हजार मेगावॉट भिवपुरी पीएसपी सीएसआर, तसेच टाटा पॉवर हायड्रो सीएसआर अंतर्गत हे कार्यक्रम घेण्यात आले. महिलांना स्वतःची स्वतंत्र ओळख निर्माण करता यावी, उद्योजकतेच्या माध्यमातून अर्थार्जन करता यावे तसेच कुटुंबाच्या आर्थिक गरजांमध्ये हातभार लावता यावा हा या उपक्रमाचा मुख्य उद्देश आहे. सामाजिक

विकासाच्या प्रक्रियेत महिलांचा सक्रिय सहभाग वाढावा, यासाठी विविध कौशल्याधारित प्रशिक्षण कार्यक्रम राबविण्यात येणार असल्याची माहिती यावेळी देण्यात आली.

उद्घाटन प्रसंगी विद्यार्थ्यांनी मनोगत व्यक्त केले. प्रशिक्षण व शिक्षणाबाबत त्यांनी समाधान व्यक्त केले. अर्चना शिंदे व सखू म्हसे यांनी सूत्रसंचालन केले. हौसा मोरमारे आणि सखू म्हसे यांनी आभार मानले. उपक्रम टाटा पॉवर कंपनी, ग्रामपंचायत कुसूर, खांडी व सावळा तसेच अथर्व येवले सोशल फाउंडेशन यांच्या संयुक्त सहकार्याने उपक्रम राबविण्यात येत आहेत. यावेळी फाउंडेशनचे अधिकारी उपस्थित होते.



MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 022-27572620
 Fax: 022-27562132
 Website: <http://mpcb.gov.in>
 Email: rorraigad@mpcb.gov.in



Raigad Bhavan, 6th floor,
 Sector - 11, C.B.D Belapur,
 Navi Mumbai.

ORANGE/S.S.I (064)
 No:- Format1.0/RO/UAN
 No.0000168247/CR/2307000597

Date: 11/07/2023

To,
 Diamond Stone Crushing Company
 S.No:-13/3,13/5, Vill:-Khanand, PO.Ambivali,
 Tal:-Karjat, Dist:-Raigad.



Sub: Grant of renewal of Consent to Operate under Orange Category.

Ref: 1. Consent to Operate accorded by Board vide RO-Raigad/Consent-1709000952 dtd. 26.09.2017 which was valid upto 31.03.2023.
 2. Your application No.MPCB-CONSENT-0000168247 Dated 13.04.2023

Your application No.MPCB-CONSENT-0000168247 Dated 13.04.2023

For: grant of Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 and Rule 18(7) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

- The consent to renewal is granted for a period up to 31/03/2031
- The capital investment of the project is Rs.0.95 Crs. (As per C.A Certificate submitted by industry)
- Consent is valid for the manufacture of:

Sr No	Product	Maximum Quantity	UOM
Products			
1	STONE METAL	10000	Ton/M

- Conditions under Water (P&CP), 1974 Act for discharge of effluent:

Sr No	Description	Permitted (in CMD)	Standards to	Disposal Path
1.	Trade effluent	0.0	As per Schedule-I	Not Applicable
2.	Domestic effluent	0.4	As per Schedule-I	Soaked in soak pit



5. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

Sr No.	Stack No.	Description of stack / source	Number of Stack	Standards to be achieved
1	0	NA	0	As per Schedule -II

6. **Non-Hazardous Wastes:**

Sr No	Type of Waste	Quantity	UoM	Treatment	Disposal
NA					

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for Collection, Segregation, Storage, Transportation, Treatment and Disposal of hazardous waste:**

Sr No	Category No./ Type	Quantity	UoM	Treatment	Disposal
NA					

- The Board reserves the right to review, amend, suspend, revoke this consent and the same shall be binding on the industry.
- This consent should not be construed as exemption from obtaining necessary NOC/ permission from any other Government authorities.
- The applicant shall make an application for renewal of consent 60 days prior to date of expiry of the consent. (Operate/Renewal)
- This consent is issued as per the Office Order for Consent Management of the Board No. 12/2020 dtd. 23.12.2020.



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Signed by: Shri Jaganath Sharma
Regional Officer
For and on behalf of
Maharashtra Pollution Control Board
mnpca@mahapolice.mh.gov.in
2023-07-11 10:28:05 IST

Received Consent fee of -

Sr.No	Amount(Rs.)	Transaction/DR.No.	Date	Transaction Type
1	25000.00	TXN2304002015	15/04/2023	Online Payment

Balance Fees of Rs. 4,380/- is pending with the Board and same will be adjusted in next Consent.

Copy to:

- Sub-Regional Officer, MPCB, Raigad II
- They are directed to ensure the compliance of the consent conditions.
- Chief Accounts Officer, MPCB, Sion, Mumbai



SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

1. A) Generation - As per your application the treated effluent generation is Nil.
B) Treatment - NA
C) Disposal - NA
2. A) As per your application, you have provided Septic Tank followed by Soak pit for the treatment of 0.4 CMD of sewage.
B) The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards.

Sr.No	Parameters	Standards (mg/l)	
1	Suspended Solids	Not to exceed	50
2	BOD 3 days 27°C	Not to exceed	30

- C) The treated sewage shall be soaked in soak pit and overflow if any shall be discharged on land for gardening within premise after confirming above standards.
3. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification there of & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.
4. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
5. The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, by installing water meters and other provisions as contained in the said act:

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	3.00
2.	Domestic purpose	5.00
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	0.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00
5.	Gardening	0.0

6. The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance/ CREP guidelines.



SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have provided the Air pollution control (APC) system and erected following stack (s) to observe the following fuel pattern:

Stack No.	Source	APC System provided/proposed	Stack Height(in mtr)	Type of Fuel	Sulphur Content(in %)	Pollutant Standard	
-	NA		0.00	-	-	NA	-

Quantitative Standards for the SPM: Suspended particulate matter shall be measured 3 to 10 meters from any process equipment of a stone crushing unit shall not exceed 600 µg/M³.

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.
3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
5. **A) Installation and Operations of Stone Crushing Unit:**
 1. Stone crusher unit shall install adequate pollution control measures including erection of G.I./M.S. sheet cover and sprinklers before commencement of crusher.
 2. Crusher shall covered and water sprinkling system shall be provided on crusher to suppress dust generated due to material handling / loading / unloading activity.
 3. Screen classifier shall be adequately covered by G.I./M.S. sheet to prevent the emission into the atmosphere due to screening / grading activity.
 4. All conveyor belts shall be adequately covered by G.I./M.S. sheet only.
 5. Regular wetting of roads shall be carried out to suppress the ground level dust within the premises to control the air borne dust emission due to wind velocity.
 6. All approach roads and ramps shall be metalled.
 7. Curtain or wall shall be provided surrounding the stone crusher.
 8. Display Board shall be provided at the entrance of the stone crusher indicating survey no., name, & address of the owner and the unit.
 9. Fine dust generated due to screening / crushing / grading shall be disposed off scientifically.

B) Air Pollution Control Measures:

1. Dust containment cum suppression system for the equipment i.e. main crusher / jaw crusher, vibrating screen etc. shall be provided to limit emissions as below.
2. Construction of wind breaking walls especially at charging hopper & crushing place shall be provided to limit emissions as below.
3. Construction of metalled roads within the premises shall be provided. Regular wetting of the ground within the premises shall be carried out.
4. Tree plantation along the periphery inside boundary of the stone crusher premises having minimum width 5 meters, on all sides shall be developed.
5. The foliage of the trees shall adequately cover area up to about 20 mtrs. height.



C] Miscellaneous:

1. Stone crusher unit shall strictly comply National Ambient Air Quality Standards, 2009.
2. The Project Proponent shall provide adequate water treatment and disposal facility from generated effluent from their activity. They shall comply with the provisions of Water (Prevention and Control of Pollution) Act, 1974.
3. The project proponent shall provide adequate Air Pollution Control arrangement at the source. They shall comply with the provisions under the Air (Prevention and Control of Pollution) Act, 1981.
4. The remediation and restoration measure shall be taken by the project proponent in case of any environmental pollution in the surrounding area due to emission / effluent in excess of the standards being emitted / discharged into the environment and violation of Consent conditions and thereby causing environmental pollution.

SCHEDULE-III

Details of Bank Guarantees:

Sr. No	Consent (C2E/C2O/C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	Consent to Operate	Rs. 50,000/-	Existing	Towards O&M of Pollution Control Systems and Compliance of Consent condition	31.03.2031	30.07.2031

****Existing BG obtained for above purpose if any, may be extended for period of validity as above.**

BG Forfeiture History

Srno.	Consent (C2E/C2O/C2R)	Amount of BG imposed	Submission Period	Purpose of BG	Amount of BG Forfeiture	Reason of BG Forfeiture
NA						

BG Return details

Srno.	Consent (C2E/C2O/C2R)	BG imposed	Purpose of BG	Amount of BG Returned
NA				

SCHEDULE-IV

General Conditions:

1. The Energy source for lighting purpose shall preferably be LED based
2. The PP shall harvest rainwater from roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial applications within the plant
3. Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.



- b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.
4. The applicant shall maintain good housekeeping.
 5. The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
 6. The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipments provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.
 7. The Board reserves the right to review, amend, suspend, revoke this consent and the same shall be binding upon you.
 8. The industry shall submit quarterly statement in respect of industries obligation towards consent and pollution control compliance's duly supported with documentary evidences (format can downloaded from MPCB official site).
 9. The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
 10. The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification No. B-29016/20/90/PC-I dated. 18.11.2009 as amended.
 11. This consent should not be construed as exemption from obtaining necessary NOC/ permission from any other Government authorities.
 12. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
 13. You shall operate OCEMS installed for source emission round 'O' clock and transmit data online to CPCB and MPCB server. You shall also monitor effluent quality, stack emissions and ambient air quality monthly/quarterly. You shall conduct Dioxin Furan monitoring by third party NABL Accredited agency once in year and submit report to Sub Regional Officer.
 14. You shall ensure collection, and segregation of BMW regularly to treat and dispose Off within 48 hrs from generation.



15. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
16. The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
17. The industry shall recycle/reprocess/reuse/recover Hazardous Waste as per the provision contain in the Hazardous and Other Wastes (M & TM) Rules 2016, which can be recycled /processed /reused /recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/reprocessed etc. should go for that purpose, in order to reduce load on incineration and landfill site/environment.
18. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
19. You shall not Rent, Lend, Sell, Transfer or Close Down the facility or otherwise transport the Bio Medical waste for any other purpose without obtaining prior written permission of the MPC Board.
20. Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
21. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
22. The industry should not cause any nuisance in surrounding area.
23. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
24. You shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the facility premises.
25. The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
26. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto
27. The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.



28. The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end.
29. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions.
30. The firm shall submit to this office, the 30th day of September every year, the Environment Statement Report for the financial year ending 31st March in the prescribed FORM-V as per the provisions of Rule 14 of the Environment (Protection) (second Amendment) Rules, 1992.
31. You should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly. You shall conduct Dioxin Furan monitoring by third party NABL Accredited agency once in every year and submit report to Sub Regional Officer.
32. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
33. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
34. You shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
35. You shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Environmental Protection Act, 1986 and industry specific standard under EP Rules 1986 which are available on MPCB website (www.mpcb.gov.in).
36. You shall create the Environmental Cell by appointing an Environmental Engineer and Chemist for looking after day-to-day activities related to compliance of CCA.
37. You should comply with the Hazardous and Other Wastes (M & TM) Rules, 2016 , Bio Medical Waste Management Rules,2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous and Other Wastes (M & TM) Rules, 2016 for the preceding year in Form-IV by 30th June of every year
38. You should comply with the Hazardous and Other Wastes (M & TM) Rules, 2016 , Bio Medical Waste Management Rules,2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous and Other Wastes (M & TM) Rules, 2016 for the preceding year in Form-IV by 30th June of every year

This certificate is digitally & electronically signed.



MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 022-27572620
Fax: 022-27562132
Website: <http://mpcb.gov.in>
Email: rorraigad@mpcb.gov.in



Raigad Bhavan, 6th floor,
Sector - 11, C.B.D Belapur,
Navi Mumbai.

ORANGE/S.S.I (064)
No:- Format1.0/RO/UAN
No.0000168247/CR/2307000597

Date: 11/07/2023

To,
Diamond Stone Crushing Company
S.No:-13/3,13/5, Vill:-Khanand, PO.Ambivali,
Tal:-Karjat, Dist:-Raigad.



Sub: Grant of renewal of Consent to Operate under Orange Category.

Ref: 1. Consent to Operate accorded by Board vide RO-Raigad/Consent-1709000952 dtd. 26.09.2017 which was valid upto 31.03.2023.
2. Your application No.MPCB-CONSENT-0000168247 Dated 13.04.2023

Your application No.MPCB-CONSENT-0000168247 Dated 13.04.2023

For: grant of Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 and Rule 18(7) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. The consent to renewal is granted for a period up to 31/03/2031
2. The capital investment of the project is Rs.0.95 Crs. (As per C.A Certificate submitted by industry)
3. Consent is valid for the manufacture of:

Sr No	Product	Maximum Quantity	UOM
Products			
1	STONE METAL	10000	Ton/M

4. Conditions under Water (P&CP), 1974 Act for discharge of effluent:

Sr No	Description	Permitted (in CMD)	Standards to	Disposal Path
1.	Trade effluent	0.0	As per Schedule-I	Not Applicable
2.	Domestic effluent	0.4	As per Schedule-I	Soaked in soak pit



5. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

Sr No.	Stack No.	Description of stack / source	Number of Stack	Standards to be achieved
1	0	NA	0	As per Schedule -II

6. **Non-Hazardous Wastes:**

Sr No	Type of Waste	Quantity	UoM	Treatment	Disposal
NA					

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for Collection, Segregation, Storage, Transportation, Treatment and Disposal of hazardous waste:**

Sr No	Category No./ Type	Quantity	UoM	Treatment	Disposal
NA					

- The Board reserves the right to review, amend, suspend, revoke this consent and the same shall be binding on the industry.
- This consent should not be construed as exemption from obtaining necessary NOC/ permission from any other Government authorities.
- The applicant shall make an application for renewal of consent 60 days prior to date of expiry of the consent. (Operate/Renewal)
- This consent is issued as per the Office Order for Consent Management of the Board No. 12/2020 dtd. 23.12.2020.



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Signed by: Shri Jaganath Sharma
Regional Officer
For and on behalf of
Maharashtra Pollution Control Board
mnpca@mahapolice.mil
2023-07-11 10:28:05 IST

Received Consent fee of -

Sr.No	Amount(Rs.)	Transaction/DR.No.	Date	Transaction Type
1	25000.00	TXN2304002015	15/04/2023	Online Payment

Balance Fees of Rs. 4,380/- is pending with the Board and same will be adjusted in next Consent.

Copy to:

- Sub-Regional Officer, MPCB, Raigad II
- They are directed to ensure the compliance of the consent conditions.
- Chief Accounts Officer, MPCB, Sion, Mumbai



SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

1. A) Generation - As per your application the treated effluent generation is Nil.
B) Treatment - NA
C) Disposal - NA
2. A) As per your application, you have provided Septic Tank followed by Soak pit for the treatment of 0.4 CMD of sewage.
B) The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards.

Sr.No	Parameters	Standards (mg/l)
1	Suspended Solids	Not to exceed 50
2	BOD 3 days 27°C	Not to exceed 30

- C) The treated sewage shall be soaked in soak pit and overflow if any shall be discharged on land for gardening within premise after confirming above standards.
3. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.
4. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
5. The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, by installing water meters and other provisions as contained in the said act:

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	3.00
2.	Domestic purpose	5.00
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	0.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00
5.	Gardening	0.0

6. The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance/ CREP guidelines.



SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have provided the Air pollution control (APC) system and erected following stack (s) to observe the following fuel pattern:

Stack No.	Source	APC System provided/proposed	Stack Height(in mtr)	Type of Fuel	Sulphur Content(in %)	Pollutant Standard	
-	NA		0.00	-	-	NA	-

Quantitative Standards for the SPM: Suspended particulate matter shall be measured 3 to 10 meters from any process equipment of a stone crushing unit shall not exceed 600 µg/M³.

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.
3. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
4. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
5. **A) Installation and Operations of Stone Crushing Unit:**
 1. Stone crusher unit shall install adequate pollution control measures including erection of G.I./M.S. sheet cover and sprinklers before commencement of crusher.
 2. Crusher shall covered and water sprinkling system shall be provided on crusher to suppress dust generated due to material handling / loading / unloading activity.
 3. Screen classifier shall be adequately covered by G.I./M.S. sheet to prevent the emission into the atmosphere due to screening / grading activity.
 4. All conveyor belts shall be adequately covered by G.I./M.S. sheet only.
 5. Regular wetting of roads shall be carried out to suppress the ground level dust within the premises to control the air borne dust emission due to wind velocity.
 6. All approach roads and ramps shall be metalled.
 7. Curtain or wall shall be provided surrounding the stone crusher.
 8. Display Board shall be provided at the entrance of the stone crusher indicating survey no., name, & address of the owner and the unit.
 9. Fine dust generated due to screening / crushing / grading shall be disposed off scientifically.

B) Air Pollution Control Measures:

1. Dust containment cum suppression system for the equipment i.e. main crusher / jaw crusher, vibrating screen etc. shall be provided to limit emissions as below.
2. Construction of wind breaking walls especially at charging hopper & crushing place shall be provided to limit emissions as below.
3. Construction of metalled roads within the premises shall be provided. Regular wetting of the ground within the premises shall be carried out.
4. Tree plantation along the periphery inside boundary of the stone crusher premises having minimum width 5 meters, on all sides shall be developed.
5. The foliage of the trees shall adequately cover area up to about 20 mtrs. height.



C] Miscellaneous:

1. Stone crusher unit shall strictly comply National Ambient Air Quality Standards, 2009.
2. The Project Proponent shall provide adequate water treatment and disposal facility from generated effluent from their activity. They shall comply with the provisions of Water (Prevention and Control of Pollution) Act, 1974.
3. The project proponent shall provide adequate Air Pollution Control arrangement at the source. They shall comply with the provisions under the Air (Prevention and Control of Pollution) Act, 1981.
4. The remediation and restoration measure shall be taken by the project proponent in case of any environmental pollution in the surrounding area due to emission / effluent in excess of the standards being emitted / discharged into the environment and violation of Consent conditions and thereby causing environmental pollution.

SCHEDULE-III

Details of Bank Guarantees:

Sr. No	Consent (C2E/C2O/C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	Consent to Operate	Rs. 50,000/-	Existing	Towards O&M of Pollution Control Systems and Compliance of Consent condition	31.03.2031	30.07.2031

****Existing BG obtained for above purpose if any, may be extended for period of validity as above.**

BG Forfeiture History

Srno.	Consent (C2E/C2O/C2R)	Amount of BG imposed	Submission Period	Purpose of BG	Amount of BG Forfeiture	Reason of BG Forfeiture
NA						

BG Return details

Srno.	Consent (C2E/C2O/C2R)	BG imposed	Purpose of BG	Amount of BG Returned
NA				

SCHEDULE-IV

General Conditions:

1. The Energy source for lighting purpose shall preferably be LED based
2. The PP shall harvest rainwater from roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial applications within the plant
3. Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.



- b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.
4. The applicant shall maintain good housekeeping.
 5. The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
 6. The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipments provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.
 7. The Board reserves the right to review, amend, suspend, revoke this consent and the same shall be binding upon you.
 8. The industry shall submit quarterly statement in respect of industries obligation towards consent and pollution control compliance's duly supported with documentary evidences (format can downloaded from MPCB official site).
 9. The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
 10. The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification No. B-29016/20/90/PC-I dated. 18.11.2009 as amended.
 11. This consent should not be construed as exemption from obtaining necessary NOC/ permission from any other Government authorities.
 12. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
 13. You shall operate OCEMS installed for source emission round 'O' clock and transmit data online to CPCB and MPCB server. You shall also monitor effluent quality, stack emissions and ambient air quality monthly/quarterly. You shall conduct Dioxin Furan monitoring by third party NABL Accredited agency once in year and submit report to Sub Regional Officer.
 14. You shall ensure collection, and segregation of BMW regularly to treat and dispose Off within 48 hrs from generation.



15. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
16. The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
17. The industry shall recycle/reprocess/reuse/recover Hazardous Waste as per the provision contain in the Hazardous and Other Wastes (M & TM) Rules 2016, which can be recycled /processed /reused /recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/reprocessed etc. should go for that purpose, in order to reduce load on incineration and landfill site/environment.
18. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
19. You shall not Rent, Lend, Sell, Transfer or Close Down the facility or otherwise transport the Bio Medical waste for any other purpose without obtaining prior written permission of the MPC Board.
20. Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
21. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
22. The industry should not cause any nuisance in surrounding area.
23. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
24. You shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the facility premises.
25. The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
26. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto
27. The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.



28. The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end.
29. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions.
30. The firm shall submit to this office, the 30th day of September every year, the Environment Statement Report for the financial year ending 31st March in the prescribed FORM-V as per the provisions of Rule 14 of the Environment (Protection) (second Amendment) Rules, 1992.
31. You should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly. You shall conduct Dioxin Furan monitoring by third party NABL Accredited agency once in every year and submit report to Sub Regional Officer.
32. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
33. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
34. You shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
35. You shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Environmental Protection Act, 1986 and industry specific standard under EP Rules 1986 which are available on MPCB website (www.mpcb.gov.in).
36. You shall create the Environmental Cell by appointing an Environmental Engineer and Chemist for looking after day-to-day activities related to compliance of CCA.
37. You should comply with the Hazardous and Other Wastes (M & TM) Rules, 2016 , Bio Medical Waste Management Rules,2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous and Other Wastes (M & TM) Rules, 2016 for the preceding year in Form-IV by 30th June of every year
38. You should comply with the Hazardous and Other Wastes (M & TM) Rules, 2016 , Bio Medical Waste Management Rules,2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous and Other Wastes (M & TM) Rules, 2016 for the preceding year in Form-IV by 30th June of every year

This certificate is digitally & electronically signed.



EMP tracking for Bhivpuri PSP (1000 MW)

An Environment Management Plan (EMP) outlines how to manage and mitigate the environmental impacts of a project. It provides a site-specific framework for implementing protective measures and ensuring compliance with environmental regulations.

At Bhivpuri PSP (1000 MW), all measures and budget provisions outlined in the EMP, which forms part of the Environmental Impact Assessment (EIA), are being adhered to.

The total approved EMP budget is ₹7,994.88 lakhs, allocated between Capex and Opex components. The EMP is planned to be implemented in a phased manner over 7 years. To date, an expenditure of ₹1,919.84 lakhs has been incurred.

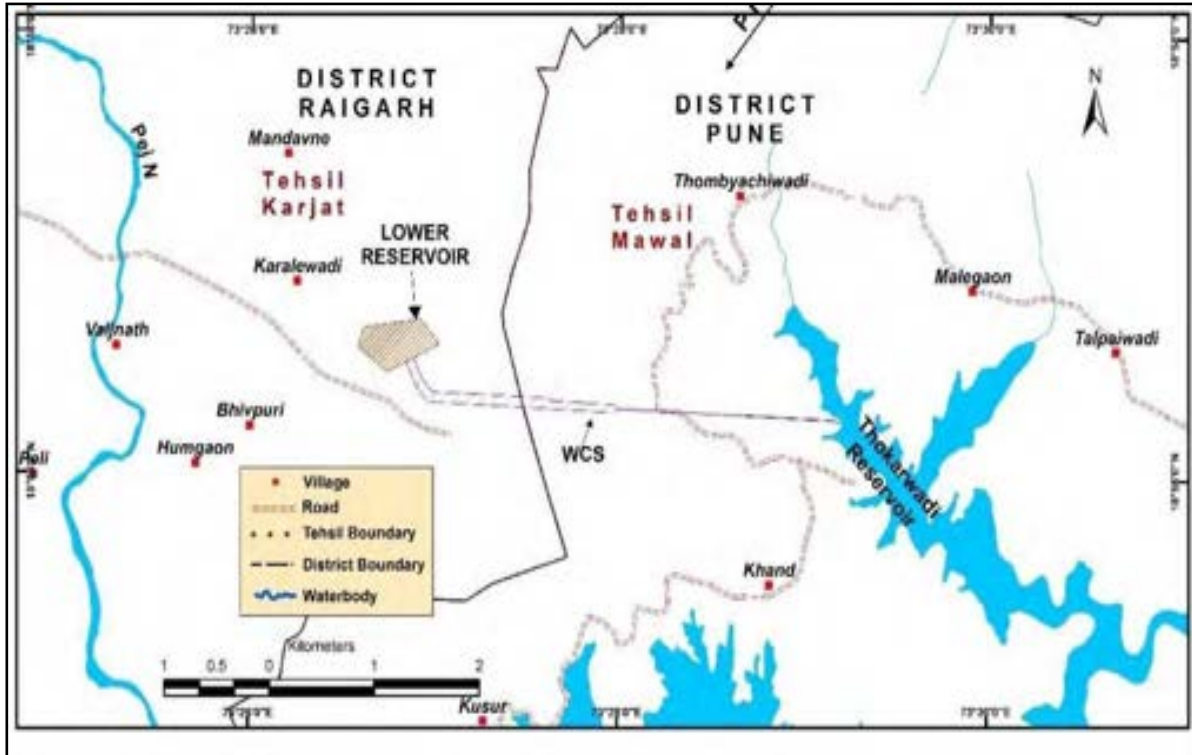
Environment Management Plan Cost Bhivpuri PSP (1000MW)													
Component of EMP	Capital Cost (Rs. In lakh)	Recurring Cost (Rs. In lakh)							Total Cost (Rs. In Lakh)	Expenditure Capital Cost (Rs. In lakh)	Expenditure Recurring Cost (Rs. In lakh) Year 1	Total Expenditure Cost (Rs. In lakh) Year 1	Remark
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7					
Catchment Area Treatment Plan	121.25	0	0	0	0	0	0	0	121.25	121.25	0	121.25	This payment is deposited under Ad-hoc CAMPA. on 09.07.2025 (UTR No. 2025070946034014)

Compensatory Afforestation Plan & NPV*	210	0	0	0	0	0	0	0	210	210	0	210	
Biodiversity Conservation & Wildlife Management Plan	490.99	0	0	0	0	0	0	0	490.99	490.99	0	490.99	
Fisheries Conservation and Management Plan	50	14.75	14.75	14.75	14.75	0	0	0	109	0	0	0	Tata Power have approached State department of fisheries and will be working in coordination for implementation of the same plan
Muck Dumping and Management Plan	86.5	508	900.2	925.17	925	18.25	18.25	18.25	3399.62	238	0	238	The expenditure incurred so far (₹238 lakh) is primarily towards the construction of gabion walls, which form a key engineering measure for stabilizing muck disposal sites.

Landscaping, Restoration of Quarry, and Construction Sites	20	15	20	30.25	25.75	20.25	10.25	10	151.5	98	0	98	Expenses towards transplanted of trees
Green Belt Development Plan	0	3.4	6.4	10	5	5	5	5	39.8	0	6	6	Expenses towards maintenance of trees
Sanitation and Solid Waste Management Plan	142	25.25	25.25	25.25	25.25	0	0	0	243	58	11.3	69.3	Expenses towards Health care facilities as per EMP
Public Health Delivery System	110	34.75	34.75	34.75	34.75	0	0	0	249	87	14.5	101.5	
Energy Conservation Measures	40	65.5	65.5	65.5	65.5	0	0	0	302	33.75	26.66	60.41	
Labour Management Plan	30	13	13	13	13	0	0	0	82	14	52.27	66.27	
Disaster Management Plan	275	31.25	31.25	31.25	31.25	0	0	0	400	0	0	0	This plan will be prepared once construction of project is last phase
Control of Air, Noise and Water Pollution	0	15	15	15	15	0	0	0	60	0	11.6	11.6	

Environmental Monitoring Programme	0	38.44	38.44	38.44	38.44	0	0	0	153.76	0	24	24	Expenses towards monthly Environment Monitoring
Rehabilitation and Resettlement Plan***	0	0	0	0	0	0	0	0	0	0	0	0	The entire private land identified for the project falls in Khand and Sawale revenue villages of Mawal Tehsil of Pune District of Maharashtra. None of them is getting displaced due to the project from the above land procurement. Hence Resettlement & Rehabilitation plan is not required
Local Area Development Plan	1172.06	0	0	0	0	0	0	0	1172.06	422.51	0	422.51	Expenses towards Local area development plan
Watershed Development Plan	811.6386	0	0	0	0	0	0	0	811.6386	0	0	0	Water Shed Management plan is being discussed for implementation
—	3558.7	764.34	1164.54	1203.36	1193.69	43.5	33.5	33.25	7994.88	1773.50	146.33	1919.84	

Bhivpuri Off-Stream Open Loop Pumped Storage Project (hereinafter referred to as Bhivpuri PSP) (1000 MW)



Submitted to

**R S Envirolink Technologies Pvt. Ltd.
(On behalf of The Tata Power Company Ltd.)**



By

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1.0 PURPOSE OF THE REPORT

The purpose of Watershed Development Plan of **Bhivpuri Off-Stream Open Loop Pumped Storage Project (hereinafter referred to as Bhivpuri PSP) (1000 MW)** is to comply with the Specific Terms of Reference (ToR) for (River Valley/ Irrigation Projects) issued by Ministry of Environment Forests and Climate Change (MoEF&CC), Government of India vide ToR Identification No. TO23A0000MH5102972N, dated: 23.09.2023 for carrying out the EIA/ EMP studies of the project.

The Specific ToR reads **“Scope of watershed development in the 10 km radius of the project shall be studied in consultation with Government Institutions/Indian Council of Agriculture Research (ICAR) and accordingly a detailed Watershed Development Plan shall be prepared and incorporated in EIA/ EMP report”**.

2.0 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT

As one of India’s largest integrated power companies, Tata Power has gained a leadership position in the Power sector. Tata Power Company Limited (TPCL), one of India's largest integrated power companies, has a diverse portfolio of power sources with a total installed capacity of 14294 MW. The various sources include hydel, thermal, waste heat recovery, solar, and wind energy. Thermal power stations contribute the most significant share of power generation capacity for TATA Power, accounting for 8860 MW, followed by solar (3142 MW), wind (969 MW), hydro (880 MW), and waste heat recovery or BFG (443 MW). Tata Power is at the forefront of the transition towards green energy. It aligns with the country’s ambition of being net zero by 2070. With the recent thrust on development of large-scale renewable (Solar & Wind) projects in the country, TPCL is considering development of pumped-storage hydroelectric projects (PSP) to make use of available surplus wind / solar power during morning and evening/night peak load hours.

Tata Power plans to explore the possibility of building pumped storage plants at the Bhivpuri hydroelectric stations, taking advantage of the increased demand for peak power generation and surplus power availability during off-peak hours. The proposed Bhivpuri PSP would utilize the existing Thokarwadi reservoir as an upper reservoir and construct a new lower reservoir to harness approximately 556 m of gross head.

Bhivpuri Off-Stream Open Loop Pumped Storage Project (1000 MW) (Bhivpuri Pumped Storage Project) located in Pune and Raigad districts of Maharashtra State. It is situated about 20 km from Karjat town. The project site is well connected and accessible throughout the year. Both Upper and Lower reservoirs are accessible from Mumbai and Pune and situated about 80 km from Mumbai and 115 km from Pune in Maharashtra State. The nearest international airport is in Mumbai. Location map of the project is shown in **Figure 1**.

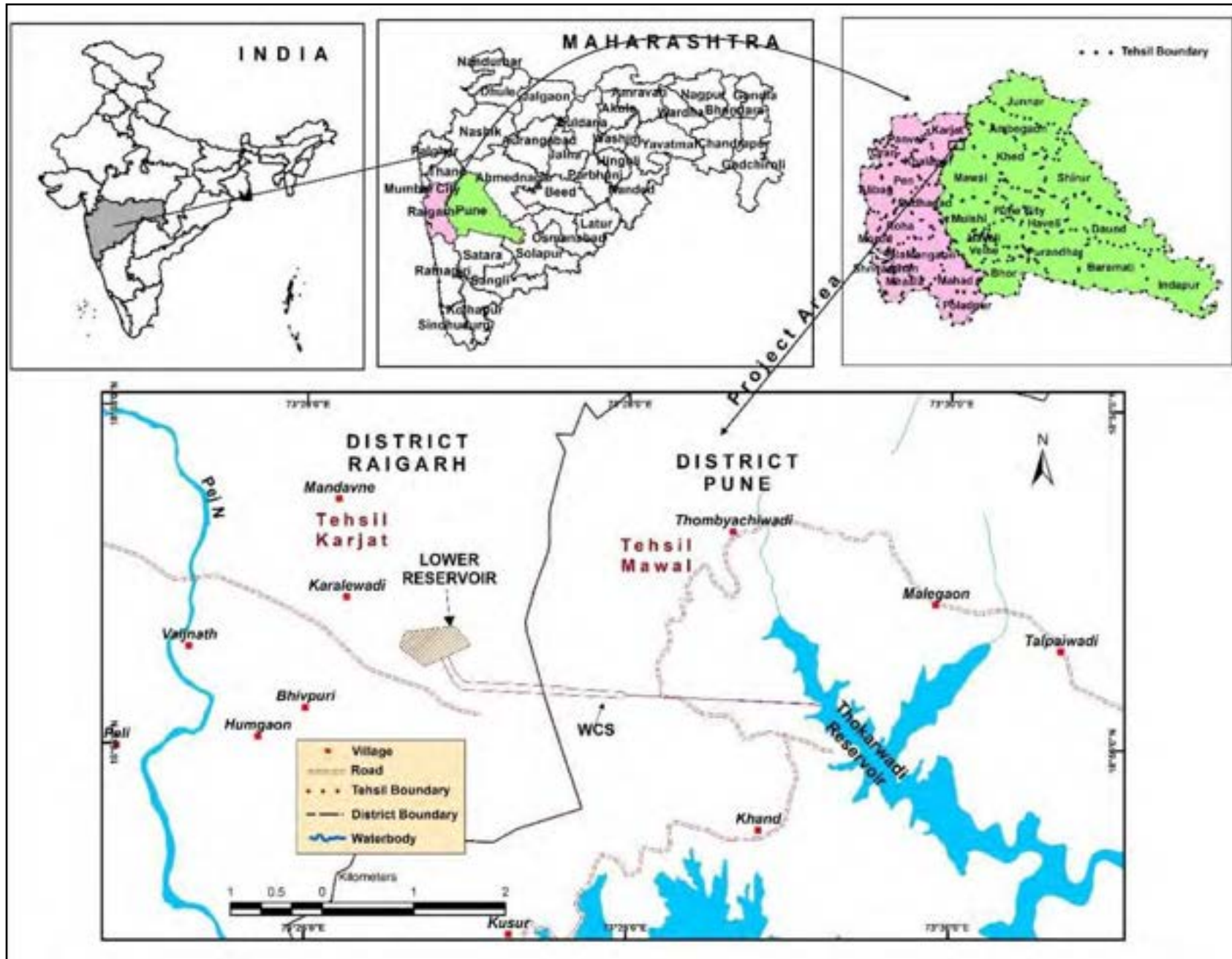


Figure 1: Location Map of Bhivpuri PSP

3.0 PROJECT DESCRIPTION

Bhivpuri PSP is located in Pune and Raigad districts of Maharashtra. It envisages the construction of temporary cofferdam, upper Intake system, water conducting systems, surge shaft, pit powerhouse, lower Intake system, and lower reservoir (equipped with bottom outlet). The scheme will involve the usage of the existing reservoir as an upper reservoir with 12.485 TMC gross storage capacity and will involve construction of 1899.0 m long Geomembrane faced rockfill embankment dam for creation of lower reservoir with 0.163 TMC gross capacity. The complete scheme envisages utilization of design discharge of 216.7 cumec for generation of 1000 MW (4X200+2X100). A rated net head of 520.40 m with design discharge of 173.20 cumec shall be used for generation of 800 MW (4 units of 200 MW each) and a rated head of 516.60 m with design discharge of 43.60 cumec shall be used for generation of 200 MW (2 units of 100 MW each).

The proposed Bhivpuri PSP (4 x 200 MW + 2 x 100 MW) envisages following major civil structures:

- **Upper Reservoir (Existing):** The Upper reservoir, also known as Thokarwadi reservoir, is an existing reservoir situated in a natural depression area. It has the capacity to create a significant pondage behind the Thokarwadi dam, effectively utilizing the depression area and preventing land wastage.
- **Upper Intake:** One intake structure consists of four bays each of 6.20 m width to accommodate 4 numbers of trash rack are placed at the mouth of intake. The size of each intake trash rack is 6.20 m (W) x 12.30 m (H).
- **Head Race Tunnel:** A concrete lined tunnel of length 1981.70 m and diameter of 8.3 m which connects the upper intake to the surge shaft.
- **Pressure Shaft/Buried Penstock (Right Limb):** 1293.50 m long 4.30 m finished diameter steel lined penstock/pressure shaft is proposed. Out of 1293.50 m, in initial reach 236 m is underground & rest of the 1057.50 m is surface penstock buried in concrete. 4.3 m diameter penstock/pressure shaft bifurcates into 2 nos. branch penstock of 3.0 m diameter each & 778.26 m long, leading to powerhouse. Out of 778.26 m length, 572.60 m length is surface penstock buried in concrete & 205.66m length is underground.
- **Pressure Shaft/Buried Penstock (Left Limb):** A steel-lined pressure shaft with a proposed length of 678.40 meters and a finished diameter of 5.30 meters is planned. Out of 678.40 m, 220.88 m long penstock is underground & balanced 457.52 m is surface penstock buried in concrete. This 5.3 m diameter penstock divides into two separate sections. One section is 1427.92 meters long with a diameter of 3.0 meters. Out of 1427.92 m length, 1245.22 m is surface penstock buried in concrete & balanced 182.70 m is underground. The 3.0 m diameter penstock then bifurcates into two-unit penstock. Each penstock has a diameter of 2.15 meters and a length of 52.72 m leading to the powerhouse. The other section of the shaft bifurcates into a 529-meter-long penstock with a diameter of 4.3 meters. This tunnel then divides into two pressure tunnels, each with a diameter of 3.0 meters and a length of 951.64 meters, also leading to the powerhouse.

- **Pit Type Powerhouse & Transformer Bay:** The overall dimensions of the powerhouse are 207.50 m long x 24 m wide x 52 m high. Transformer bay size is 207.55 m x 17.0 m x 23.0 m
- **Tailrace Tunnel:** There are four-unit tail race tunnels with a diameter of 4.50 meters that originate from the power house and connect to the lower diffuser, specifically designed for the larger unit. Additionally, there are two unit tail race tunnels with a diameter of 3.2 meters that also originate from the power house from smaller units and connect to the main TRT of 4.50 m diameter & lower diffuser.
- **Lower Reservoir & Dam (Geo-membrane facing rock fill Dam (GFRD)):** The lower reservoir is situated at the base of the hill in a natural depression that has been identified as suitable for creating an artificial reservoir. The construction of the reservoir involves minor excavation and the establishment of a Geomembrane Filled Rock Filled Dam. To ensure proper containment of water, a geo-membrane is installed on water side of the dam, providing an additional layer of protection. The maximum height of the Geo-membrane facing rock fill Dam (GFRD), is approximately 28.0 meters. This design allows for the creation of the lower reservoir and provides the necessary water storage capacity for the project. The length of the proposed GFRD dam is about 1900 m.

The salient features are given in **Table 1** and Layout map of proposed Bhivpuri PSP are given at **Figure 2**.

Table 1: Salient Features of Bhivpuri PSP

1	Location	
	Country	India
	State	Maharashtra
	District	Raigad and Pune
2	Access to the Project	
	Road	Accessible from Highway 80 Km from Mumbai
	Nearest Airport	Mumbai Airport
3	PROJECT	
	Type	Pumped Storage Project
	Installed Capacity	1000 MW [2 x 100 MW + 4 x 200 MW]
	Peak Generation duration	6 Hours
	Pumping Operation duration	6 Hours 42 Minutes
4	RESERVOIR LEVELS & STORAGE DETAILS	
4.1	Upper Reservoir (Existing)	
	Latitude	18° 56' 9.34" N
	Longitude	73° 29' 14.59" E
	FRL	667.17 m
	MDDL	646.18 m
	Live Storage	353.52 MCM at FRL
4.2	Lower Reservoir (New proposed)	
	Latitude	18° 56' 35.36" N
	Longitude	73° 26' 39.81" E
	FRL	132.0 m
	MDDL	99.00 m
	Total Storage	4.613 MCM
	Live Storage	4.577 MCM

5	CIVIL STRUCTURE	
5.1	Lower Dam (New Proposed)	
	Type	GFRD
	Top of Dam	135.0 m
	Maximum Height	28.0 m
	Length	1899.00 m
5.2	Upper Intake	
	Type	Diffuser Type
	Number of Intake Structure	1 No.
	Nos of Trash rack bay	4 Nos.
	Size of Trash rack bay	6.20 m (w) x 12.30 m (H)
	Size of Trash rack Panel	20 Nos. [6.70 m (W) x 2.66 m (H) each] 05 Nos. in each bay
	Sill Level of trash rack	629.00 m
	Invert level of Intake Conduit	629.00 m
	Nos. and size of Service Gate	1 Nos.- 6.5 m (W) x 8.3 m (H)
	Nos. and size of Stoplog Gate	1 Nos.- 6.5 m (W) x 8.3 m (H)
	Design Discharge (Each intake)	216.80 Cumec
5.3	Lower Intake	
	Type	Diffuser Type
	Number of Intake Structure	5 Nos.
	Nos of Trash rack bay	4 Nos. per Intake (Total 20 nos. Trash rack bays)
	Size of Trash rack bay	4.10 m (w) x 5.0 m (H)
	Size of Trash rack Panel	Size 4.60 m (W) x 2.0 m (H)
	Sill Level of trash rack of Intake	75.0 m
	Invert level of Intake Conduit	74.60 m
	Nos and size of Service Gate	5 Nos.- 3.40 m (W) x 4.50 m (H)
	Nos and size of Stoplog Gate	1 No.- 3.40 m (W) x 4.50 m (H)
	Rated Pumping Discharge (each intake)	43.30 m ³ /s
5.4	Head Race Tunnel [HRT]	
	Finish Shape and Size	Circular Finish - 8.3 m Diameter, Concrete Lined
	Length	1981.70 m
	Design Discharge	216.80 Cumec
5.5	Surge Shaft	
	Finish Shape and Size	Circular Finish – 20.0 m Diameter
	Maximum Up surge	689.50 m
	Minimum Down surge	609.50 m
	Top Elevation of Surge shaft	691.50 m
	Bottom Elevation of Surge shaft	566.42 m
	Diameter of Orifice	4.50 m
5.6	Surface/Buried Penstock & Pressure Tunnels (Left bifurcation)	
5.6.1	Surface Penstock	1 No.
	Size and Type	5.30 m Diameter, Circular shape, steel lined
	Design Discharge (each shaft)	144.53 Cumec
	Length	678.40 m
5.6.2	Surface Penstock	1 No.
	Size and Type	4.3 m Diameter, Circular shape, steel lined
	Design Discharge (each shaft)	96.35 Cumec
	Length	529.0 m
5.6.3	Surface Penstock	2 Nos.
	Size and Type	3.0 m Diameter, Circular shape, steel lined
	Design Discharge (each shaft)	48.18 Cumec

	Length	768.94 m
5.6.4	Surface Penstock	1 No.
	Size and Type	3.0 m Diameter, Circular shape, steel lined
	Design Discharge (each shaft)	48.18 Cumec
	Length	1245.22 m
5.6.5	Unit Pressure Shaft	2 Nos.
	Size and Type	3.00m Diameter, Circular shape, steel lined
	Design Discharge	48.18 Cumec
	Length	182.70 m
5.6.6	Pressure Shaft	1 No.
	Size and Type	3.00m Diameter, Circular shape, steel lined
	Design Discharge	48.18 Cumec
	Length	182.70 m
5.6.7	Unit Pressure Shaft	2 Nos.
	Size and Type	2.15m Diameter, Circular shape, steel lined
	Design Discharge	24.09 Cumec
	Length	52.72 m
5.7	Surface/Buried Penstock & Pressure tunnels (Right bifurcation)	
5.7.1	Surface Penstock	1 No.
	Size and Type	4.30 m Diameter, Circular shape, steel lined
	Design Discharge (each shaft)	96.36 Cumec
	Length	1293.50 m
5.7.2	Surface Penstock	2 Nos
	Size and Type	3.00 m Diameter, Circular shape, steel lined
	Design Discharge (each shaft)	48.18 Cumec
	Length	605.76 m
5.7.3	Unit Pressure Shaft	2 Nos.
	Size and Type	3.00m Diameter, Circular shape, steel lined
	Design Discharge	48.18 Cumec
	Length	172.50 m
5.8	POWERHOUSE	
	Latitude	18° 56' 19.65" N
	Longitude	73° 26' 56.73" E
	Type	Pit-type Powerhouse
	Installed capacity	1000 MW [4 x 200 + 2 x 100]
	Number of units	6 Nos.
	Type of turbine	Reversible Francis, Vertical Shaft
	Centre line of generating unit	56.00 m
	Powerhouse size	207.50 m long x 24 m wide x 52
	Design Head (generation)	520.40 m for 200MW unit; 516.60 m for 100MW unit
	Design Head (Pumping)	553.80 m for 200MW unit; 556.30 m for 100MW unit
	Service bay level	70.00 m
5.9	ACCESS ROAD TO POWERHOUSE	
	Width	7.0 m
	Length	1200.00 m
	Start Elevation	126.00 m
	End Elevation	70.00 m
5.1	TRANSFORMER CUM GIS Hall	
	Type	Surface
	Transformer Bay Size	207.55 m x 17.0 m x 23.0
5.11	TAIL RACE TUNNEL	
5.11.1	Unit TRT	2 Nos. (From 100 MW Unit)

	Size and Type	3.20 m Diameter, Circular shape, Steel Lined
	Design Discharge	24.09 Cumec
	Length	77.87 m
5.11.2	Main TRT	5 Nos.
	Size and Type	4.50 m Diameter, Circular shape, Steel Lined
	Design Discharge	48.18 Cumec
	Length	191.41 (Connected with Small Units) 230.21 m (Connected with Big Unit)
5.12	POTHEAD YARD	
	Type	Surface
	Size	135.0 m (L) x 51.0 (W)
6	CONSTRUCTION PERIOD	
	Construction Period	4 Years excluding 17 months of pre-construction activities
7	ELECTRO-MECHANICAL EQUIPMENT	
7.1	Generating Mode	
	Turbine Type	Reversible Francis, Vertical Shaft
	Max Net Head	549.37 m for 200MW unit; 545.57 m for 100MW unit
	Min Net Head	495.38 m for 200MW unit; 491.58 m for 100MW unit
	Rated Net Head	520.37 m for 200MW unit; 516.57 m for 100MW unit
	Design Head	531.37 m for 200MW unit; 527.57 m for 100MW unit
7.2	Pumping Mode	
	Max Net Head	582.87 m for 200MW unit; 585.27 m for 100MW unit
	Min Net Head	528.88 m for 200MW unit; 531.28 m for 100MW unit
	Rated Net Head	553.87 m for 200MW unit; 556.27 m for 100MW unit
	Design Head	564.87 m for 200MW unit; 567.27 m for 100MW unit
	Design Discharge per unit	For 6 Units
	Generating Mode	43.23 cumec for 200MW unit; 21.78 cumec for 100MW unit
	Pumping Mode	38.78 cumec for 200MW unit; 19.30 m for 100MW unit
7.3	Generator Motor	
	Generator Type	Vertical shaft, Synchronous generator, Suspended type
	Turbine Efficiency (Generation)	0.92
	Turbine Efficiency (Pumping)	0.93
	Generator Efficiency	98.50%
	Synchronous Speed	375 rpm for 200MW Unit; 500 rpm for 100 MW unit
	Generator Voltage	18 kV for 200MW Unit; 18 kV for 100 MW Unit
	Transmission Voltage	400 kV
	Generator Step up Transformer	87 MVA, 1 Phase, 18kV/400 kV for 200MW unit (total 13 Nos.) 44 MVA, 1 Phase, 18kV/400 kV for 100MW unit (total 7 Nos.)
8	ANNUAL ENERGY	
	Annual Energy for Generation	2079.42 MU
	Generation Duration (Peaking)	6 Hours
	Annual Energy for Pumping	2578.97 MU
	Pumping Duration	6 Hours 42 Minutes

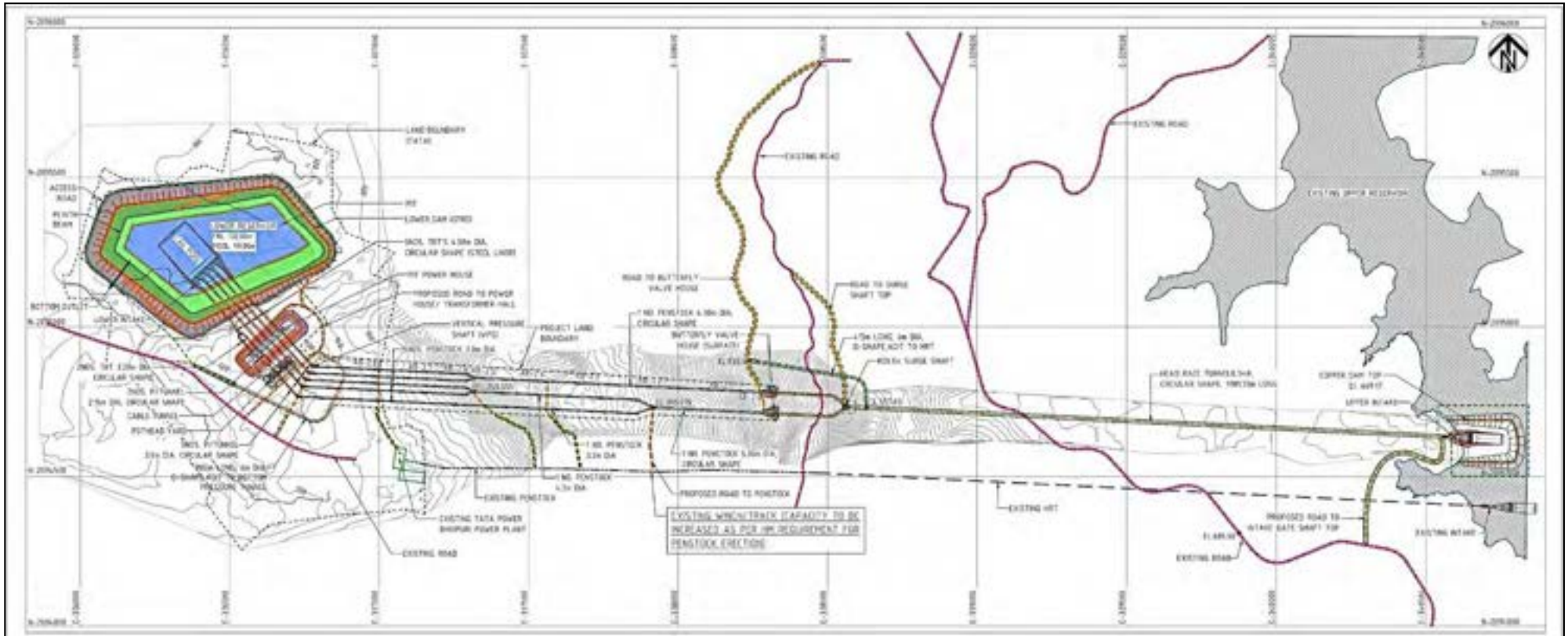


Figure 2: Project Layout Map of Bhivpuri PSP

4.0 NEED FOR WATERSHED DEVELOPMENT PLAN

Watershed development and management can be defined as the process of formulating and carrying out course of action involving manipulation of natural, agricultural, and human resources of a watershed to provide resources that are desired by and suitable to the watershed community by making sure that these actions don't have any adverse effects of soil and water resources. It works on an integrated and multi-disciplinary approach. Primary principles include protecting fertile top layer soil, minimizing setting up of tanks, in situ conservation of rainwater, construction of check dams for increasing ground water recharge and arresting soil erosion, water harvesting for supplemental irrigation, utilizing the land based on its capability etc.

Approach under the present study focusses on soil and water conservation measures along with raising crop productivity and livelihood improvement in watersheds. Major objectives of the watershed management program are:

- Conservation, up-gradation, and utilization of natural endowments such as land, water, plant, animal, and human resources in a harmonious and integrated manner with low-cost, simple, effective, and replicable methods.
- Generation of massive employment so as to reduce dependence on resources around and arrest exploitation of same
- Reduction of inequalities between irrigated and rain-fed areas and poverty alleviation.
- Reduction of organic, inorganic and soil pollution load
- Provision for adequate supply of water for domestic, industrial and agricultural needs
- Flood control through small man-made reservoirs and other water impounding structures
- To avoid or minimize the adverse impacts of the project on surrounding environment and society

Preparation of watershed development plan involves identification of watershed problems and formulation of development and management plan. The following physical components have been included in the present watershed development plan:

- Land/Soil and water conservation measures
- Plantation/horticulture activities
- Agronomical practices
- Livestock management
- Renewables
- Alternative employment avenues to reduce impact on resources
- Capacity building/Institutional mechanism

In addressing above aspects for watershed development, community participation has to be mobilized to create sustainable outcome like awareness, implementation in consultation with the community and help of various user groups.

5.0 METHODOLOGY

The various steps, covered in the study, are as follows:

- Defining study area
- Delineating sub-watershed around study area
- Consideration of components of sub-watershed management

- Assessment of Vulnerability in sub-watershed
- Socioeconomic surveys
- Suggestion of treatment measures for watershed management
- Cost estimation

6.0 STUDY AREA

Study area has been defined as for the purpose of preparation of watershed development plan. As per Terms of reference, watershed development plan has to be prepared for Watersheds falling within 10 km radius of the project. More precisely, study area considered for the preparation of Watershed Development Plan is the area of all the Watersheds covering the area being considered for the Environmental Impact Assessment study and as per Terms of Reference accorded by the MoEF&CC, Govt. of India for the project. As stipulated in the Terms of Reference, the area being considered for the Environmental Impact Assessment study is the area within 10 km radius of the main project components like proposed reservoirs, pump house, water conductor system etc. The total geographical area of the study area delineated for the Watershed Development Plan is **590.15 sq km** (refer **Figure 3**).

7.0 DELINEATING SUB-WATERSHEDS AROUND STUDY AREA

In order to plan watershed management and to formulate action plans it requires Sub-watershed delineation, therefore, study area was further delineated into Sub-watersheds. For the delineation of Sub-watershed, Watershed Atlas of India prepared by Soil and Land Use Survey of India (SLUSI) has been referred.

As per Watershed Atlas of India, the study area falls in 9 Sub-watersheds. The nomenclature of Sub-watersheds has been assigned as follows: All drainage flowing into Bay of Bengal except those at 2 & 3 and All drainage flowing into Arabian Sea except that at 1 Region (4 and 5 respectively); Krishna and North Western Ghats Basin (4D and 5B respectively); Upper Bhima and Savatri to Tapi Catchment (4D7 and 5B2 respectively); Bhima and Ulhas Sub-Catchment (4D7F & 5B2B respectively); Andra Indrayani Kundli, Bhima Bhama and Ulhas Watershed (4D7F8, 4D7F9 and 5B2B7 respectively) and 9 Sub-watersheds. The detail of Sub-watersheds delineated is given below in **Figure 3 and Table 2**.

Table 2: Names and Codes of Sub-watersheds Delineated

S. No.	Water Resource Region	Basin	Catchment	Sub-Catchment	Watershed	Sub-watershed	Sub-watershed Area (ha)
1	All drainage flowing into Bay of Bengal except those at 2 & 3 (4)	Krishna (4D)	Upper Bhima (4D7)	Bhima (4D7F)	Andra	4D7F8s	5262.78
2					Indrayani Kundli (4D7F8)	4D7F8u	12461.65
3					Bhima Bhama (4D7F9)	4D7F9h	5213.71
4	All drainage flowing into Arabian Sea except that at 1 (5)	North Western Ghats (5B)	Savatri to Tapi (5B2)	Ulhas (5B2B)	Ulhas (5B2B7)	5B2B7g	6308.84
5						5B2B7h	8901.46
6						5B2B7j	5905.27
7						5B2B7k	4857.09
8						5B2B7n	6485.37
9	5B2B7p	3618.68					
TOTAL							59014.84

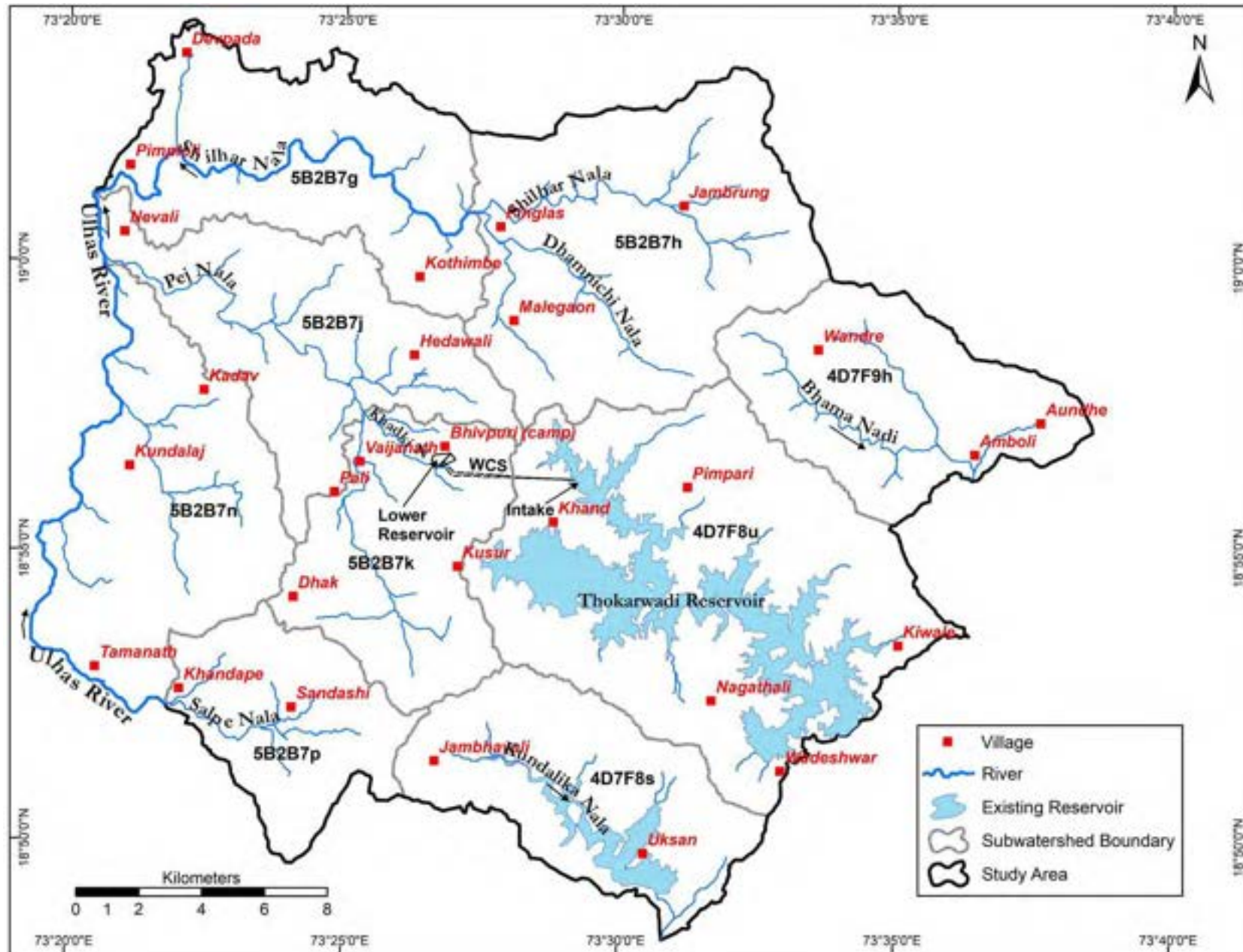


Figure 3: Map showing Study Area and Sub-Watersheds Delineated

8.0 COMPONENT OF SUB-WATERSHED MANAGEMENT CONSIDERED IN THE PRESENT STUDY

Approach needs to be based upon the integration of technologies within the natural boundaries of a drainage area for optimum development of land, water, and plant resources to meet the basic needs of people and animals in a sustainable manner. Basically, aim is to improve the standard of living of common people by increasing his earning capacity by offering all facilities required for optimum production.

In order to achieve its objective, integrated watershed management suggests to adopt land and water conservation practices, water harvesting in ponds and recharging of groundwater for increasing water resources potential and stress on crop diversification, use of improved variety of seeds, integrated nutrient management and integrated pest management practices, etc.

8.1 Land and Soil Management Practices

Land and Soil management practices are the primary step of watershed management program. The land characteristics such as terrain, slope, formation, depth, texture, moisture, in-filtration rate and soil capability are the main to consider under land management activities for watershed development. In broad sense the land management interventions includes following activities:

- Vegetative measures
- Structural measures
- Production measures; and
- Protection measures.

8.2 Water Management Practices

Under watershed management task the water management is one of the very important components. A good water potential in watershed provides a conducive path for its overall development. In watershed the main source of water is the rainfall; however, the incoming ground water from surrounding areas also shares to some extent.

In order to manage the rainwater, it is very essential to check the out flowing rain water. It could be done by constructing the structures like pond, reservoirs etc. in the area. Also, the rain dependent farming systems can be practiced for better utilization of rainwater is also considered as a measure for water management. Apart from conserving the rainwater, their judicious use either for crop production or other farm operations, also play very significant role in water management.

As for as the water management regarding irrigation point of view is concerned, the selection of most suitable irrigation method depending on the crop, soil, land topography, availability of water in the area etc., is very important. Those irrigation methods should always be at priority, which have better water use efficiency, lesser loss of water etc. Similarly, the choice on cropping system, crop variety, and crop duration etc., based on the water availability can also be very effective in water management.

Overall, various interventions followed for water management are outlined below:

- Rainwater harvesting.

- Ground water recharge.
- Maintenance of water balance.
- Preventing water pollution.
- Economic use of water.

Conservation practices can be divided into two main categories:

- In-situ and
- Ex-situ management.

Land and water conservation practices, those made within agricultural field like construction of contour bunds, graded bunds field bunds, terraces building broad bed and furrow practice and other soil-moisture conservation practices, are known as in-situ management. These practices protect land degradation, improve soil health, and increase soil-moisture availability and groundwater recharge.

Moreover, construction of check dam, farm pond, gully control structures, pits excavation across the stream channel is known as ex-situ management. Ex-situ watershed management practices reduce peak discharge in order to reclaim gully formation and harvest substantial amount of run-off, which increases groundwater recharge and irrigation potential in watersheds.

8.3 Biomass Management through Improved Agronomic Practices

In a watershed the task of biomass management can be achieved by following intervention areas:

- Eco-preservation
- Biomass regeneration
- Forest management and conservation
- Plant protection and development of social forestry
- Increasing productivity of animals
- Income and employment generation activities
- Coordination of health and sanitation programmes
- Better standard of living of people
- Eco-friendly lifestyle of people, and
- Formation of learning community.
- Integrated Pest and Nutrient Management
- Crop Diversification and Intensification

Watershed management puts emphasis on crop diversification and intensification through the use of advanced technologies, especially good variety of seeds, balanced fertilizer application and by providing supplemental irrigation.

8.4 Integration of On and Off Farm Practices

Farmers those solely dependent on agriculture, hold high uncertainty and risk of failure due to various extreme events, pest and disease attack, and market shocks. Therefore, integration of agriculture (on-farm) and non-agriculture (off-farm) activities is required at various scales for generating consistent source of income and support for their livelihood. For example,

agriculture, livestock production and dairy farming, together can make more resilient and sustainable system compared to adopting agriculture practice alone. Product or by-product of one system could be utilized for other and vice-versa e.g. biomass production (crop straw) after crop harvesting could be utilized for livestock feeding and manure obtained from livestock could be applied in field to maintain soil fertility. It includes horticulture plantation, aquaculture, and animal husbandry at indivisible farm, household or community scale.

8.5 Capacity Building/ Institutional Mechanism

Watershed development requires multiple interventions that jointly enhance the resource base and livelihoods of the rural people and it requires their capacity building. Capacity building is a process to strengthen the abilities of people to make effective and efficient use of resources in order to achieve their own goals on a sustained basis. Unawareness and ignorance of the stakeholders about the objectives, approaches, and activities are the reasons that affect the performance of the watersheds.

Capacity building program focuses on construction of low-cost soil and water conservation methods, production and use of bio-fertilizers and bio-pesticides, income generating activities, livestock-based activities, waste land development, market linkage for primary stakeholders etc. The stakeholders should be aware about the importance of various activities, their benefits in terms of economics, social and environmental factors.

Therefore, organizing various training at different scales is important for watershed development. Besides, there are some other components needs to the considered like, livestock management, afforestation, rural energy management, development of community skills and resources etc.

9.0 VULNERABILITY ASSESSMENT OF SUB-WATERSHEDS

The various steps undertaken in assessing vulnerability of Sub-watersheds in the study area, are as follows:

- Defining data requirement
- Data acquisition and preparation
- Output presentation
- Prioritization

The above-mentioned steps are briefly described in the following paragraphs:

9.1 Defining Data Requirement

Soil loss has been calculated through RUSLE (Revised Universal Soil Loss Equation) model which is computed by the following equation:

$$\text{Soil Loss (A)} = R * K * LS * C * P$$

Wherein;

A = Soil loss (Tons/ha/year)

R is Rainfall & Runoff Erosivity Factor ($\text{MJ mm ha}^{-1} \text{ h}^{-1} \text{ yr}^{-1}$), which depends upon the annual average rainfall in mm. Data required for R factor is rainfall intensity.

K is Soil Erodibility Factor ($t\ ha\ h\ MJ^{-1}\ mm^{-1}$), which depends on the organic matter, texture permeability and profile structure of the soil. Also, it is a constant value for each soil type. Data required for K factor is soil type.

LS is Topographic Factor (dimensionless) which depends upon flow accumulation and steepness and length of slope in the area. Data required for LS factor is slope length and slope gradient.

C = Vegetation Cover and Crop Management Factor (dimensionless), which is the ratio of bare soil to vegetation and non- photosynthetic material. It is a constant value for each land use category. Data required for C factor is land use/ land cover.

P is Conservation Supporting Practice Factor (dimensionless), which takes into account specific erosion control practices like contour bunding, bench terracing etc.

9.2 Data Acquisition and Preparation

The data on various aspects was collected from different sources. Soil map of the catchment area was prepared from soil map of Maharashtra procured from Regional Centre of National Bureau of Soil Survey & Land Use Planning (NBSS&LUP), New Delhi. For the preparation of DEM and preparation of Slope map, Shuttle Radar Topography Mission (SRTM) 3 Arc-Second Global Digital Terrain Elevation Data (DTED) data has been used. For the preparation of land use/ land cover, map prepared by National Remote Sensing Centre (NRSC), Indian Space Research Organisation (ISRO) of Dept. of Space, Govt. of India with Partner Institution, Maharashtra Remote Sensing Application Centre, Govt. of Maharashtra has been used. The rainfall data in the catchment area has been sourced from Climatic Research Unit (CRU), a component of the University of East Anglia and one of the leading institutions concerned with the study of natural and anthropogenic climate change.

a. Rainfall Erosivity (R) Factor

R factor is a function of the falling raindrop and rainfall intensity and is estimated as the product of the kinetic energy (E) of the raindrop and the maximum intensity of rainfall (I₃₀) over duration of 30 min in a storm. The erosivity of rain is calculated for each storm, and these values are summed up for each year. In this study, the storm wise rainfall data were not available for the computation of rainfall erosivity factor (R); therefore, the relationship between seasonal value of R and average rainfall has been used. The rainfall erosivity factor has been defined as $R = 81.5 + 0.38X$, where, R is the average seasonal erosivity factor ($MJ\ mm\ ha^{-1}\ h^{-1}\ year^{-1}$), and X is the annual average rainfall (mm).

For the estimation of rainfall erosivity in the study area, average rainfall of 10 years has been taken from the High-resolution gridded CRU datasets. In the absence of site specific periodic data, CRU data from the year 2011 to 2020 has been used for the calculation of R factor. In and around the study average rainfall of 10 years have been taken from the rain gauge station for the estimation of rainfall erosivity. The rainfall erosivity factor (R) has been calculated using equation $R = 81.5 + 0.38X$ for annual average rainfall of observed and simulated data. The values from R have been adopted in this study to calculate soil erosion using RUSLE (**Figure 4**).

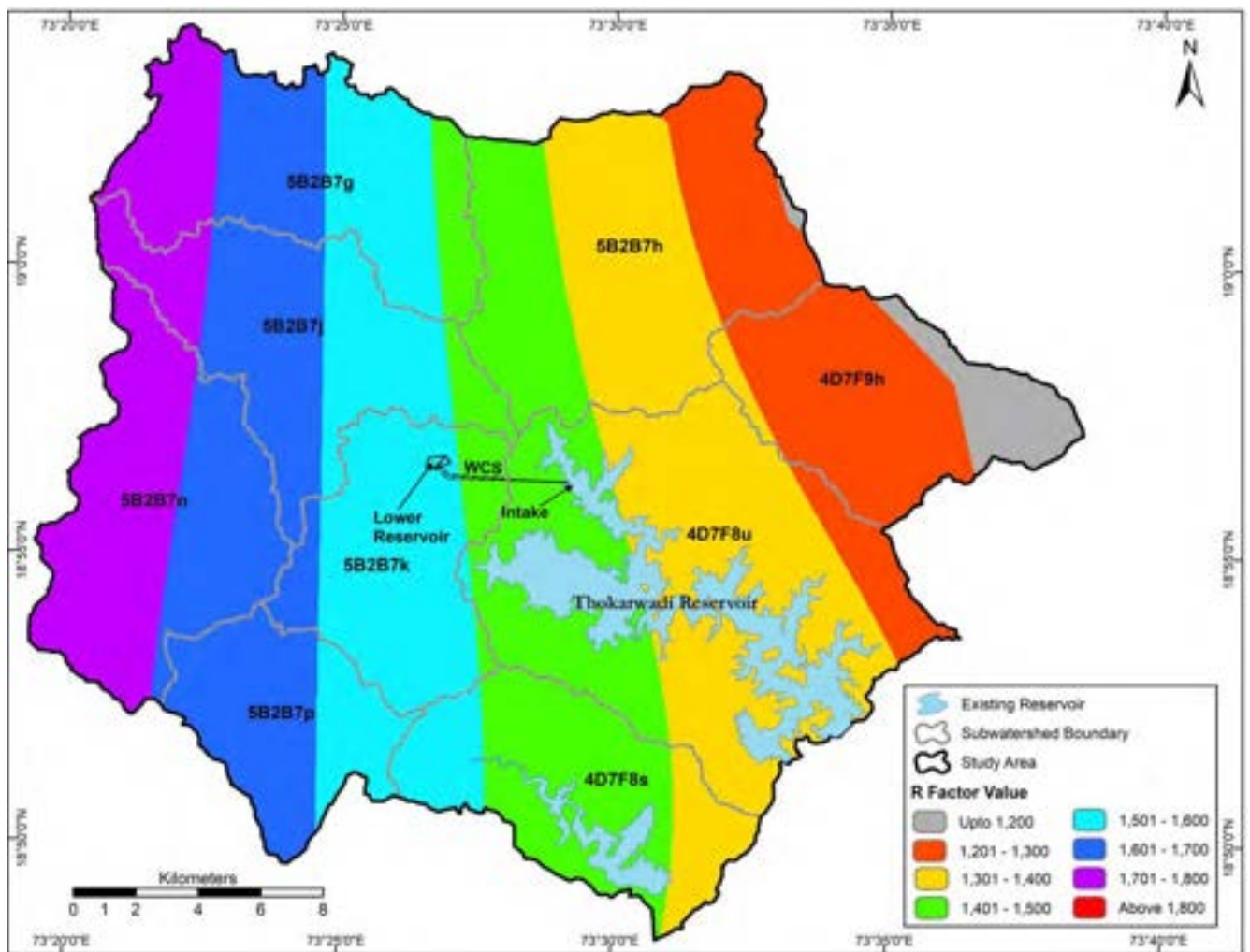


Figure 4: R Factor Map of Study Area

b. Soil Erodibility (K) Factor

The K factor is an expression of the inherent erodibility of the soil or surface material at a particular site under standard experimental conditions. It is a function of the particle-size distribution, organic-matter content, structure, and permeability of the soil or surface material. Prior to deciding the K values, soil map for the area is prerequisite. Soil map procured from NBSS&LUP, Nagpur was digitized. The dominant soil mapping unit is S77 (60.0%), characterised by very shallow, excessively drained, loamy soils on moderately steeply sloping highly dissected hill ranges with escarpments and narrow valleys with very severe erosion, followed by soil mapping unit S33 (26.71%), characterised by shallow, well drained, loamy soils on moderately steeply sloping dissected hills and intervening valley with severe erosion. **Annexure-I** show an example shallow soil of the area under study. Rest all soil mapping units covers less than 10% of the study area. Soil map has been shown in **Figure 5**. The legend for soil unit classes is given in **Table 3**.

As per the soil map of the study area, the soil can be classified in three major categories. Moderately deep to very shallow with moderate erosion have moderate K value i.e. 0.15. Shallow to extremely shallow with severe erosion has slightly high K value i.e. 0.25. Very shallow with very severe erosion has high K value i.e. 0.325. Various classes of soil and the values of K are given in **Table 4** and shown in **Figure 6**.

Table 3: Description of Soil Units in the Study Area

Mapping Unit	Description	Taxonomic Classification	Area (ha)	Area (%)
S021	Extremely shallow, somewhat excessively drained, loamy soils on moderately steeply sloping undulating and rolling lands with severe erosion; <i>associated with</i> : Slightly deep moderately well drained, loamy soils on very gently sloping lands with moderate erosion.	<ul style="list-style-type: none"> Loamy-skeletal, mixed, isohyper-thermic, Lithic Ustorthents Fine-loamy, mixed, isohyper-thermic, Typic Ustropepts 	5386.50	9.13
S028	Moderately deep, well drained, loamy soils on gently sloping elongated ridges/ hills with moderate erosion; <i>associated with</i> : Shallow, well drained, loamy soils with moderate erosion.	<ul style="list-style-type: none"> Fine-loamy, mixed, isohyper-thermic, Typic Ustropepts Loamy, mixed, isohyper-thermic, Lithic Ustropepts 	33.26	0.06
S033	Shallow, well drained, loamy soils on moderately steeply sloping dissected hills and intervening valley with severe erosion; <i>associated with</i> : Very shallow, well drained, loamy soils on gently sloping lands with moderate erosion.	<ul style="list-style-type: none"> Loamy, mixed, isohyper-thermic, Typic Ustropepts Loamy, mixed, isohyper-thermic, Lithic Ustropepts 	15764.08	26.71
S077	Very shallow, excessively drained, loamy soils on moderately steeply sloping highly dissected hill ranges with escarpments and narrow valleys with very severe erosion	<ul style="list-style-type: none"> Loamy, mixed, isohyper-thermic, Lithic Ustorthents 	35408.42	60.00
S083	Shallow, well drained, clayey soils on moderately sloping highly dissected hill ranges on north Sahyadri with moderate erosion; <i>associated with</i> : Slightly deep, moderately well drained, clayey soils with moderate erosion.	<ul style="list-style-type: none"> Clayey, mixed, isohyper-thermic, Typic Ustropepts Clayey, montmorillonitic, isohyper-thermic, shallow, Typic Ustropepts 	21.85	0.04
S118	Very shallow, well drained to somewhat excessively drained, loamy soils on gently sloping undulating lands with moderate erosion; <i>associated with</i> : Very shallow, well drained to somewhat excessively drained, loamy soils with moderate erosion and moderate stoniness.	<ul style="list-style-type: none"> Loamy, mixed, isohyper-thermic, Lithic Ustorthents Loamy-skeletal, mixed, isohyper-thermic, Lithic Ustorthents 	2400.72	4.07
	Total		59014.84	100

Table 4: Soil Erodibility Factor for different Soil Types

S. No.	Soil Type	Erosion Intensity	K Value
1	Very shallow	Very severe	0.325
2	Shallow to extremely shallow	Severe	0.25
3	Moderately deep to very shallow	Moderate	0.15

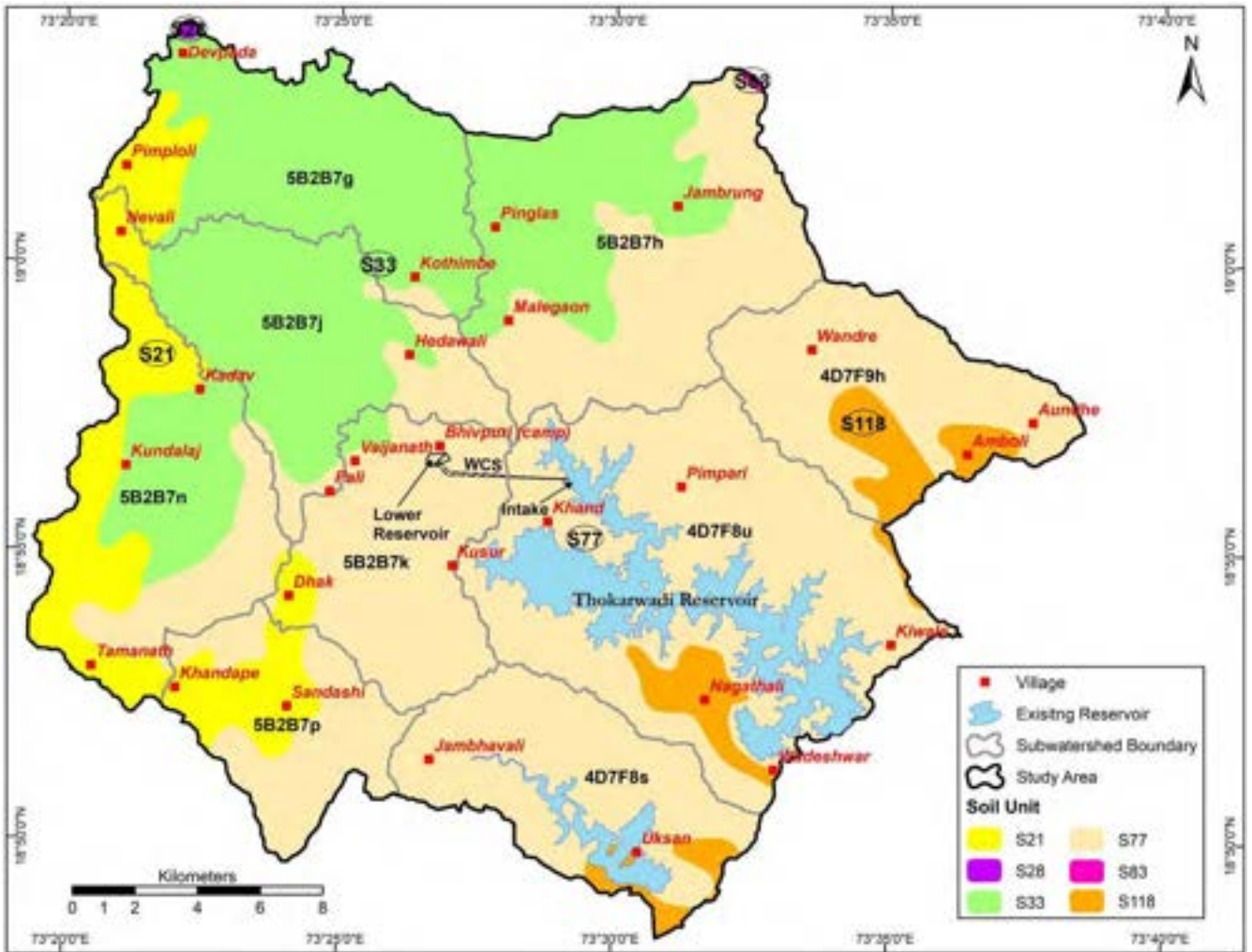


Figure 5: Soil Map of Study Area (For details of Soil Unit legend refer Table 3)

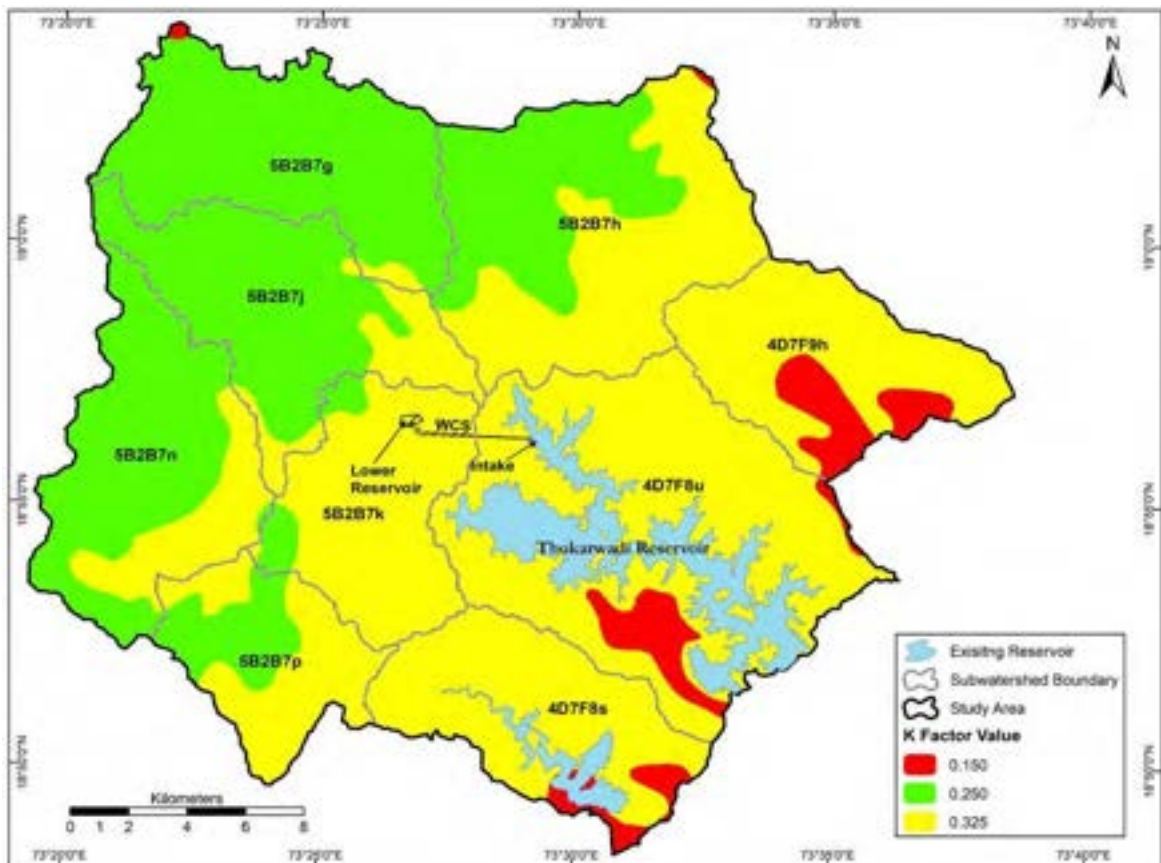


Figure 6: K Factor Value Map of the Study Area

c. **Topographic (LS) Factor**

The LS factor is an expression of the effect of topography, specifically hill slope length and steepness, on rates of soil loss at a particular site. The value of 'LS' increases as hill slope length and steepness increase, under the assumption that runoff accumulates and accelerates in the down-slope direction. Digital Elevation Model (DEM) and Slope of a particular area is prerequisite for LS factor. As already discussed, SRTM data has been used for DEM and the same DEM has been used for the preparation of slope map. The slope map in degrees prepared for the study area is given at **Figure 7**. In the study area, the slope ranges from 0° to around 75°. The LS factor prepared for the study area is given at **Figure 8**.

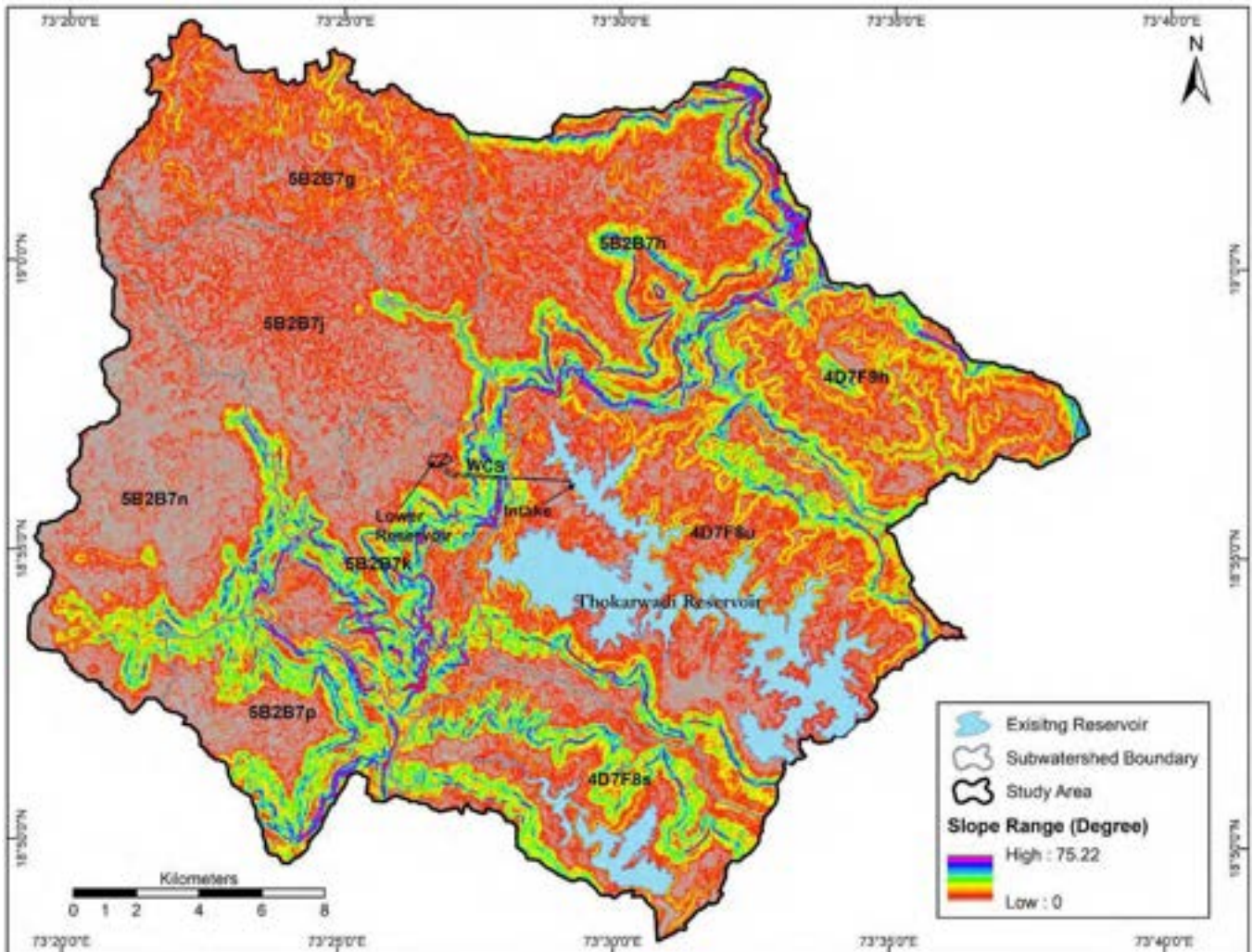


Figure 7: Slope Map of Study Area

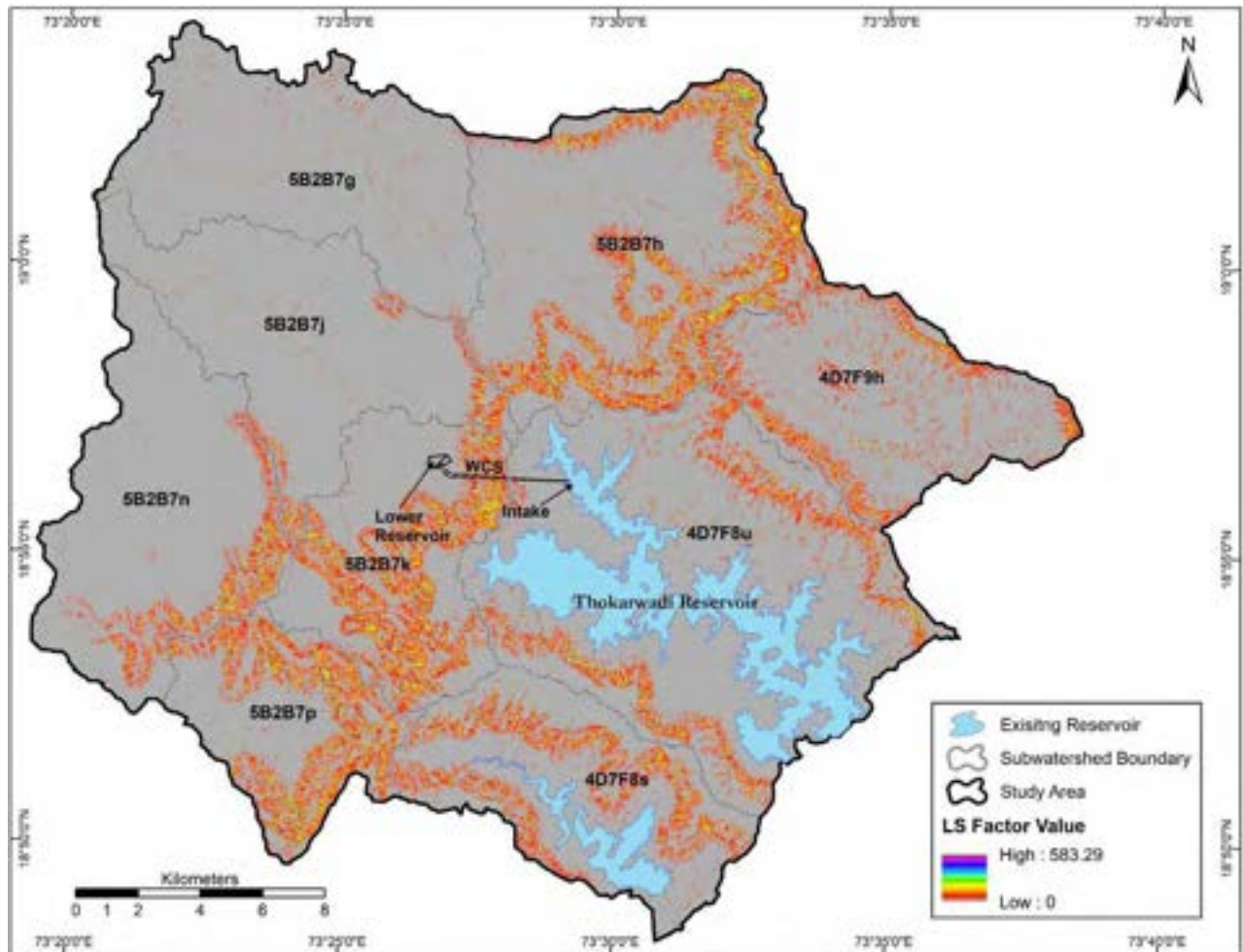


Figure 8: LS Factor Map of Study Area

b. Crop Management (C) Factor

The C factor is an expression of the effect of surface cover and roughness, soil biomass, and soil-disturbing activities on rates of soil loss at a particular site. The value of C decreases as surface cover and soil biomass increase, thus protecting the soil from rain splash and runoff. In the present study, the land use/land cover map prepared by National Remote Sensing Centre (NRSC), Indian Space Research Organisation (ISRO) of Dept. of Space with Partner Institution, Maharashtra Remote Sensing Application Centre, Govt. of Maharashtra has been used.

The classified land use/land cover map of the study area is shown as **Figure 9**. The land use/land cover pattern of the study area has been given in **Table 5**. As can be seen from the map and table, the land use/land cover pattern can be classified into nine classes, out of these, agricultural land covers the maximum area i.e. 28.08%, followed by evergreen/semi evergreen forest, covering 20.54%. Scrub land covers 19.34% of the area. Deciduous forest and scrub forest covers 7.77% and 7.05% of the area respectively. Fallow land covers 9.36% of the area. Waterbody covers 6.89% of the area. Rest all the other classes covers 0.96% of the area.

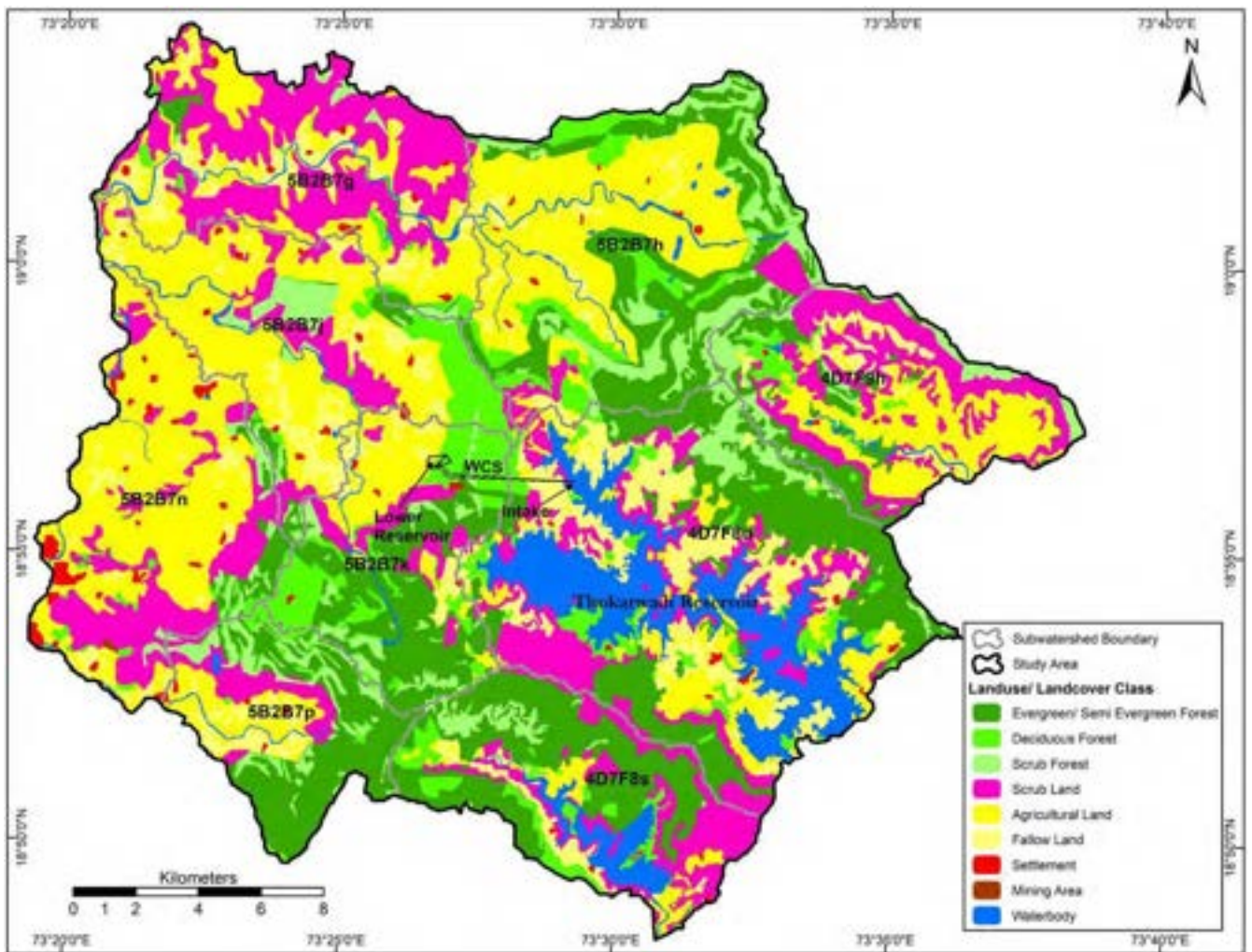


Figure 9: Land use/ Land cover Map of Study Area

Table 5: Area Falling Under Different Land Use/ Land Cover Classes

Land use/ Land cover Classes	Area (ha)	Area (%)
Evergreen/ Semi Evergreen Forest	12122.31	20.54
Deciduous Forest	4585.43	7.77
Scrub Forest	4161.73	7.05
Scrub Land	11414.14	19.34
Agricultural Land	16573.19	28.08
Fallow Land	5523.97	9.36
Settlement	557.59	0.94
Mining Area	11.49	0.02
Waterbody	4065.00	6.89
Total	59014.84	100

Table 6 describes the cover management factors used in the model under different land use/land cover categories. Figure 10 shows the map of C Factor.

Table 6: Crop Management Factor

S. No.	Land use/ Land cover Type	C Value
1	Fallow Land	0.03
2	Scrub Forest and Scrub Land	0.02
3	Evergreen/ Semi Evergreen Forest, Deciduous Forest	0.01
4	Agricultural Crop Land	0.005
5	Settlement, Mining Area & Waterbody	0.00

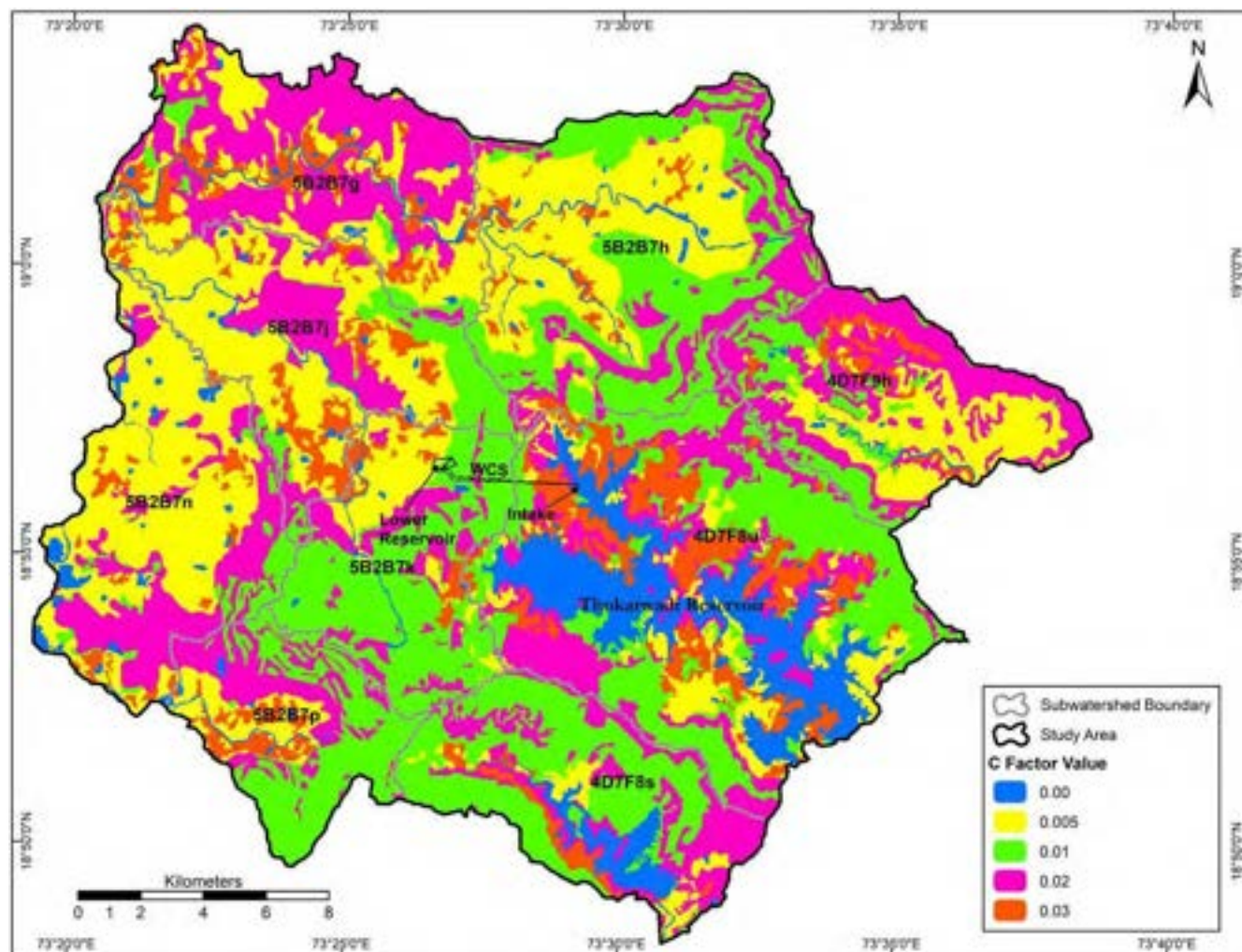


Figure 10: C Factor Map of Study Area

e. Conservation Support Practice (P) Factor

The P factor is an expression of the effects of supporting conservation practices, such as contouring, buffer strips of vegetation, and terracing, on soil loss at a particular site. It is the ratio of soil loss with specific support practice to the corresponding loss with up-or down-slope cultivation. In the present study, the P factor has been considered as 1.

9.3 Output Presentation

A thematic map for soil loss of the study area has been prepared using RUSLE model mentioned in the above section. The study area was then demarcated into different soil erosion intensity mapping units or classes based upon the extent of soil loss (see **Table 7 & Figure 11**). The study area under different Erosion Intensity categories is given in **Table 7**. As can be seen from the figure and table, around 44% of the study area is prone to less than 1 tons/ha/annum soil erosion, i.e. under negligible erosion intensity category. Around 21% of its area is prone to Severe and Very Severe soil erosion.

Table 7: Area falling under different Erosion Intensity Categories

S. No.	Soil loss in tons/hectare/annum	Erosion Intensity Category	Area (ha)	Area (%)
1	<1	Negligible	26123.95	44.27
2	1-5	Slight	6649.64	11.27
3	5-10	Very Low	3878.46	6.57

S. No.	Soil loss in tons/hectare/annum	Erosion Intensity Category	Area (ha)	Area (%)
4	10-20	Low	4576.53	7.75
5	20-40	Moderate	5433.23	9.21
6	40-80	Severe	5445.59	9.23
7	>80	Very Severe	6907.43	11.70
Total			59014.84	100

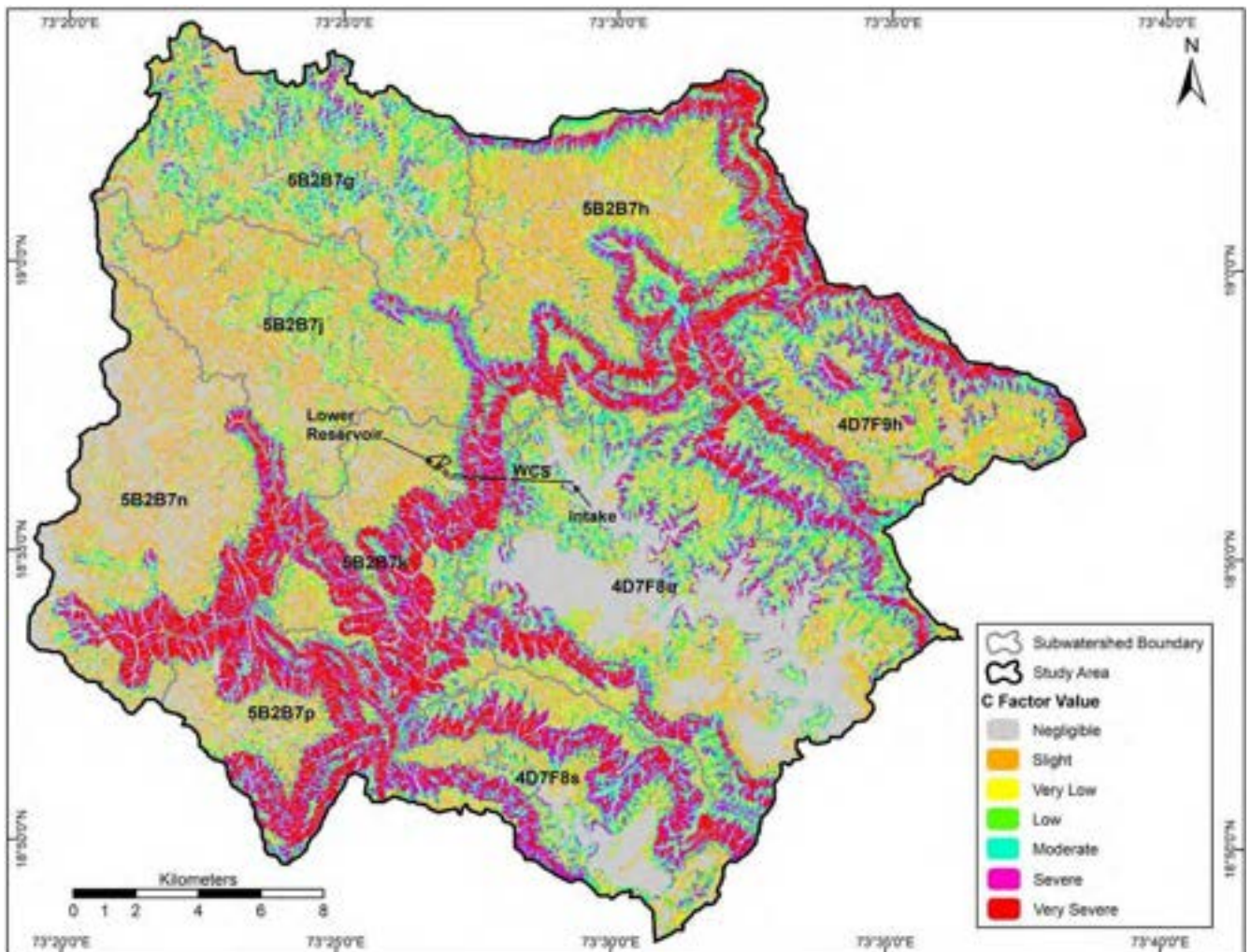


Figure 11: Erosion Intensity Map of Study Area

9.4 Prioritization of Sub-Watersheds using Silt Yield Index (SYI) Method

'Silt Yield Index' (SYI), method has been used for prioritization of Sub-watersheds for treatment. The Silt Yield Index (SYI) is defined as the Yield per unit area and SYI value for hydrologic unit is obtained by taking the weighted arithmetic mean over the entire area of the hydrologic unit by using suitable empirical equation. The Silt Yield Index Model (SYI) considers sedimentation as product of erosivity, morphometry and delivery ratio of a particular Sub-watershed and was conceptualized by Soil and Land Use Survey of India (SLUSI) as early as 1969 and has been operational since then to meet the requirements of prioritization of smaller hydrologic units within river valley project areas. Silt yield index (SYI) was calculated using following empirical formula:

$$SYI = \frac{\sum (A_i * W_i) * D_i}{A_w} * 100 ; \quad \text{where } i = 1 \text{ to } n$$

where,

A_i	=	Area of i th unit (EIMU)
W_i	=	Weightage value of i th mapping unit
n	=	No. of mapping units
A_w	=	Total area of Sub-watershed.
D_i	=	Delivery ratio

9.4.1 Erosion Intensity Mapping Unit

Erosion Intensity Mapping Units (EIMU) are demarcated and defined as per the soil erosion intensity map prepared above. Various EIMU categories, such as Very Severe, Severe, Moderate, Low, Very Low, and Negligible & Slight (clubbed together), were then used to calculate Sub-watershed wise SYI. Erosion Intensity Mapping Units (EIMU) is a composite expression of physiography, land use, and conservation practices adopted. While computing soil erosion intensity, all the factors (physiography, land use, and conservation practices) are already taken into consideration. Therefore, EIMUs are assumed as per the soil erosion intensity in the Sub-watershed.

9.4.2 Weightage Value

Each erosion intensity unit is assigned a weightage value. When considered collectively, the weightage value represents approximately the comparative erosion intensity. A basic factor of $K = 10$ was used in determining the weightage values. The value of 10 indicates a static condition of equilibrium between erosion and deposition. Any addition to the factor K ($10+X$) is suggestive of erosion in ascending order whereas subtraction, i.e. ($10-X$) is indicative of deposition possibilities. The weightage value assigned to erosion mapping unit in a Sub-watershed ranges from 11-20.

9.4.3 Delivery Ratio

Delivery ratios were adjusted for each of the erosion intensity unit. The delivery ratio suggests the percentage of eroded material that finally finds entry into reservoir or river/ stream. Delivery ratios are assigned to all erosion intensity units depending upon their distance from the nearest stream. The criteria adopted for assigning the delivery ratio are as follows:

Nearest Stream	Delivery ratio
0 - 0.9 km	1.00
1.0 - 2.0 km	0.95
2.1 - 5.0 km	0.90
5.1 - 15.0 km	0.80
15.1 - 30.0 km	0.70

9.4.4 Silt Yield Index

The area of each of the mapping units is computed and silt yield indices of individual Sub-Sub-watersheds are calculated using the equations mentioned above. The SYI values for classification of various categories of erosion intensity rates are given in **Table 8**.

Table 8: Calculation of SYI in Sub-watersheds

Sub-watershed	EIMU	EIMU Area (EA) (ha)	Weightage Factor (WF)	Silt Yield (SY) = EA * (WF)	Delivery Ratio (DR)	SYI = (SY*DR*100)/SA
4D7F8s	1	719.20	20	14383.99	0.85	1308
	2	776.16	20	15523.17		
	3	602.20	18	10839.62		
	4	409.21	16	6547.29		
	5	312.79	14	4379.10		
	6	2443.22	12	29318.66		
Total		5262.78		80991.85		1308
4D7F8u	1	819.00	20	16380.04	0.85	1223
	2	1095.60	20	21912.01		
	3	1388.20	18	24987.55		
	4	1133.82	16	18141.09		
	5	777.36	14	10883.07		
	6	7247.67	12	86972.00		
Total		12461.65		179275.76		1223
4D7F9h	1	641.20	20	12823.93	0.85	1301
	2	664.02	20	13280.39		
	3	684.70	18	12324.53		
	4	483.34	16	7733.45		
	5	384.98	14	5389.70		
	6	2355.48	12	28265.78		
Total		5213.71		79817.80		1301
5B2B7g	1	93.43	20	1868.53	0.9	1258
	2	338.18	20	6763.64		
	3	785.03	18	14130.48		
	4	788.36	16	12613.79		
	5	591.37	14	8279.13		
	6	3712.48	12	44549.76		
Total		6308.84		88205.33		1258
5B2B7h	1	1489.09	20	29781.77	0.85	1288
	2	880.23	20	17604.68		
	3	842.08	18	15157.36		
	4	666.66	16	10666.49		
	5	690.83	14	9671.63		
	6	4332.57	12	51990.88		
Total		8901.46		134872.80		1288
5B2B7j	1	191.60	20	3831.99	0.85	1129
	2	208.41	20	4168.26		
	3	271.53	18	4887.60		
	4	438.50	16	7015.93		
	5	509.30	14	7130.15		
	6	4285.93	12	51431.15		
Total		5905.27		78465.08		1129
5B2B7k	1	1216.43	20	24328.65	0.8	1265
	2	628.24	20	12564.80		
	3	369.67	18	6654.13		
	4	280.40	16	4486.46		
	5	223.82	14	3133.41		
	6	2138.52	12	25662.24		
Total		4857.09		76829.69		1265

Sub-watershed	EIMU	EIMU Area (EA) (ha)	Weightage Factor (WF)	Silt Yield (SY) = EA * (WF)	Delivery Ratio (DR)	SYI = (SY*DR*100)/SA
5B2B7n	1	704.09	20	14081.75	0.9	1228
	2	313.35	20	6267.07		
	3	193.64	18	3485.60		
	4	206.69	16	3307.04		
	5	262.15	14	3670.11		
	6	4805.44	12	57665.34		
Total		6485.37		88476.91		1228
5B2B7p	1	1033.39	20	20667.90	0.85	1380
	2	541.39	20	10827.85		
	3	296.19	18	5331.35		
	4	169.56	16	2712.97		
	5	125.87	14	1762.19		
	6	1452.27	12	17427.25		
Total		3618.68		58729.51		1380

9.4.5 Prioritization of Sub-watersheds

The Sub-watersheds are subsequently rated into various categories corresponding to their respective SYI values. The criteria followed for priority categorization of Sub-watersheds depending upon their SYI values is given below and the priority classification of individual Sub-watershed is given in **Figure 13** and **Table 9**.

Priority categories	SYI Values
Very high	> 1300
High	1200-1299
Medium	1100-1199
Low	1000-1099
Very Low	<1000

Table 9: Priority Number as per SYI Classification

S. No.	Sub-watershed	SYI Value	Priority
1	4D7F8s	1308	Very High
2	4D7F8u	1223	High
3	4D7F9h	1301	Very High
4	5B2B7g	1258	High
5	5B2B7h	1288	High
6	5B2B7j	1129	Medium
7	5B2B7k	1265	High
8	5B2B7n	1228	High
9	5B2B7p	1380	Very High

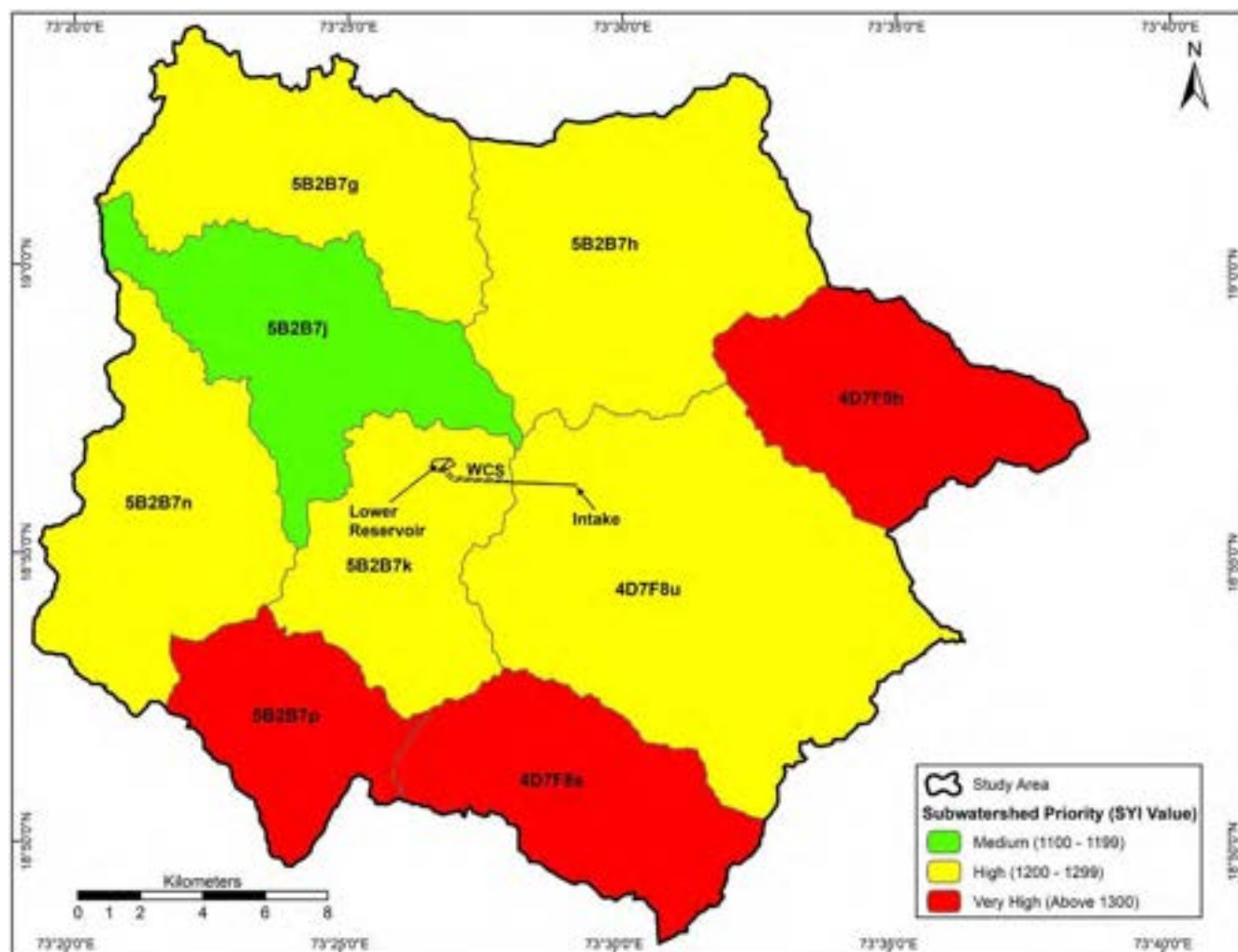


Figure 12: Sub-watersheds Priority Classification Map of Study Area

10.0 SOCIO-ECONOMIC SURVEY

The objective of conducting socio-economic baseline survey in the study area is to understand the overall socio-economic situation of the area and identify potential challenges in agricultural production. This survey aims to suggest areas where technology transfer can promote sustainable development. It will help create a plan to improve socio-economic conditions and preserve natural resources, supporting those who rely on the watershed for their livelihoods. Also, it will act as a benchmark for analysing impact of watershed interventions after implementation of recommended interventions.

For this survey, semi-structured interviews and focus group discussions with key informants and villagers in selected villages within study area were carried out. A total of 11 villages were surveyed, with household interviews conducted randomly among 5% of the total households. The surveyed villages are listed in **Table 10**, location of the surveyed village is shown in **Figure 13**. The study employed semi-structured interviews, field visits, and ground-truthing to understand existing cultivation practices and issues related to crop production within the study area.

The secondary data have been collected through district census books, Mission Antyodaya 2020, pamphlets, websites etc.

Table 10: List of Surveyed Villages

S. No	Tehsil	Village Name	S. No	Tehsil	Village Name
District: Raigad			District: Pune		
1	Karjat	Vaijanath	6	Mawal	Vadeshwar
2	Karjat	Bhivpuri	7	Mawal	Khand
3	Karjat	Humgaon	8	Mawal	Malegaon Bk.,
4	Karjat	Mandawane	9	Mawal	Malegaon Kh.
5	Karjat	Gaulwadi	10	Mawal	Pimpri
			11	Mawal	Sawale

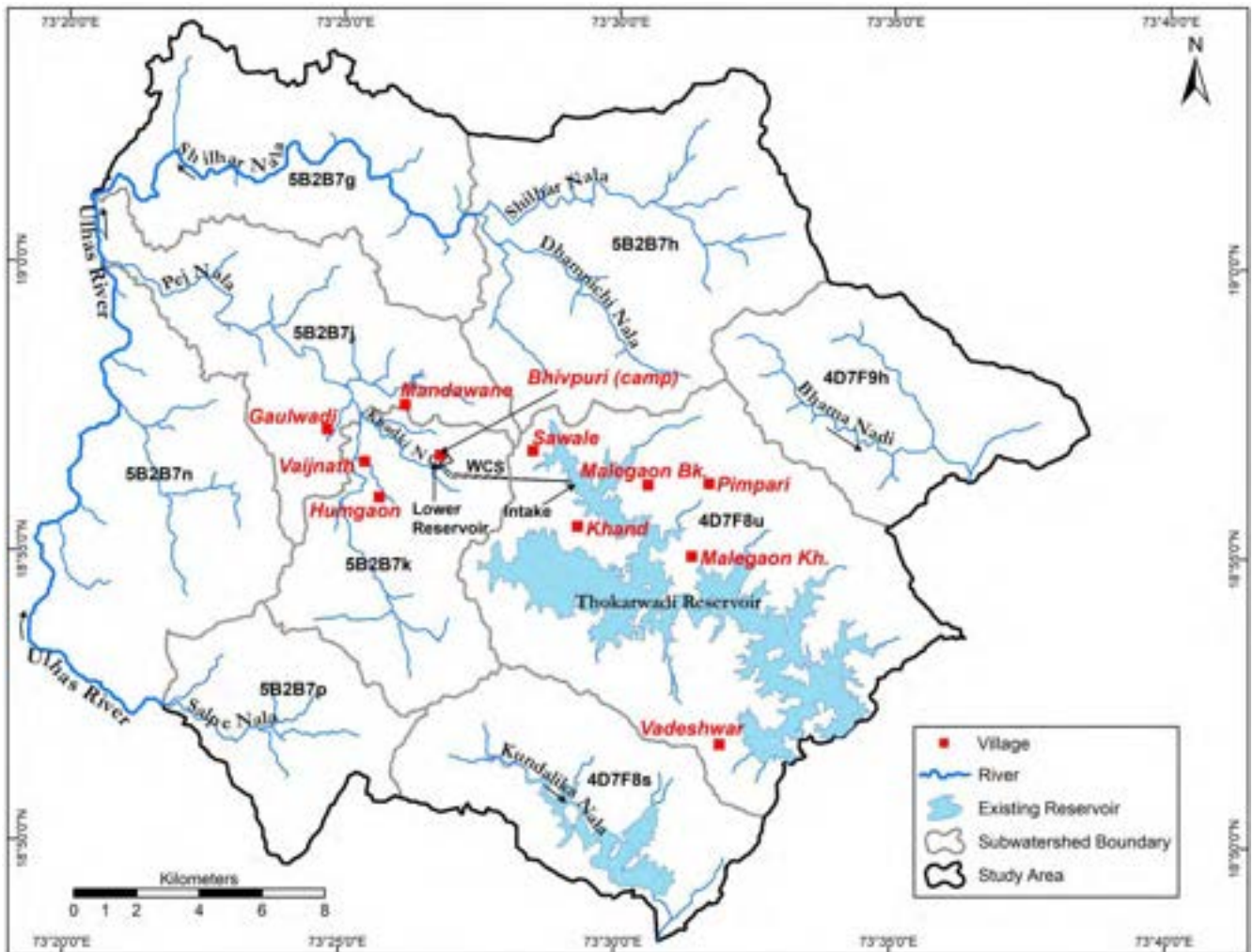


Figure 13: Surveyed Villages in the Study Area

10.1 Demographic Profile of the Study Area

There are total of 121 villages falling in the study area; of these, 89 are in Karjat tehsil of Raigad district, 5 are in Khed tehsil of Pune district and 27 are in Mawal tehsil of Pune district. The summary of the demographic profile of villages in the study area based on the Census of India 2011 is given below.

- ❖ **Total Population of the Study Area = 90096**
 - Male = 45922
 - Female = 44174
- ❖ **Total SC Population in the Study Area = 3571**
 - Male SC = 1790
 - Female SC = 1781

❖ **Total ST Population in Study Area= 28185**

- Male ST = 14098
- Female ST = 14087

10.2 Socio-Economic Profile & Demographic Condition of Surveyed Villages

The study found that the majority of respondents were in the middle age group (30-60 years), followed by the old age group (above 60 years), with some participants in the young age group (20-30 years) also. The average farming experience in the study area was relatively high, averaging 26 years, particularly among middle-aged farmers (35-64 years) who were the main interviewees.

The total population of the surveyed villages is 12,591, with 6,520 (51.78%) males and 6,071 (48.21%) females. The number of households are 2,634, with an average occupancy of 4-5 persons per household. The child population below 6 years old was found to be 1,446, which is 11.48% of the total population. The sex ratio was found to be 931 females per 1000 males.

Out of the total population, 391 are scheduled castes, accounting for 3.10% of the total population of surveyed villages, of which 196 are male and 195 are female. The population of scheduled tribes is 5,389, accounting for 42.80% of the total population, of which 2,721 are male and 2,668 are female. The project area is mainly inhabited by the **Mahadev Koli** tribal community, predominantly residing in Mawal tehsil of Pune district.

The literacy rate in the villages is 67.01% (for those above the age of 6), with males and females having rates of 73.78% and 59.75%, respectively, creating a gender gap of 14.3%. During the field survey, it was noted that the literacy level among farmers is moderately low in the surveyed villages.

10.2.1 Occupation

During the field survey it was found that most of the households in the region have income in the following ranges: approximately 45% earn between Rs. 25,000 to Rs. 50,000, approximately 25% earn between Rs. 50,000 to Rs. 100,000, approximately 20% earn between Rs. 100,000 to Rs. 250,000, and approximately 10% earn more than Rs. 250,000 per year.

Agriculture and allied activities are the primary activities in the villages around the project area, with around 43% relying on crop farming, 32% working as agricultural labourers, 10% engaged in other work (such as in factories or cities, business, transport, government, and private jobs), and 5% involved in animal husbandry. Many resorts and hotels are present in the project surrounding area, which provide employment opportunities to the villagers, with around 10% of the people engaged in hotels and resorts.

There is a dam named Thokarwadi Dam, attracting visitors from outside the district as well as nearby areas for travel purposes. **Annexure-I** show some photographs of the reservoir and the boating activity. Local residents and farmers from the villages sell their locally produced goods to tourists, supporting their livelihoods.

Apart from agriculture, villagers also go to the forest to collect firewood, mangoes, berries, and honey. They sell these products in the Karjat Market for their livelihood.

During the field visit, flower farming and poultry farming was observed in the area. The villagers sell flowers to the nearest market and tourists for their livelihood. Most of the women groups in the area are involved in poultry farming. It was observed that more number of poultry farms are available in the villages of Karjat tehsil within the study area.

Regarding livestock management, activities like fodder collection, fodder preparation and feeding of livestock are handled by women. However, preparation of animal feed, transportation of manure, application and grazing of animals are done jointly by men and women. Thus, agricultural and livestock management activities, which fall under the productive sector of gender roles, show that while men have dominant roles, women also play important roles for livelihood purposes.

Within the household, activities related to cooking, fetching water and collecting fodder are performed by women.

10.2.2 Land Holdings

Land Resources, whether private or common are an extremely important asset for rural communities. At the village level it is the land resources which allow for the satisfaction of the needs/demands of fuel wood, and fodder for livestock and other everyday resources.

The data presented in **Table 11** shows that among the surveyed villages, over 3.18 ha is designated as barren and uncultivable land, while the village area boasts 2596.12 ha of forest cover. Approximately 3044.43 ha is under agricultural use within the total surveyed villages land. The Mandawane village have 6.58 ha pastures and other Grazing land. Consultation with several farmers in the surveyed villages revealed that each farmer owns about 4-5 hectares on average.

Table 11: Land Use Pattern in the Surveyed Villages

Village Name	Forest Area (ha.)	Area under Non-Agricultural Uses (ha.)	Barren & Uncultivable Land Area (ha.)	Permanent Pastures and Other Grazing Land Area (ha.)	Culturable Waste Land Area (ha.)	Fallows Land other than Current Fallows Area (ha.)	Current Fallows Area (ha.)	Net Area Sown (ha.)
Vaijanath	0	45.83	0	0	126.14	14.1	25.17	66.45
Bhivpuri	37.79	109.72	3.18	0	5.3	0	0	0
Humgaon	506.58	57.05	0	0	0	0	90.35	95.32
Mandawane	73.35	70.01	0	6.58	102.15	281.75	0	114.35
Gaulwadi	0.4	15	0	0	212	0	0	146.6
Vadeshwar	299	575	0	0	17	0	0	652
Khand	209	576	0	0	66.54	0	0	435.46
Malegaon Bk.	78	289	0	0	94.75	0	0	310.25
Malegaon Kh.	22	286	0	0	42	0	0	252
Pimpari	1254	78	0	0	0	0	0	535
Sawale	116	360	0	0	388	0	0	437

Village Name	Forest Area (ha.)	Area under Non-Agricultural Uses (ha.)	Barren & Un-cultivable Land Area (ha.)	Permanent Pastures and Other Grazing Land Area (ha.)	Culturable Waste Land Area (ha.)	Fallows Land other than Current Fallows Area (ha.)	Current Fallows Area (ha.)	Net Area Sown (ha.)
Total	2596.12	2461.61	3.18	6.58	1053.88	295.85	115.52	3044.43

Most farmers in the surveyed area are small-scale, with about 35% lacking irrigation and relying on rainfall for farming. Four surveyed villages (Vaijanath, Humgaon, Mandawane, and Gaulwadi) have canal and drip irrigation facilities.

10.2.3 Irrigation and Groundwater Level

The predominant sources of irrigation for landholders across the study area are canals and rivers, with approximately 80% of irrigated farmers relying on these as their primary water sources. Some farmers have wells in their fields for irrigation purposes. Conversely, around 20% of farmers are dependent on rainfall for cultivation.

Based on farmers' responses, the groundwater level in the region ranges between 480 m to 700 m. Considering the bore well adoption rate of the farmers in the study area, it is revealed that only approximately 15% of farmers currently have functional bore wells, indicating that only a few farmers have irrigation facilities. The study found that some farmers in the region have adopted bore wells. Notably, 40% of farmers have reported water scarcity, particularly in villages located within the project's upper reservoir area during the summer season. The absence of adequate irrigation infrastructure in the study area poses a significant challenge to agricultural practices and water management.

10.2.4 Cropping Pattern & Livestock Rearing

Primarily the economy of the district depends on agriculture where Sugarcane, Paddy, Pearl Millet, Groundnut, Soyabean and Pigeon Pea are the major crops of kharif season, which are mainly rainfed crops except Sugarcane which is mainly cultivated in irrigated lands. The major rabi season' crops are Sorghum, wheat, Chickpea and Maize. Mango, Sapota and Custard Apple are the major fruit crop, Onion, Potato, Tomato, Brinjal, Okra and Chilli are major vegetables and Rose, Marigold, Tuberoses and Chrysanthemum are the major flowers cultivated in the study area.

In the surveyed villages, the predominant crops cultivated includes paddy, groundnut, pulses, and finger millets. The major crop in the area is paddy.

Under irrigated conditions, the major fruit crops (horticultural crops) grown include sapota, mango and cashew, while vegetable horticultural crops such as brinjal, green chilli, and leafy vegetables are also prominent.

Around 40% of the population keep hens, followed by goats and buffalos. Most of the household keep buffalos in the study area. Animal sales and animal products serve as a source of income for the villagers. Livestock is sold for cash to cover expenses and purchase basic household goods.

10.2.5 Agriculture

Paddy is cultivated as a food grain crop on large scale in existing reservoir and proposed reservoir in the project area.

The agricultural season is divided into four seasons. The period from December to February is the dry and comparatively cool season. The summer season starts from March and lasts till May. This is followed by the southwest monsoon from June to September, while October and November constitute the post-monsoon or northeast monsoon season. The rainy season starts from June and lasts till September. The rainfall in the southwest monsoon period is most important for the sowings of dry crops such as groundnut, pulses, and millets, etc. The paddy crop covers more than 70% of the total cropped area (refer **Figure 14**).

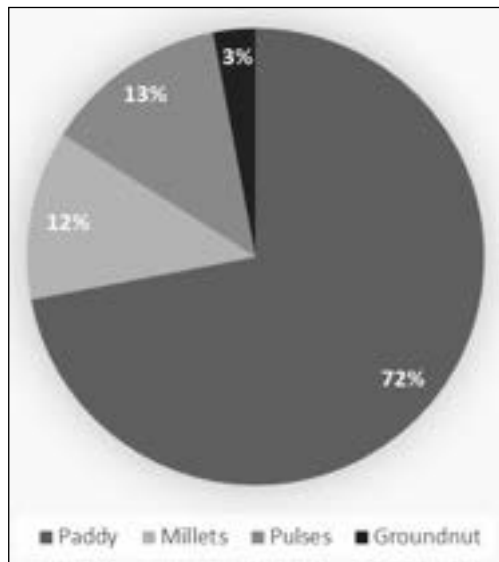


Figure 14: Area distribution of different field crops in the Study Area

The major horticulture fruit crops grown are mango, sapota, and cashew, while the horticulture vegetable crops cultivated include brinjal, onion, okra, potato, green chili, and leafy vegetables. The area distribution of fruit crops is depicted in **Figure 15**.

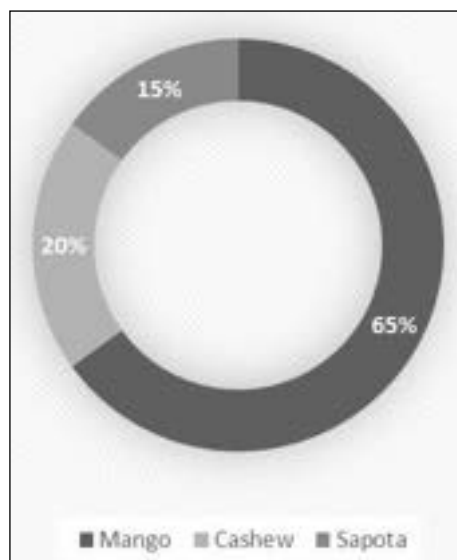


Figure 15: Area distributed of different fruit crops in the Study Area

During field surveys, interactions with farmers revealed that paddy is cultivated as a food grain crop on a large scale in the study project area, as well as in the tehsils of Pune and Raigad district.

According to farmer respondents, many parts of Maharashtra, including the surveyed area, are transitioning from water-intensive paddy cultivation to the innovative Saguna rice technique, which manages soil and water more efficiently while yielding better harvests.

The farmer respondents mentioned using fertilizers such as urea, single superphosphate, and muriate of potash in paddy fields.

State government schemes, like Maharashtra's initiative to conserve soil and water through good agricultural practices, include measures such as harvesting rainwater through the construction of check dams and ponds, adopting crop diversification, seed production, and nursery raising in waterlogged areas, as well as adopting drip and sprinkler irrigation systems to save 30-37% water and enhance crop quality and productivity. During the survey it was found that the farmers in the study area have benefited from the drip irrigation system. Some of the Farmers also expressed concerns about the low availability of water, which has resulted in crop losses in the surveyed area.

10.2.6 Status of household & Farm assets in the Study Area

The baseline survey reveals that nearly all households surveyed have mobile phones, followed by televisions (approx. 95%), bikes (approx. 50%), bicycles (approx. 30%), tractors (approx. 2%), and a smaller percentage owning refrigerators and washing machines.

10.2.7 Migration

About 50% of household members in the study area are engaged in temporary migration for agricultural labour, with the focus mainly on male migration due to educational activities and labour work in nearby cities. In contrast, tribal female migration remains largely in villages, primarily for seasonal temporary agricultural labour on a daily wage basis, while about 50% of households show no recorded migration activity.

10.2.8 Social Participation

The majority of villagers surveyed have bank account and access to Self-Help Groups (SHGs). When examining the frequency of involvement, it became evident that most respondents are neither members of nor actively participating in any social organizations. Consequently, there is a low incidence of social engagement.

10.2.9 Issue Recognition (Collected Through Focus Group Discussions with Farmers)

- Farmers in low-literacy villages, namely Vadeshwar, and Sawale, are seeking a farming training program as part of a watershed development plan.
- There is less awareness in the village's farmers about technical information and government policies.
- About 60% of the households surveyed include marshals and smallholders who are located on less than 5 acres of land. Therefore adoption of mechanization is not the pattern in the area.

- Study area villages, Vaijanath, Bhivpuri (camp), Mandawane and Humgaon villages are prone to soil erosion due to factors such as slope, rainfall intensity, and land use practices. Farmers have expressed concerns about soil erosion, which can result in the loss of fertile topsoil, reduced crop productivity, and sedimentation of water bodies.
- In the study area, while some villages experience satisfactory groundwater levels, many others encounter challenges such as frequent hand pump failures and low groundwater in the upper reservoir area. This is particularly evident in the village, namely Sawale, Khand, and Malegaon Bk. of the proposed PSP project site.
- Poor irrigation in project region has resulted in low crop yields, emphasizing the urgent requirement for better water management practices in the Khand, Sawale, and Malegaon Kh. villages.
- Farmers in the area lack access to a cooperative marketing milk collection system, leading them to rely on local private milk dairies for selling their milk.
- In the region, water conservation efforts are good, but 40% of farmers face soil erosion, and 30% experience water shortage for irrigation. To address this, implementing measures like (TCB) Trench cum Bund, Borewell recharge filters, and Farm ponds at specific sites as per farmers' needs is recommended.

11.0 WATERSHED MANAGEMENT TREATMENT PLAN

11.1 Area to be taken up for Treatment

Area under severe and very severe erosion intensity category in all the 9 Sub-watersheds will be taken up for treatment. To arrive at such an area, first of all areas under severe and very severe erosion intensity category was extracted for each Sub-watershed, which comes out to be **12353.02 ha**. Thereafter, area under severe and very severe erosion intensity category falling above 45 degree of slopes were extracted as it is not feasible to implement treatment measures in the area having slope more than 45 degree. Finally, areas under severe and very severe erosion intensity category falling under scrub land and fallow land classes of land use/ land cover have been selected for treatment as forest department under various schemes is already implementing treatment measures in the forest areas therefore, in order to treat non forest land scrub land fallow land have been selected for treatment. The Sub-watershed wise and land use/ land cover wise area thus arrived at and considered as treatable area is **3838.51 ha (or say 3838 ha)** and is presented below in **Table 12**.

Table 12: Sub-watershed wise treatable area in Study Area

Sub-Watershed	Scrub Land	Fallow Land	Total Area (ha)
4D7F8s	357.53	34.75	392.28
4D7F8u	700.52	208.65	909.17
4D7F9h	699.72	73.62	773.34
5B2B7g	315.71	51.01	366.72
5B2B7h	173.57	34.68	208.25
5B2B7j	64.92	25.93	90.85
5B2B7k	212.44	20.24	232.68
5B2B7n	635.06	7.87	642.93
5B2B7p	208.27	14	222.27
Total	3367.8	470.75	3838.51

11.2 Treatment Measures

Watershed management is the optimal use of soil and water resources within a given geographical area so as to enable sustainable production. It implies changes in land use, vegetative cover, and other structural and non-structural action that are taken in a Sub-watershed to achieve specific Sub-watershed management objectives. The overall objectives of Sub-watershed management programme are to:

- increase infiltration into soil;
- control excessive runoff;
- manage & utilize runoff for useful purpose.

11.2.1 Biological Measures

The biological measures would comprise of:

- Normal Afforestation
- Assisted Natural Regeneration
- Energy Plantation

11.2.1.1 Normal Afforestation

It is proposed to increase the vegetation cover in the tract. For this, patches of scrub land falling under severe and very severe erosion intensity category shall be brought under afforestation. The locality factors prevalent in the area such as fires, grazing etc. are fairly adverse to the establishment of plantations. Thus, special and intensive efforts are needed to ensure the success of afforestation work. Owing to these factors, the plantation will require higher levels of maintenance also. This will include raising of multi-tier mixed vegetation of suitable local species. 1111 plants per hectare will be planted under this scheme. Planting will be done in pits. Earth work should be done well in advance. Plants should be healthy with strong stems. Planting should be done in June when the water supply starts. Further, it is assessed that it is essential to make provision for soil and moisture conservation measures in the areas proposed for afforestation. Provision had been made for undertaking various necessary soil and moisture conservation measures in these areas. Provision is also made for five years maintenance of afforestation undertaken as part of the watershed management. The unit cost for afforestation including maintenance cost for five years is estimated to be Rs 6,28,030/- per ha. The detailed estimate is sourced from the Rate Structure for Compensatory Afforestation Model No. 5 prepared by the Nanded Forest Division. The detailed cost norm thus prepared after making necessary changes and adopting current wage rate is furnished in **Annexure-II**. The area to be brought under afforestation **57 ha**.

11.2.1.2 Assisted Natural Regeneration

In certain areas, conditions are conducive to natural regeneration provided some sort of assistance is provided. Such area shall be taken up under this component. The areas shall be closed to reduce biotic interference. Ground surface will be cleared of slash, debris and felling refuse to afford a clean seed bed to the falling seed. At certain places some soil raking may also have to be done to facilitate germination of seeds. Where natural regeneration is found deficient. It will be supplemented by artificial planting. Patch sowing in suitable areas may also be done. 625 plants per hectare will be planted under this scheme. The plantation will be maintained for subsequent five years. The unit cost for aided natural regeneration including

maintenance cost for five years is estimated to be Rs. 3,66,840 per ha. The detailed estimate is furnished in **Annexure-II**. The area to be brought under aided natural regeneration is **84 ha**.

11.2.1.3 Agroforestry (Energy Plantation)

Sustainable agriculture depends on agro ecological process that promote soil fertility and past resistance through biologically acquired inputs and social process that generate knowledge and incentives for producing a variety of foods and fibers within locally affordable means. Agroforestry practice, the cultivation of trees or other woody plants with crops for multiple benefits can contribute substantially to advancing a sustainable agriculture through its influence on ecological and social process. One of the major types of agroforestry system proposed under this Sub-watershed development and management plan is Energy Plantation. Energy plantation scheme, one of the major types of Agroforestry system is essential for a continuous supply of fuel and fodder. It can be easily carried out and it is economical to carry out. Fallow land falling under severe and very severe erosion intensity category will be used for energy plantation. Additionally, bunds of agricultural lands can also be utilized for agroforestry (energy plantation). However, plantation on the bunds of the agricultural lands will be carried out only after consultation with concerned farmers. Under this present scheme 1111 plants per hectare will be planted. The plantation will be maintained for subsequent three years. The unit cost for aided natural regeneration including maintenance cost for five years is estimated to be Rs. 3,66,840 per ha. The detailed estimate is furnished in **Annexure-II**. The area to be brought under aided natural regeneration is **46 ha**.

11.2.2 Engineering Measures

The engineering treatment measures require less time to be put in place and can provide quick solutions. These would comprise mainly of continuous contour trenches, brushwood check dams, Dry stone masonry check dams (as shown in **Annexure-I**)/ walls, farm ponds and water harvesting structures.

11.2.2.1 Continuous Contour Trench

A continuous contour trench is dug at a right angle to the slope and are planned along contour lines. The water that percolates into these trenches after a rainfall, keeps the soil moisture intact for a long time that may even extend up the following dry season. The same water can be directly pumped out for irrigation or extracted from shallow wells in the area. Without trenches, a lot of soil erosion happens which increases the salt buildup in the water downstream. This becomes unfavourable for groundwater quality as well as for crops. Also, the roots and foliage of the vegetation trap sediment that would otherwise overflow from the trench during heavy rainfall. Any pollutants other than salts that may have mixed during the runoff are also contained within these trenches without getting concentrated and accumulating downstream. Runoff happens when rainfall intensity exceeds the ability of the soil to absorb and transmit rain-water. The detailed estimate is furnished in **Annexure-II**. The area to be brought under continuous contour trench is **215 ha**.

11.2.2.2 Brushwood Check Dams

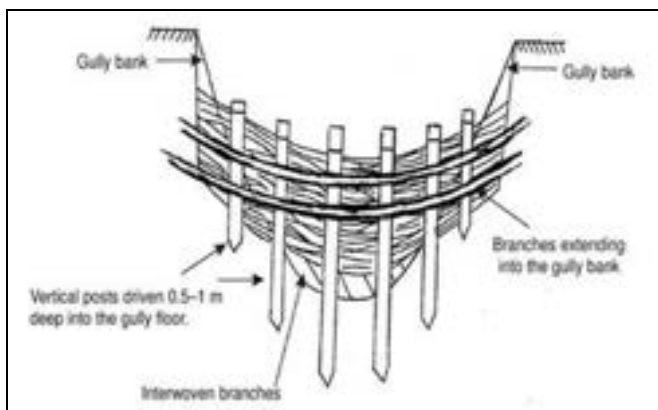
Brushwood check-dams made up of posts and brushes are placed across the gully. The main objective of brushwood check-dams is to hold fine materials carried by flowing water in the gully. Small gully heads, can also be stabilized by brushwood check dams. The main requirement

of brushwood check dam is that, they must be quick and easy to construct, should be made by using cheap and readily available material in nearby areas. In areas where the soil in the gully is deep enough, brushwood check dams can be used if proper construction is assured. The gradient of the gully channel may vary from 5 to 12 percent, but the gully catchment area should not be as such huge which produces high amount of runoff volume. There are two types of brushwood check-dams: these are single row and double row brush wood check-dams. The type chosen for a particular site depends on the amount and kind of brush available and on the rate and volume of runoff. The maximum height of the dam is one meter from the ground (effective height). The number of brushwood check dam suggested are **530 nos.**

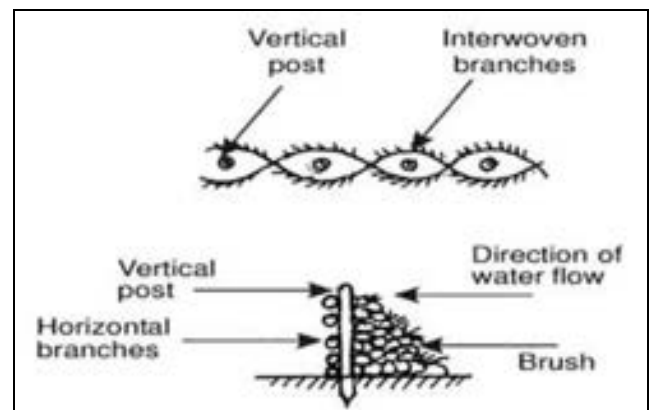
a. **Single Row Brushwood Check-dams**

These check-dams can be used where the rate of runoff is less than 0.5 m³/sec. The structure is temporary and its durability will depend on the quality of posts used. If possible live posts of willow, popular and other trees should be used (8-10 cm dia). Flexible branches are cut and woven around the posts. This dam is constructed across the channel or gully with the brush wood materials, laid along the flow of water, keeping the butt ends towards u/s face of the gully. The brushwood is kept in position by tying to the posts. Before the dam construction is begun, the sides of the gully or channel should be sloped to 1:1 and the gully bed should also be excavated for 15 cm depth along the entire gully width over which brushwood have to be laid. In addition, 15 cm excavation is also done into the bank to give necessary notch capacity.

After excavation, the wooden posts of about 10 cm in diameter are driven in a line across the gully at an interval of 90 cm up to a depth of 75 cm in gully bed. The top of wooden posts should be kept at such a height so as to form a notch of required size. The brushwood is tied from the front line and the other lines are tied using galvanized wire for keeping them in position. The lowest layer of the brushwood must be the longest.



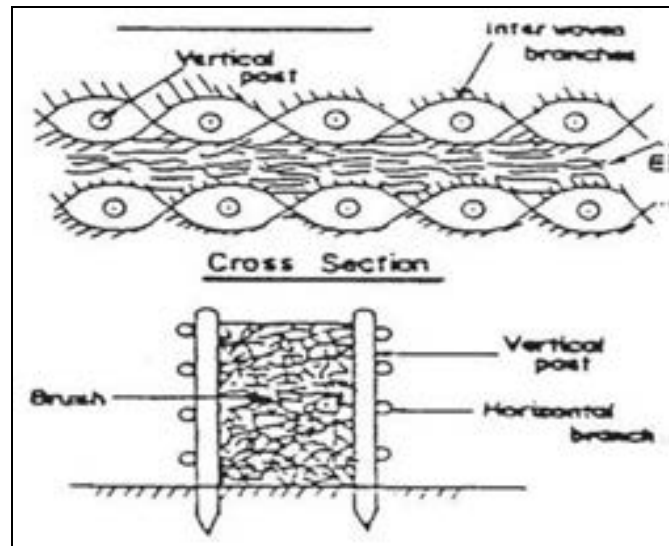
A single row brushwood check-dam front view



Vertical and side views of single row check-dam

b. **Double Row Brushwood Check-Dam**

This type of brushwood check-dam is suited where the rate of runoff is less than 1 m³/sec. The construction of the dam starts with an excavation in the floor and into the sides of the gully to a depth of 0.3-0.5 m. Two rows of posts, 5-10 cm in diameter and 1-2 m in length are placed into the holes, across the floor of the gully to a depth of 0.5-0.6 m. The spacing between the posts is 0.5 m. Brushwood or branches are packed between the posts. The height of the posts in the center should not exceed the height of the spillway otherwise the flow will be blocked and water may be forced to move to the gully sides.



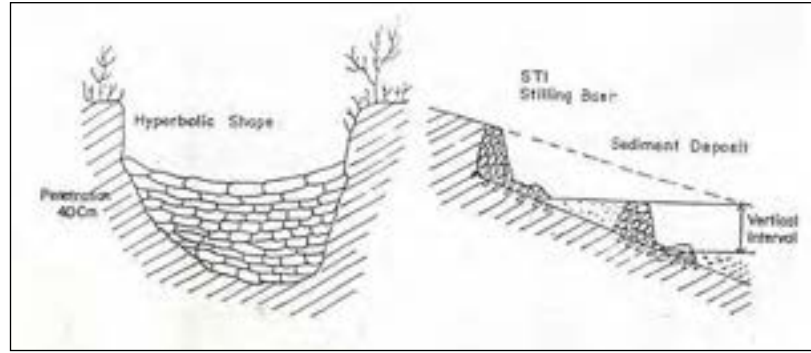
Double row brush wood check-dam

11.2.2.3 *Dry Stone Masonry Check Dam*

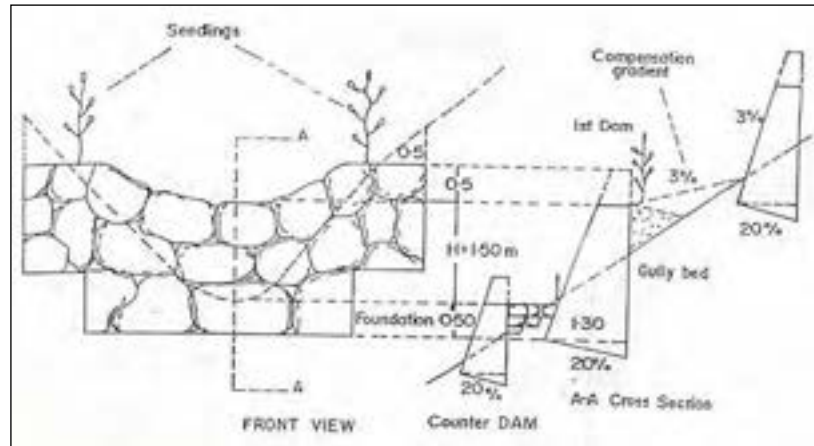
Larger gullies have to be treated to prevent further deepening and widening. The purpose of a check dam is to reduce the gradient and reduce the flow velocity. The water is guided safely from a higher elevation to a lower elevation without causing erosion at the gully/nala bed and banks. The water pools behind the dam promotes the percolation into the soils.

The ideal spacing of check dam should be such that the bottom of the upper check dam is in the level with the top of the next lower one. In steep areas, this is difficult to achieve as it may require too many check dams. Check dam must be well anchored to prevent under scouring and scouring between the dam and the banks. The flow is directed through a water or water spill in the centre of the dam, at the point of impact of the bed, a protective apron must be constructed to dissipate the energy.

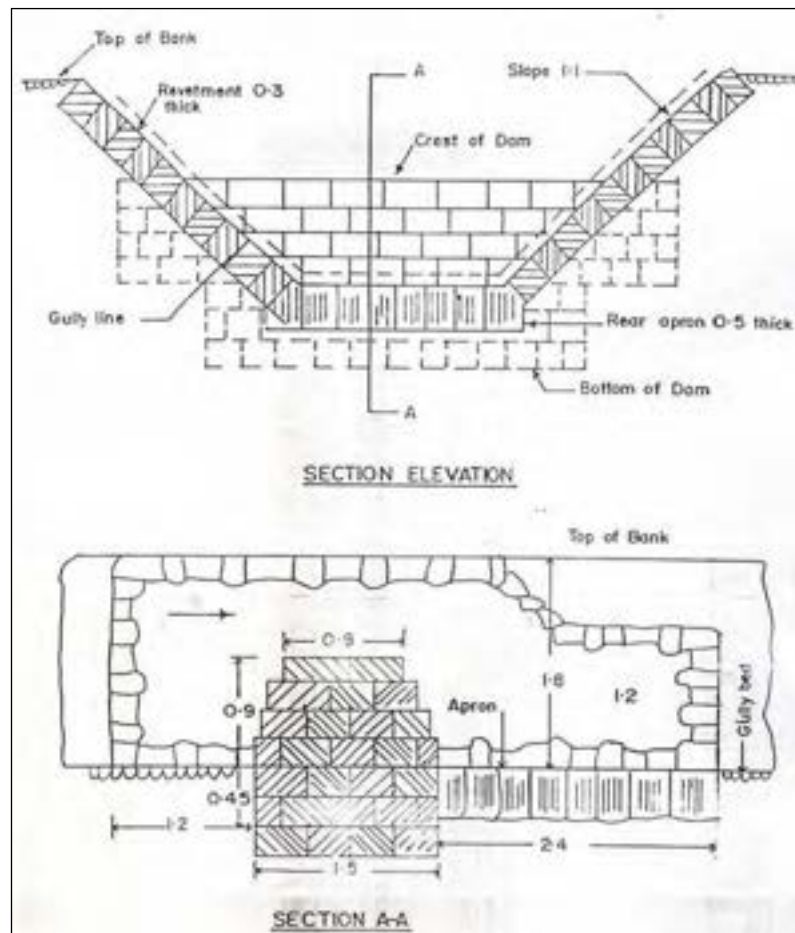
Masonry Check Dams are the most commonly used structures both in case of larger gullies and small nalas/ stream. These are generally constructed in upper reaches of eroding nallahs to reduce the bed slope, stabilize the grade and check the bed scouring and retain silt, sand and pebbles. The depth of the foundation may vary from 30-60 cm. Foundation should be dug across the nala width extending well into the banks. The larger stones are placed in bottom layers. In every of stones, a step of 15 to 20 cm is left on the downstream side, so that the width is reduced from base to top. Two wing walls with appropriate foundations are often constructed at the upper side to force the flow into the water spills or notch and to prevent it from damaging the banks. The wing walls should form an angle of about 30 degree with the banks. Below the dam an apron has to be constructed with stones. On the upstream side, the dam has to get an earth fill for greater strength. The structure is supplemented by planting seedlings and cutting of suitable species along the banks on the upstream side. The number of dry stone masonry check dams suggested are **145 nos.**



Layout of Typical Check Dam



Layout of Loose Stone Check Dam



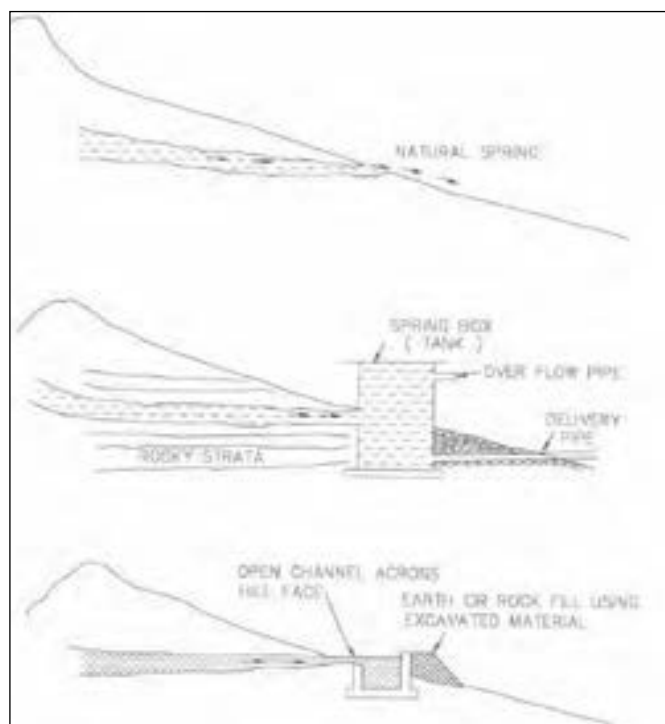
Layout of Dry Stone Check Dam

11.2.2.4 Water Harvesting Structure

The demand on the water resources has been increasing with every passing year. The state is faced with a situation of water stress i.e. manifested by apparent moisture stress in vegetation and forest. Keeping in view of these facts water harvesting structures are proposed in the present Watershed Management Plan to conserve and augment water resources. The basic idea is to trap rain water on hill sides, increase percolation and to build water retaining structures to store the excess water runoff in streams. If runoff is collected locally at appropriate locations in water harvesting structures, not only it can be gainfully utilized subsequently, but it will also help in reducing the volume of runoff in streams during monsoon and subsequently reduce the soil erosion. Types of water harvesting structures are illustrated below. However, component and design is to be followed as direction given by the concerned department from time to time and as per availability and requirement of the site. In the present plan, one water harvesting structure is proposed in each inhabited sub-watershed having more than one village. The number of water harvesting structures suggested are **9 nos.**

a. Spring Water Harvesting

Lined channels are built across the hill slopes to intercept rain water. These channels convey water for irrigation terraced agricultural fields. The water is also used to fill small ponds for domestic use and the cattle. Generally, water from hill streams are diverted through small excavated channels. A typical spring water harvesting system is shown in Figure below:



Typical Spring Water Harvesting System

One relatively easy means of storing and distributing spring water is through a device known as a spring box. Built usually into a hillside and deep enough to access the spring-water source, this device allows water to enter from the bottom (as depicted in Figure above) and fill upto a level established by an overflow or vent pipe. Hydraulic pressure then maintains the level in the spring box. The outflow pipe near the base of the device may be connected via pipe to a larger storage system (such as a tank) closer to the point of use or tapped directly at the location of

the box. This device can be constructed using local materials. Depending on local water requirements and conditions, a number of these spring boxes may be constructed to provide year-round supply or used to recharge other community water storage systems.

b. Polylined Tanks

Polylined tanks suggested in study area are trapezoidal shaped having depth of 1.5 m, length of 10 m and width of 6 m at bottom each and side slopes of 1:1. For lining the tank, a blue colored UV stabilized, multi-layered cross-laminated sheets may be used. The construction activities involve digging the tank in trapezoidal shape, smoothing and levelling the four walls as well as base of the tank, spraying of weedicide, sheet laying and brick lining (completely loose, without any cementing material). If small pebbles are present on the walls and bottom, try to remove them completely, else there are chances of the sheet getting damaged. If the need be, the walls and the base may be levelled by spreading the fine screened soil. The size of the sheet should be obtained by actually measuring the cross dimensions i.e. length and width of the already dug out tank including 85 cm of sheet which needs to be buried at the top outer ends of the tanks. Normally the storage capacity of a tank with this dimension is between 70000 – 75000 litre. A typical polylined tank is shown in Figure below:



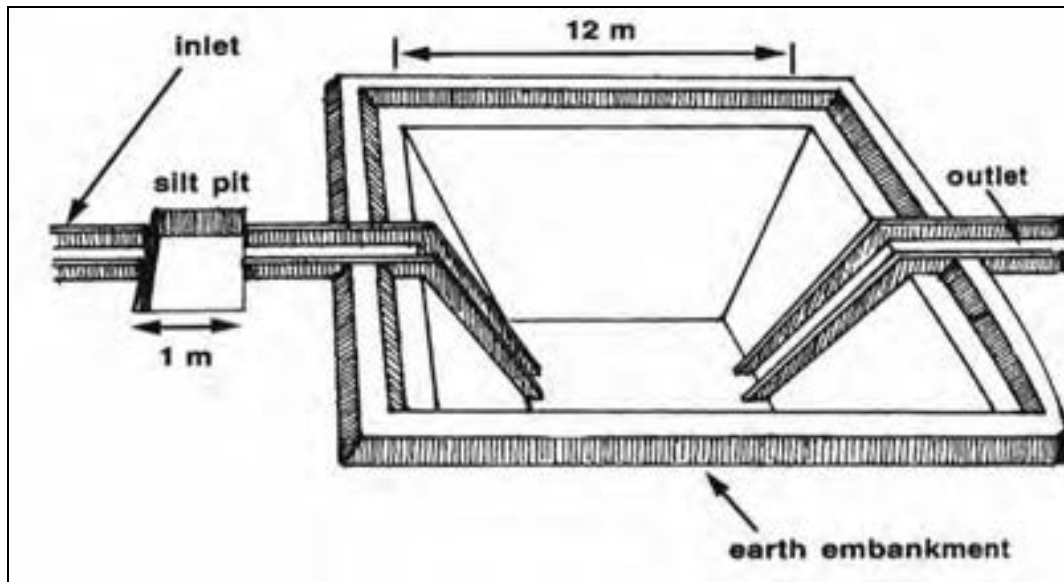
Preparation of polylined tank



Rain water harvested in polylined tank

11.2.2.5 Farm Ponds

The ideal farm pond should be dug into the ground in a naturally low-lying area. Some of the soil that is removed can be used to construct an earthen berm around the pond, which should be planted with trees and grasses for stability. The shade and wind protection provided by the raised mound and vegetation will reduce evaporative losses. Greater depth of the pond and less surface area will also reduce evaporative losses. However, digging deeper than 5 meters will increase the expense of the digging, and increase seepage loss due to increased water pressure on the ground. The pond should have an inlet and an outlet lined with rock to prevent erosion. These features will need to be linked into a larger drainage plan which directs water into the pond, and receives any overflow water. A small settling pit at the inlet will help remove silt, and can be more easily cleaned than the whole pond. The sides of the pond should be sloped for stability. In the present plan, five farm ponds are proposed in each subwatershed, and thus, the number of farm ponds suggested are **45 nos.**



Excavated/dugout Farm Pond

12.0 OTHER INTERVENTIONS

12.1 Improved Agronomic Practices and Environmental Services

Encouragement for improved agronomic and environmental services is a concept for good conservation behaviour to the community living in the watersheds. It is a tool to incentivize the local communities for sustainable and environmentally friendly use of the catchment. Encouragement for improved agronomic and environmental services programs pay users to conduct environmentally friendly initiatives or to give up destructive practices. The general criteria to a successful system includes (i) voluntary transactions, (ii) well-defined Environmental Service, which in present case are all the measures that will reduce soil erosion; (iii) buyer for Environmental Service, which in present case is local community; (iv) seller for Environmental Service, which in present case is rural development/Panchayati Raj department; and (v) payment is conditional upon receiving Environmental Service which in present case will be followed as per the norms of department. A lumpsum provision of **Rs. 15.00 lakh** has been kept for the purpose.

Some of the activities proposed under Encouragement for improved agronomic and environmental services are as follows:

- **Incentive for freezing of land use:** Since frequent change in land use make the soil strata loose and prone to erosion, e.g., removal of stones loosen up the soil. Effective conservation measures to protect the existing land use require participation of local communities. Therefore, it is proposed to provide incentive to the community and land owners who freeze and maintain the existing land use pattern of community forest, grasslands, fodder, agriculture land and orchards for long period of time to maintain the ecological balance.
- **Incentive for survival of plantation:** Forest cover can only increase if the survival percentage of the plants planted in the various plantation activities carried out is good. Survival incentives systems for tree plantations are an important instrument to create renewable resources through credible mechanisms to encourage community participation in conservation efforts.
- **Incentive for reduction of biotic pressure:** The human dependency on forest has led to continuous degradation of ecosystem. It is necessary to encourage community for agroforestry and joint forest management practices to reduce biotic pressure of ecosystem services.
- **Incentive for maintenance & improved water resources:** It is utmost important to maintain and improve water resources. Also, it becomes important to conserve the recharges zone of these water resources. In addition, since water resources such as water harvesting structures, farms ponds have been suggested in the present plan therefore, maintenance of these resources also becomes necessary.
- **Incentive for rotational grazing:** Awareness among the community becomes necessary to avoid environmental hazards due to over grazing. Rotational grazing is one the option to deal with consequences of overgrazing. Rotational grazing refers to dividing the grazing

into two parts, one to remain closed and other one to be used. This will allow the parts to rejuvenate in tandem.

- **Incentive for organic farming in private land:** Organic farming is a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators, genetically modified organisms and livestock food additives. The impact of organic farming on natural resources favours interactions within the agro-ecosystem that is vital for both agricultural production and nature conservation. At the ecosystem level, the maintenance of natural areas within and around organic fields and absence of chemical inputs create suitable habitats for wild flora and fauna. Awareness and encouragement are required among the farmers to adopt the organic farming practices. Therefore, Incentive for farmers practicing certified organic farming is an important tool to motivate farmers towards organic farming.

12.2 Research, Training, Capacity Building and Livelihood Enhancement

The component includes Participatory Action Research for site/issue specific research/study/survey. Such studies can be undertaken by either Rural Development/Panchayati Raj Department or any recognized Law University in India. Capacity building shall be an integral part of such studies. A lumpsum provision of **Rs. 13.40 lakh** has been kept for the purpose.

To address the lack of knowledge among farmers regarding improved cultivation practices, a skill development training program is proposed, covering various relevant topics.

- Propose a comprehensive training program for residents of low-literacy villages— Sawale, and Vadeshwar —aimed at enhancing agricultural skills and capacities. This program will be a vital component of the watershed development plan, focusing specifically on farming techniques and practices to empower local farmers.
- Propose targeted capacity-building programs in watershed areas to promote the adoption of mechanization, focusing on small landholders with less than 5 acres, to enhance their skills and awareness in four villages, namely Sawale, Humgaon, Khand, and Pimpri.
- Implementing a comprehensive soil conservation program involving terracing, afforestation, and sustainable land management practices to mitigate soil erosion in watershed areas such as Vaijanath, Bhivpuri, and Humgaon villages.
- Implementing diversified irrigation techniques and establishing resilient crop varieties to mitigate the impact of inconsistent water availability on crop yield in watershed areas.
- Implement training programs for local communities across the watershed area, with a focus on sustainable water management practices. The goal is to address declining groundwater levels, reduce hand pump failures, and ensure water security in the upper radius villages, namely Sawale, Khand, and Malegaon Bk, as part of the proposed project site.
- Implementing comprehensive training programs on efficient irrigation techniques and water management practices in the villages of Khand, Sawale, and Malegaon Kh. within the study area to enhance agricultural productivity and address challenges related to poor irrigation and low crop yields.

- Implement capacity-building activities in the rural area to establish a cooperative marketing milk collection system, empowering farmers to reduce dependence on local private dairies for milk sales.
- Proposed activities for capacity building in rural areas include training farmers on implementing soil conservation techniques like Trench cum Bund (TCB), installing Bore well recharge filters, and constructing Farm ponds tailored to their specific needs, aiming to address soil erosion and water scarcity for irrigation.
- To enhance livelihoods, the developer should promote eco-tourism and support local markets by creating designated areas for farmers and artisans to sell their goods to tourists. Additionally, improving infrastructure and marketing the unique cultural and natural attractions of Thokarwadi Dam could attract more visitors, thereby increasing the income of the local community.
- To enhance livelihoods, promoting sustainable harvesting practices and value addition to forest products such as firewood, mangoes, berries and honey could be beneficial. Training villagers in these practices and facilitating direct market access or cooperative marketing in the Karjat and Vadeshwar markets will help increase their income and ensure long-term availability of these resources.
- To enhance livelihoods in the area, support for flower and poultry farming should be increased through market access initiatives and skill development programmes, especially targeting women groups involved in poultry farming in the study area. Encouraging agro-tourism and value-added products can increase income opportunities for villagers.

12.3 Monitoring and Evaluation

Monitoring and evaluation is an integral part of the plan where efficacy is assessed regarding implementation of rehabilitation measures. It is proposed to carry out monitoring through a third-party agency using following two methods:

- Physical inspection
- Satellite data-based monitoring

Frequency of such monitoring could be every six months. For the online and offline monitoring, a provision of **Rs. 10.00 lakh** has been made.

13.0 COST ESTIMATE

The estimated cost of implementation of watershed development and management plan for the study area as defined above is **Rs. 811.6386 lakh** and is given at **Table 13**.

Table 13: Estimated Cost of Watershed Development and Management Plan Implementation in Study Area

S. No.	Item	Rate (Rs)	Unit	Target	
				Physical	Financial (Rs)
I	Biological Measures				
1	Normal Afforestation	4,79,480	ha	57	2,73,30,360.00
2	Assisted Natural Regeneration	3,66,840	ha	84	3,08,14,560.00
3	Agroforestry (Energy Plantation)	4,41,000	ha	46	2,02,86,000.00
	Sub Total I				5,11,00,560.00
II	Engineering Measures				









S. No.	Item	Rate (Rs)	Unit	Target	
				Physical	Financial (Rs)
5	Continuous Contour Trench (CCT)	92,820	ha	215	1,99,56,300.00
6	Brushwood Check Dams	2,000	No	530	10,60,000.00
7	Check Dams (DRSM)	26,600	No	145	38,57,000.00
8	Water Harvesting Structure	1,00,000	No	9	9,00,000.00
9	Farm Pond	10,000	No	45	4,50,000.00
	Sub Total II				2,62,23,300.00
III	Improved Agronomic practices and Environmental Services	Lumpsum			15,00,000.00
IV	Research, Training, Capacity Building and Livelihood Enhancement				
1	Training program to low-literacy level village on farming techniques	50,000	No	2	1,00,000.00
2	training programs on efficient irrigation techniques and water management practices in the villages	25,000	No	4	1,00,000.00
3	To implement training programs for local communities and sustainable water management in the villages.	50,000	No	3	1,50,000.00
4	Training farmers in diversified irrigation methods and promoting resilient crop varieties for improved yield in the study area.	25000	No	6	1,50,000.00
5	Organization of awareness and skill of small landholders with less than 5 acres for enhance agricultural productivity and address the challenges of poor irrigation and low crop yields	37,500	No	4	1,50,000.00
6	Train on good animal husbandry practices and establish a cooperative milk collection system for marketing in the study area	25,000	No	4	1,00,000.00
7	Training farmers in implementing soil conservation techniques like Trench cum Bund (TCB), installing Bore well recharge filters, and constructing Farm ponds tail to their specific needs, aiming to address soil erosion and water scarcity for irrigation	37,500	No	4	1,50,000.00
8	Trainings on millet-based value addition and marketing to SHG in the villages	20,000	No	5	1,00,000.00
9	Promote eco-tourism and support local markets through infrastructure improvements and marketing at Thokarwadi Dam."	30,000	No	4	1,20,000.00
10	Promote sustainable harvesting practices and value addition to forest products through training and market access in Karjat and Vadeshwar."	20,000	No	4	80,000.00
11	Support for flower and poultry farming through market access initiatives, skill development programs for women	20,000	No	7	1,40,000.00

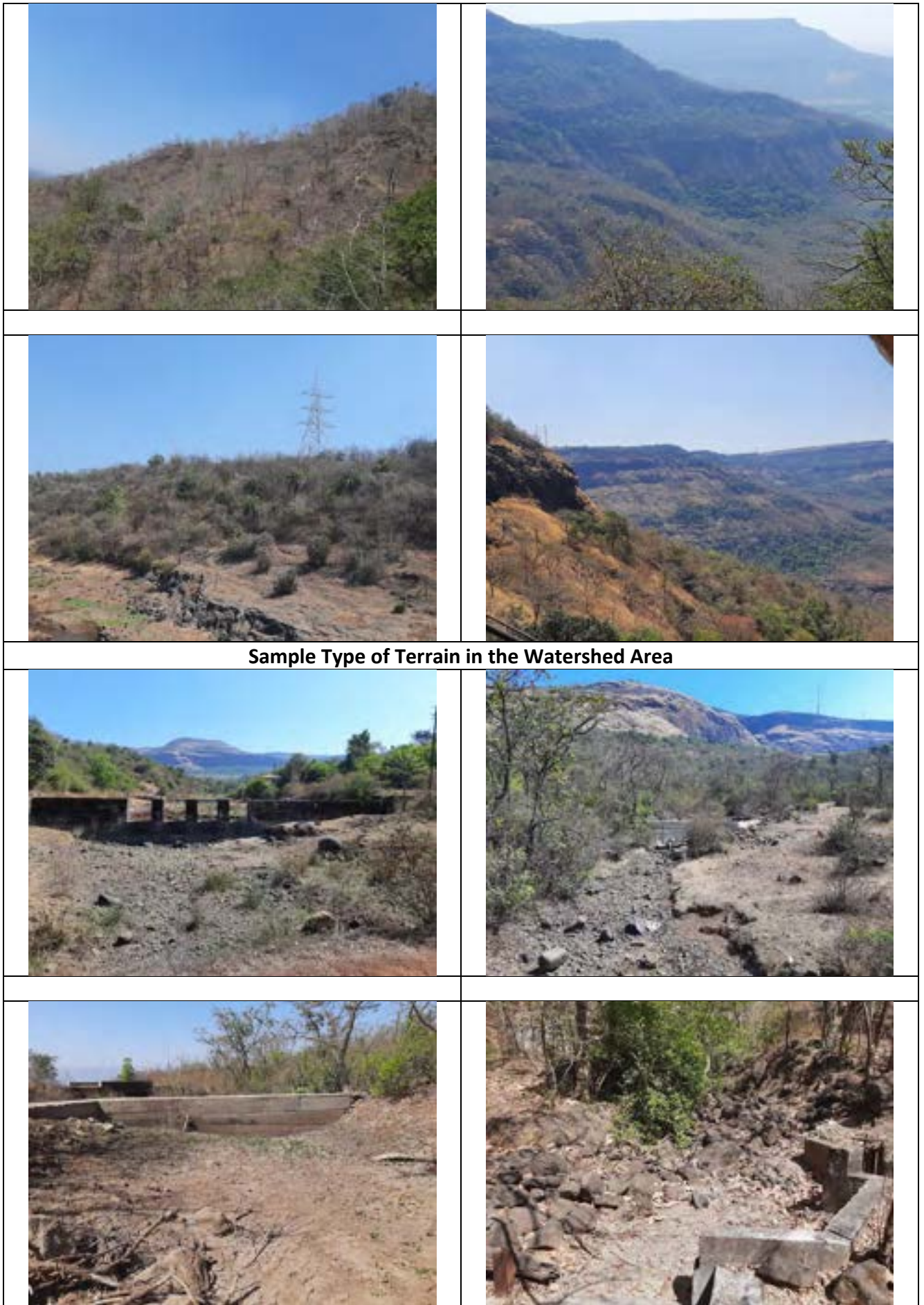
S. No.	Item	Rate (Rs)	Unit	Target	
				Physical	Financial (Rs)
	groups, agri-tourism and value-added products.				
	Sub Total IV				13,40,000.00
V	Monitoring and evaluation	Lumpsum			10,00,000.00
	Total Cost				8,11,63,860.00

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ANNEXURE-I: FIELD VISIT PHOTOGRAPHS

	
Thokarwadi Dam	Immediate Downstream of Thokarwadi Dam
	
Thokarwadi Reservoir	
	
Plantation Activities carried out by TPL near Intake Point	
	





Soil & Water Conservation and Water Harvesting Structures in the Watershed Area



Public Consultation

ANNEXURE-II**1. Per Hectare Model Rate Structure for Normal Afforestation****Spacement: 2m x 2m****Wage Rate: Rs. 443.50 per day****Size of Pits: 0.45m x 0.45m x 0.45m****No. of Seedlings: 1100****Mix Plantation**

S. No.	Particulars of Works	Man Day	Wages	Material Supply	Total
A	Pre Monsoon Works PPO/ PYO				
1	(a) Survey and demarcation	1.00	443.50	91.00	534.50
	(b) Preparation of treatment map (100 m x 50 m grid)	1.00	443.50	91.00	534.50
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid	0.40	177.40	0.00	177.40
	(d) Fixing 60cm x 0.05cm x 12cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No. etc complete (3 pillars Rs. 75/- for each pillar)		0.00	225.00	225.00
	(e) Clearing of bushes and preparation of site (As per requirement)	10.00	4435.00	91.00	4526.00
2	Soil and moisture conservation works including collection of rubbles from areas upto 30m etc.	31.00	13748.50	0.00	13748.50
3	Providing and fixing chain link fencing, 102 Rmt per ha (with 1 gate + 2 wicket gates per site (Rs. 1494/- per Rmt of basic rate + 20% for transportation of average lead plus 20% for tribal/ remote area (by tender process) (Rs. 1494/- + 149 + 149 = 1792/- per Rmt (1.60 Rmt height with G.I. Chain link size 50mm x 50mm, 8 gauge thick and fixed 75mm above ground level complete as per SSB item No. 1744 for 2017-18)	0.00	0.00	182865.60	182865.60
4	Alignment of pits at 2m x 2m spacement. 1111 pits per ha (0.25 per 100 pits and M&S @ Rs. 2.24 per 50 pits)	2.78	1232.93	49.77	1282.70
5	Digging of pits of size 0.45x0.45x0.45 (1111 pits per ha) 6.60 M.D. per 100 pits.	73.33	32521.86	0.00	32521.86
6	Construction of 5.00 Rmt. wide Inspection Path 1 M.D. per 100 Rmt.	1.00	443.50	0.00	443.50
7	Enumeration of all valuable plant species at plantation site and grid wise counting and providing colour band and recording the same in register 0.75 MD per 100 plants	0.75	332.63	25.00	357.63
8	Providing and fixing (4 feet x 3 feet) information board each per site	0.00	0.00	5000.00	5000.00
9	Part Nursery cost of raising 1333 seedlings per ha (including 20% casualty replacement) in polygons of size 12.50 x 25.00 cm (Wage Rs. 11.90 and M&S Rs. 3.62 per plant)	46.71	20715.89	4825.46	25541.35
	Total	167.97	74494.70	193263.83	267758.53
	Contingency 3%				8032.76
	Labour Welfare 4%				10710.34
	Grand Total				286501.62
B	First Year Operations				

S. No.	Particulars of Works	Man Day	Wages	Material Supply	Total
1	Part Nursery cost of raining 1333 seedlings per ha (Wage Rs. 2.97 and M&S Rs. 0.81 per plant)	14.80	6563.80	1079.73	7643.53
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	8178.14	1944.25	10122.39
3	Transportation of 1333 seedling from Nursery to plantation site including loading & unloading (0.14 M.D. per 100 seedling & M.S. Rs. 1.82 per seedling)	1.87	829.35	2426.00	3255.35
4	Planting of 1111 seedlings (1.0 M.D. per 100 seedling)	11.11	4927.29	0.00	4927.29
5	3 weeding (1 Rmt circular) and 2 soil workings (4.00 M.D. per 100 seedlings) fertilizer application of Rs. 0.82 per seedlings	44.44	19709.14	911.02	20620.16
6	Casualty replacement (20% 222 seedlings per ha) (2 M.D. per 100 seedlings)	4.44	1969.14	0.00	1969.14
7	Part Nursery cost for casualty replacement in SYO (222 seedlings per ha) (wages Rs. 11.90 and material supply Rs. 3.62 total Rs. 12.55 per seedling)	7.77	3446.00	803.64	4249.64
8	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	12143.03	0.00	12143.03
9	Fire tracing	2.00	887.00	0.00	887.00
	Total	132.25	58652.88	7164.64	65817.52
	Contingency 3%				1974.53
	Labour Welfare 4%				2632.70
	Grand Total				70424.74
C	Second Year Operations				
1	Part Nursery cost for seedlings casualty replacement (222 seedlings per ha) labour rate @ 3.77 and M.S. Rs. 1.82 per seedlings	2.46	1091.01	404.00	1495.01
2	Transportation of 222 seedlings for casualty replacement from nursery to plantation site (including loading and unloading) wages 0.14 M.D. per 100 seedlings & M.S. Rs. 1.82 per seedlings	0.31	137.49	404.04	541.53
3	Planting for casualty replacement 222 seedlings (2.0 M.D. per 100 seedling)	4.44	1969.14	0.00	1969.14
4	2 weeding and 1 soil workings with fertilizer application at 2.5 M.D. per 100 seedlings M.S. Rs. 0.82 per seedlings	27.77	12316.00	911.02	13227.02
5	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
6	Fire tracing	2.00	887.00	0.00	887.00
	Total	73.48	32588.38	1719.06	34307.44
	Contingency 3%				1029.22
	Labour Welfare 4%				1372.30
	Grand Total				36708.96
D	Third Year Operations				
1	1 weeding and 1 soil workings (1.50 M.D. per 100 seedlings) fertilizer application of Rs. 0.82 per plant	16.67	7393.15	911.02	8304.17
2	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
3	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2.00	887.00	25.00	912.00
4	Fire tracing	2.00	887.00	0.00	887.00

S. No.	Particulars of Works	Man Day	Wages	Material Supply	Total
	Total	57.17	25354.90	936.02	26290.92
	Contingency 3%				788.73
	Labour Welfare 4%				1051.64
	Grand Total				28131.28
E	Fourth Year Operations				
1	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2.00	887.00	25.00	912.00
3	Fire tracing	2.00	887.00	0.00	887.00
	Total	40.50	17961.75	25.00	17986.75
	Contingency 3%				539.60
	Labour Welfare 4%				719.47
	Grand Total				19245.82
F	Fifth Year Operations				
1	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2.00	887.00	25.00	912.00
3	Fire tracing	2.00	887.00	0.00	887.00
	Total	40.50	17961.75	25.00	17986.75
	Contingency 3%				539.60
	Labour Welfare 4%				719.47
	Grand Total				19245.82
G	Sixth Year Operations				
1	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2.00	887.00	25.00	912.00
3	Fire tracing	2.00	887.00	0.00	887.00
	Total	40.50	17961.75	25.00	17986.75
	Contingency 3%				539.60
	Labour Welfare 4%				719.47
	Grand Total				19245.82

Abstract

S. No.	Year of Operation	Man days	Wages	Material Supply	Total	Other Expenses	Total Amount	Or Say
1	Pre Monsoon Works	167.97	74494.70	193263.83	267758.53	18743.10	286501.62	286500.00
2	First Year Operation	132.25	58652.88	7164.64	65817.52	4607.23	70424.74	70420.00
3	Second Year Operation	73.48	32588.38	1719.06	34307.44	2401.52	36708.96	36710.00
4	Third Year Operation	57.17	25354.90	936.02	26290.92	1840.36	28131.28	28130.00
5	Fourth Year Operation	40.50	17961.75	25.00	17986.75	1259.07	19245.82	19240.00
6	Fifth Year Operation	40.50	17961.75	25.00	17986.75	1259.07	19245.82	19240.00
7	Sixth Year Operation	40.50	17961.75	25.00	17986.75	1259.07	19245.82	19240.00
	Total	552.37	244976.10	203158.55	448134.65	31369.43	479504.07	479480.00

2. Per Hectare Model Rate Structure for Energy Plantation**Spacement: 2m x 2m****Wage Rate: Rs. 443.50 per day****Size of Pits: 0.45m x 0.45m x 0.45m****No. of Seedlings: 1100****Mix Plantation**

S. No.	Particulars of Works	Man Day	Wages	Material Supply	Total
A	Pre Monsoon Works PPO/ PYO				
1	(a) Survey and demarcation	1.00	443.50	91.00	534.50
	(b) Preparation of treatment map (100 m x 50 m grid)	1.00	443.50	91.00	534.50
	(c) Digging trial pits of size 0.30x0.30x0.60 in corner of Grid	0.40	177.40	0.00	177.40
	(d) Fixing 60cm x 0.05cm x 12cm cement pillars upto 30cm deep in corner of Grid, painting with Grid No. etc complete (3 pillars Rs. 75/- for each pillar)		0.00	225.00	225.00
	(e) Clearing of bushes and preparation of site (As per requirement)	10.00	4435.00	91.00	4526.00
2	Soil and moisture conservation works including collection of rubbles from areas upto 30m etc.	31.00	13748.50	0.00	13748.50
3	Providing and fixing chain link fencing, 102 Rmt per ha (with 1 gate + 2 wicket gates per site (Rs. 1494/- per Rmt of basic rate + 20% for transportation of average lead plus 20% for tribal/ remote area (by tender process) (Rs. 1494/- + 149 + 149 = 1792/- per Rmt (1.60 Rmt height with G.I. Chain link size 50mm x 50m, 8 gauge thick and fixed 75mm above ground level complete as per SSB item No. 1744 for 2017-18)	0.00	0.00	182865.60	182865.60
4	Alignment of pits at 2m x 2m spacement. 1111 pits per ha (0.25 per 100 pits and M&S @ Rs. 2.24 per 50 pits)	2.78	1232.93	49.77	1282.70
5	Digging of pits of size 0.45x0.45x0.45 (1111 pits per ha) 6.60 M.D. per 100 pits.	73.33	32521.86	0.00	32521.86
6	Construction of 5.00 Rmt. wide Inspection Path 1 M.D. per 100 Rmt.	1.00	443.50	0.00	443.50
7	Enumeration of all valuable plant species at plantation site and grid wise counting and providing colour band and recording the same in register 0.75 MD per 100 plants	0.75	332.63	25.00	357.63
8	Providing and fixing (4 feet x 3 feet) information board each per site	0.00	0.00	5000.00	5000.00
9	Part Nursery cost of raising 1333 seedlings per ha (including 20% casualty replacement) in polygons of size 12.50 x 25.00 cm (Wage Rs. 11.90 and M&S Rs. 3.62 per plant)	46.71	20715.89	4825.46	25541.35
	Total	167.97	74494.70	193263.83	267758.53
	Contingency 3%				8032.76
	Labour Welfare 4%				10710.34
	Grand Total				286501.62
B	First Year Operations				

S. No.	Particulars of Works	Man Day	Wages	Material Supply	Total
1	Part Nursery cost of raining 1333 seedlings per ha (Wage Rs. 2.97 and M&S Rs. 0.81 per plant)	14.80	6563.80	1079.73	7643.53
2	Refilling of pits by good quality soil including application of single super phosphate (1.66 MD per 100 pits)	18.44	8178.14	1944.25	10122.39
3	Transportation of 1333 seedling from Nursery to plantation site including loading & unloading (0.14 M.D. per 100 seedling & M.S. Rs. 1.82 per seedling)	1.87	829.35	2426.00	3255.35
4	Planting of 1111 seedlings (1.0 M.D. per 100 seedling)	11.11	4927.29	0.00	4927.29
5	3 weeding (1 Rmt circular) and 2 soil workings (4.00 M.D. per 100 seedlings) fertilizer application of Rs. 0.82 per seedlings	44.44	19709.14	911.02	20620.16
6	Casualty replacement (20% 222 seedlings per ha) (2 M.D. per 100 seedlings)	4.44	1969.14	0.00	1969.14
7	Part Nursery cost for casualty replacement in SYO (222 seedlings per ha) (wages Rs. 11.90 and material supply Rs. 3.62 total Rs. 12.55 per seedlings)	7.77	3446.00	803.64	4249.64
8	Watch and ward (10 months - 1 watcher per 10 ha)	27.38	12143.03	0.00	12143.03
9	Fire tracing	2.00	887.00	0.00	887.00
	Total	132.25	58652.88	7164.64	65817.52
	Contingency 3%				1974.53
	Labour Welfare 4%				2632.70
	Grand Total				70424.74
C	Second Year Operations				
1	Part Nursery cost for seedlings casualty replacement (222 seedlings per ha) labour rate @ 3.77 and M.S. Rs. 1.82 per seedlings	2.46	1091.01	404.00	1495.01
2	Transportation of 222 seedlings for casualty replacement from nursery to plantation site (including loading and unloading) wages 0.14 M.D. per 100 seedlings & M.S. Rs. 1.82 per seedlings	0.31	137.49	404.04	541.53
3	Planting for casualty replacement 222 seedlings (2.0 M.D. per 100 seedling)	4.44	1969.14	0.00	1969.14
4	2 weeding and 1 soil workings with fertilizer application at 2.5 M.D. per 100 seedlings M.S. Rs. 0.82 per seedlings	27.77	12316.00	911.02	13227.02
5	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
6	Fire tracing	2.00	887.00	0.00	887.00
	Total	73.48	32588.38	1719.06	34307.44
	Contingency 3%				1029.22
	Labour Welfare 4%				1372.30
	Grand Total				36708.96
D	Third Year Operations				
1	1 weeding and 1 soil workings (1.50 M.D. per 100 seedlings) fertilizer application of Rs. 0.82 per plant	16.67	7393.15	911.02	8304.17
2	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
3	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2.00	887.00	25.00	912.00

S. No.	Particulars of Works	Man Day	Wages	Material Supply	Total
4	Fire tracing	2.00	887.00	0.00	887.00
	Total	57.17	25354.90	936.02	26290.92
	Contingency 3%				788.73
	Labour Welfare 4%				1051.64
	Grand Total				28131.28
E	Fourth Year Operations				
1	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
2	Counting of survival percentage Grid wise and Species wise and to Note the same on Register in May and October	2.00	887.00	25.00	912.00
3	Fire tracing	2.00	887.00	0.00	887.00
	Total	40.50	17961.75	25.00	17986.75
	Contingency 3%				539.60
	Labour Welfare 4%				719.47
	Grand Total				19245.82

Abstract

S. No.	Year of Operation	Man days	Wages	Material Supply	Total	Other Expenses	Total Amount	Or Say
1	Pre Monsoon Works	167.97	74494.70	193263.83	267758.53	18743.10	286501.62	286500.00
2	First Year Operation	132.25	58652.88	7164.64	65817.52	4607.23	70424.74	70420.00
3	Second Year Operation	73.48	32588.38	1719.06	34307.44	2401.52	36708.96	36710.00
4	Third Year Operation	57.17	25354.90	936.02	26290.92	1840.36	28131.28	28130.00
5	Fourth Year Operation	40.50	17961.75	25.00	17986.75	1259.07	19245.82	19240.00
	Total	471.37	209052.60	203108.55	412161.15	28851.28	441012.43	441000.00

3. Per Hectare Model Rate Structure for Aided Natural Regeneration

Spacement: 4m x 4m

Wage Rate: Rs. 443.50 per day

No. of Seedlings: 625

S. No.	Particulars of Works	Man Day	Wages	Material Supply	Total
A	Pre Monsoon Works PPO/ PYO				
1	(a) Survey and demarcation	1.00	443.50	50.00	493.50
	(b) Preparation of treatment map (100 m x 50 m grid)	1.00	443.50	50.00	493.50
	(c) Clearing of bushes and preparation of site (As per requirement)	10.00	4435.00	50.00	4485.00
2	Soil and moisture conservation works including collection of rubbles from areas upto 30m etc.	31.00	13748.50	0.00	13748.50
3					
4	Alignment of pits at 5m x 5m spacement. 625 pits per ha (0.13 per 50 pits and M&S @ Rs. 2.24 per 50 pits)	1.62	718.47	28.00	746.47

S. No.	Particulars of Works	Man Day	Wages	Material Supply	Total
5	Digging of pits of size 0.60x0.60x0.60 (625 pits per ha) 36.26 M.D. per 100 pits.	207.88	92194.78	0.00	92194.78
	Total	252.50	111983.75	178.00	112161.75
	Contingency 3%				3364.85
	Labour Welfare 4%				4486.47
	Grand Total				120013.07
B	First Year Operations				
1	Purchases of selected seedling 687 seedlings per ha (50% Bearing species) Rs. 50 per seedling	0.00	0.00	34350.00	34350.00
2	Refilling of pits by good quality soil including application of single super phosphate (2.5 MD per 50 pits)	31.25	13859.38	21600.00	35459.38
3	Transportation of seedling from Nursery to plantation site (including loading & unloading) Wages 1.00 MD per 55 seedlings and M.S. Rs. 300 per 55 seedlings	12.49	5539.32	3747.00	9286.32
4	Planting of 625 seedlings (2.01 M.D. per 50 seedling)	25.13	11145.16	0.00	11145.16
5	Planting for 10% casualty replacement	1.26	558.81	0.00	
5	3 weeding and 2 soil workings (3.40 M.D. per 50 seedlings)	42.50	18848.75	281.00	19129.75
6	Watch and ward (10 months - 1 watcher per 10 ha)	30.00	13305.00	0.00	13305.00
7	Fire tracing	2.00	887.00	0.00	887.00
8	Purchases of selected seedling 687 seedlings per ha (50% Bearing species) Rs. 50 per seedling	0.00	0.00	34350.00	34350.00
	Total	144.63	64143.41	59978.00	124121.41
	Contingency 3%				3723.64
	Labour Welfare 4%				4964.86
	Grand Total				132809.90
C	Second Year Operations				
1	3 weeding and soil workings (3.40 M.D. per 50 plants) fertilizer application Rs. 0.45 per plant	42.50	18848.75	281.00	19129.75
2	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
3	Fire tracing	2.00	887.00	0.00	887.00
	Total	81.00	35923.50	281.00	36204.50
	Contingency 3%				1086.14
	Labour Welfare 4%				1448.18
	Grand Total				38738.82
D	Third Year Operations				
1	3 weeding and soil workings (3.40 M.D. per 50 plants) fertilizer application Rs. 0.45 per plant	42.50	18848.75	281.00	19129.75
2	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
3	Fire tracing	2.00	887.00	0.00	887.00
	Total	81.00	35923.50	281.00	36204.50
	Contingency 3%				1086.14
	Labour Welfare 4%				1448.18
	Grand Total				38738.82
E	Fourth Year Operations				
1	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
2	Fire tracing	2.00	887.00	0.00	887.00
	Total	38.50	17074.75	0.00	17074.75
	Contingency 3%				512.24

S. No.	Particulars of Works	Man Day	Wages	Material Supply	Total
	Labour Welfare 4%				682.99
	Grand Total				18269.98
F	Fifth Year Operations				
1	Watch and ward (12 months - 1 watcher per 10 ha)	36.50	16187.75	0.00	16187.75
2	Fire tracing	2.00	887.00	0.00	887.00
	Total	38.50	17074.75	0.00	17074.75
	Contingency 3%				512.24
	Labour Welfare 4%				682.99
	Grand Total				18269.98

Abstract

S. No.	Year of Operation	Mandays	Wages	Material Supply	Total	Other Expenses	Total Amount	Or Say
1	Pre Monsoon Works	252.50	111983.75	178.00	112161.75	7851.32	120013.07	120010
2	First Year Operation	144.63	64143.41	59978.00	124121.41	8688.50	132809.90	132810
3	Second Year Operation	81.00	35923.50	281.00	36204.50	2534.32	38738.82	38740
4	Third Year Operation	81.00	35923.50	281.00	36204.50	2534.32	38738.82	38740
5	Fourth Year Operation	38.50	17074.75	0.00	17074.75	1195.23	18269.98	18270
6	Fifth Year Operation	38.50	17074.75	0.00	17074.75	1195.23	18269.98	18270
	Total	636.13	282123.66	60718.00	342841.66	23998.92	366840.57	366840

4. Per Hectare Model Rate Structure for Continuous Contour Trench (CCT)

S. No.	Particular Works	Man days	Wages (Rs)	Material Supply	Total Cost/Ha.
1	Survey & Demarcation of area & Preparation of treatment map (M&S @Rs. 6 per Ha)	1.00	443.50	300.00	743.50
2	Gully plugging work maximum up to 10 Cu. M (0.87-man-days per Cu. M).	8.69	3854.02	0.00	3854.02
3	For CCT & their spacing 0.25 mandays per 100Rmt. Per ha. 1600Rmt.	4.17	1849.40	333.00	2182.40
4	By digging and excavating 0.6m to 0.3m deep CCT construct 0.3 m high embankment on the slope side of the pasture from excavated soil per ha. 1514 Rmt. as 270 Cu. M.	169.63	75230.91	0.00	75230.91
5	Agave plantations along with transportation near the base of drains and CCTs per 100 circuses as Rs.25/- for planting 100 circuses as Rs.0.40/- man-days 1700 circus/ha.	6.80	3015.80	0.00	3015.80
6	For top of embankment beside CCT for 100 m. length Sow 1 kg of seeds as follows 1) Seed rate Rs.25 per kg 2) For sowing seeds in 100 Rmt. Rs.0.025 man-days in 15.14 kg/ha	0.38	168.53	1550.81	1719.34
	Total	190.67	84562.15	2183.81	86745.96
	Add 3% Contingency				2602.38
	Add 4% Labour welfare				3469.84
	Grant Total				92818.17
	Or Say				92820.00



Government of India
Ministry of Environment, Forest and Climate Change
(Forest Conservation Division)



Online Proposal No.:
 FP/MH/HYD/IRRIG/447097/2023



Dated: 12/05/2025

To,

The Principal Secretary (Forests),
 Government of Maharashtra,
 Mumbai.

Subject: Proposal for seeking prior approval of the Central Government under Section 2(1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 20.15 ha forest land for the development of Bhivpuri off-stream open loop pumped storage project (1000 MW) in favour of M/s Tata Power Company Limited in Pune and Raigad District of Maharashtra State (Online No. FP/MH/HYD/IRRIG/447097/2023) - regarding.

Sir/Madam,

I am directed to refer the Government of Maharashtra's communication dated 28.10.2024 on the above subject seeking prior approval of the Central Government under section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and to say that the proposal has been examined by the Advisory Committee constituted by the Central Government under Section-3 of the aforesaid Act.

2. After careful examination of the proposal of the State Government and on the basis of the recommendations of the Advisory Committee and with due approval of the competent authority, the Central Government hereby accords '**in-principle**' approval under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 20.15 ha forest land for the development of Bhivpuri off-stream open loop pumped storage project (1000 MW) in favour of M/s Tata Power Company Limited in Pune and Raigad District in the State of Maharashtra subject to fulfilment of the following conditions:

I. General Conditions

S. No	Conditions
1.1	Legal status of the diverted forest land shall remain unchanged

S. No	Conditions
1.2	The Compensatory afforestation over an area of 20.15 ha Non -Forest land shall be raised at the project cost under the supervision of the State Forest Department and afforestation works shall start within two years from the date of Final approval and maintained thereafter in accordance with the approved CA scheme in consultation with the State Forest Department;
1.3	The User Agency shall transfer the cost of raising and maintaining the compensatory afforestation as per the approved CA scheme at the current wage rate in consultation with State Forest Department in the account of CAMPA of the concerned State through online portal;
1.4	The cost of survey, demarcation and erection of permanent pillars, if required on the identified CA land, shall be deposited in advance with the Forest Department by the user agency. The CA will be maintained for 10 years. The scheme may include afforestation of indigenous species with appropriate provision for anticipated cost increase for works scheduled for subsequent years
1.5	The non-forest land shall be transferred and mutated in favour of the State Forest Department and further the same shall be notified by the State Government as PF under Section-29 of the Indian Forest Act, 1927 or under the relevant Section(s) of the local Forest Act, 1927 before handing over the forest land to the User Agency.
1.6	The User Agency shall transfer the funds towards the cost of Net Present Value (NPV) of the forest land being diverted under this proposal in accordance with the MoEF&CC's guidelines dated 6.01.2022 read with guidelines dated 19.01.2022;
1.7	At the time of payment of the Net Present Value (NPV) at the present rate, the user agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India;
1.8	The State Government shall upload the KML files of the area under diversion and the accepted area for raising compensatory afforestation in the e-Green watch portal of FSI, before handing over forest land to the user agency;
1.9	All the funds received from the user agency under the project shall be transferred/deposited in CAMPA account only through e-portal (https://parivesh.nic.in/); Amount deposited through other mode will not be accepted as compliance of the in-principle approval;
1.10	The cost of felling of trees shall be deposited by the User Agency with the State Forest Department;
1.11	Felling of trees shall be done in phase-wise manner, when it is absolutely necessary under strict supervision of the State Forest Department;
1.12	The user agency shall explore the possibility of translocation of maximum number of trees identified to be felled and shall ensure that any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department;

S. No	Conditions
1.13	The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required;
1.14	No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;
1.15	The boundary of the diverted forest land, as applicable, shall be demarcated on ground at the project cost. by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS coordinates;
1.16	The layout plan of the proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal except the change in land use allowed on the forest land vide Ministry's guideline dated 26.12.2024;
1.17	The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;
1.18	No damage to the flora and fauna of the adjoining area shall be caused;
1.19	The user agency shall comply all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s) pertaining to this project, if any, for the time being in force, as applicable to the project;
1.20	The User Agency shall submit the annual self -compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year regularly;
1.21	Any other condition that the Ministry of Environment, Forests & Climate Change may stipulate from time to time in the interest of conservation, protection and development of forests & wildlife shall be carried with by the State Government and user agency;
1.22	Violation of any of these conditions will amount to violation of Forest (Conservation) Act, 1980 and action would be taken as prescribed in para 1.16 of Chapter 1 of the Handbook of comprehensive guidelines of Forest (Conservation) Act, 1980 as issued by this Ministry's letter No. 5-2/2017-FC dated 29.12.2023;
1.23	The compliance report shall be uploaded on e-portal (https://parivesh.nic.in/).

2. Standard conditions

S. No	Conditions
2.1	The user agency shall undertake afforestation along the periphery of the reservoir and canals (as applicable).
2.2	The user agency shall carry out muck disposal at pre-designated sites in such a manner so as to avoid its rolling down. A muck disposal plan may be submitted along with the compliance report.
2.3	The dumping area for muck disposal shall be stabilized and reclaimed by planting suitable species by the user agency at the cost of project under the supervision of State Forest Department. Retaining walls and terracing shall be carried out to hold the dumping material in place. Stabilization and reclamation of such dumping sites shall be completed before handing over the same to the State Forest Department in a time bound manner as per Plan. A copy of plan may be submitted along with the compliance report.
2.4	The User agency shall consult organization(s) having experience in construction of roads in hilly areas to avoid frequent road blockade due to landslides etc and shall provide breast walls and retaining walls wherever necessary.

3. Specific Conditions

S. No	Conditions
3.1	As the project is to be implemented in a very steep area, appropriate Soil and Moisture Conservation measures shall be taken by the user agency during the execution of the work.
3.2	The Catchment Area Treatment plan submitted by the State shall be implemented at the cost of the user agency.
3.3	The State Govt. should make all due diligence for formulating the improvement plan for the CA area. The plan should include components/activities which help in improving soil and moisture regime and the biodiversity of the area and make a visible positive impact in due course of time.

After receipt of compliance report on fulfillment of the conditions mentioned above, the proposal shall be considered for final approval under Section-2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. Transfer of forest land shall not be affected till final approval is granted by the Central Government in this regard.

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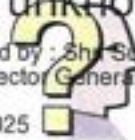
1. The PCCF (HoFF), Department of Forest, Government of Maharashtra, Nagpur;
2. The Dy. DGF (Central), Regional Office, MoEF&CC, Nagpur;
3. The Nodal Officer, Department of Forest, Government of Maharashtra, Nagpur;
4. User Agency;
5. Monitoring Cell, FC Division, MoEF&CC, New Delhi.

Your's faithfully
(Suneet Bhardwaj)
Assistant Inspector General of Forests

Validity unknown

Digitally Signed by : Shri Suneet Bharadwaj
Assistant Inspector General/Scientist, MEF

Date: 12/05/2025





सत्यमेव जयते

Government of India
Ministry of Environment, Forest and Climate Change
(Forest Conservation Division)



Online Proposal No.:
FP/MH/HYD/IRRIG/447097/2023



Dated: 04/11/2025

To,

The Principal Secretary (Forests),
Government of Maharashtra,
Mumbai.

Subject: Proposal for seeking prior approval of the Central Government under Section 2(1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 20.15 ha forest land for the development of Bhivpuri off-stream open loop pumped storage project (1000 MW) in favour of M/s Tata Power Company Limited in Pune and Raigad District of Maharashtra State (Online No. FP/MH/HYD/IRRIG/447097/2023) - regarding.

Sir/Madam,

I am directed to refer to the online proposal no. FP/MH/HYD/IRRIG/447097/2023 dated 28.10.2024 seeking prior approval in accordance with section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. The proposal was granted "In-Principle" (Stage-I) approval by the Central Government vide letter dated 12.05.2025. The Government of Maharashtra has reported/submitted the compliance report on 17.10.2025 through online PARIVESH portal to the conditions stipulated in the "In-Principle" approval and requested for grant of final approval.

After careful consideration of the compliance report furnished by the Government of Maharashtra online on proposal No. FP/MH/HYD/IRRIG/447097, I am directed to convey the "Final approval" under Section 2 (1) (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 20.15 ha forest land for the development of Bhivpuri off-stream open loop pumped storage project (1000 MW) in favour of M/s The Tata Power Co. Ltd. in Pune and Raigad District of Maharashtra subject to fulfilment of the following conditions:

I. General Conditions

S. No	Conditions
1.1	Legal status of the diverted forest land shall remain unchanged;
1.2	The State Government shall ensure that the Compensatory Afforestation on the identified Non-forest/Revenue land over an area of 20.15 Ha in the Gut No. 263/1, 264, 265/2 in Village: Vadgaon, Tal: Mulshi, Dist: Pune shall be raised at the project cost and the afforestation work shall start within two years from the date of final approval and maintained thereafter in accordance with the approved CA scheme by the State Forest Department;
1.3	The cost of survey, demarcation and erection of permanent pillars, if required on the identified CA land, shall be deposited in advance with the Forest Department by the user agency. The CA will be maintained for 10 years. The scheme may include afforestation of indigenous species with appropriate provision for anticipated cost increase for works scheduled for subsequent years
1.4	The non-forest land identified for CA shall be notified by the State Government as PF under Section-29 of the Indian Forest Act, 1927 or under the relevant Section(s) of the local Forest Act, before handing over the forest land to the User Agency;
1.5	The User Agency shall pay the additional amount of NPV, if so determined at a later date or as per the final decision of the Hon'ble Supreme Court of India;
1.6	The KML files of the area under diversion and the accepted area for raising compensatory afforestation shall be uploaded in the e-Green watch portal of FSI, before handing over forest land to the user agency;
1.7	The cost of felling of trees shall be deposited by the User Agency with the State Forest Department;
1.8	The felling of trees shall be done in a phased manner, when it is absolutely necessary under strict supervision of the State Forest Department;
1.9	The State Government shall ensure that the user agency shall explore the possibility of translocation of maximum number of trees identified to be felled and also ensure that any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department;
1.10	The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (Protection) Act, 1986, if required;
1.11	No labour camp shall be established on the forest land and the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;

S. No	Conditions
1.12	The boundary of the diverted forest land, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS coordinates;
1.13	The layout plan of the proposal shall not be changed without the prior approval of the Central Government and the forest land shall not be used for any purpose other than that specified in the proposal;
1.14	The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;
1.15	No damage to the flora and fauna of the adjoining area shall be caused;
1.16	The User Agency shall submit the annual self-compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year regularly;
1.17	Any other condition that the Ministry of Environment, Forests & Climate Change may stipulate from time to time in the interest of conservation, protection and development of forests & wildlife shall be carried with by the State Government and user agency;
1.18	Violation of any of these conditions will amount to violation of Van(Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and action would be taken as prescribed in para 1.16 of Chapter 1 of the Handbook of comprehensive guidelines as issued by this Ministry's letter No. 5-2/2017-FC dated 29.12.2023;
1.19	The State Government after receiving the 'Final' approval of the Central Government under subsection (1) of section 2 of the Adhiniyam, and after fulfilment and compliance of the provisions of all other Acts and rules made thereunder, as applicable including ensuring settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007), shall issue order for diversion;
1.20	The State Government and user agency shall ensure compliance to all conditions stipulated in the 'in-principle' approval letter dated 12.05.2025 for which undertakings have been obtained from the user agency and also the provisions of all Acts, Rules, Regulations and Guidelines, relevant Hon'ble Court Order (S) and NGT Order (S), if any, for the time being in force, including compliance of the Schedule Tribes and Other Traditional Forest Dwellers (Recognition of Forests Rights) Act, 2006

2. Standard conditions

S. No	Conditions
2.1	The user agency shall undertake afforestation along the periphery of the reservoir and canals (as applicable);
2.2	The user agency shall carry out muck disposal at pre-designated sites in such a manner so as to avoid its rolling down;
2.3	The dumping area for muck disposal shall be stabilized and reclaimed by planting suitable species by the user agency at the cost of project under the supervision of State Forest Department. Retaining walls and terracing shall be carried out to hold the dumping material in place;
2.4	The User agency shall consult organization(s) having experience in construction of roads in hilly areas to avoid frequent road blockade due to landslides etc. and shall provide breast walls and retaining walls wherever necessary;

3. Specific Conditions

S. No	Conditions
3.1	As the project is to be implements in a very steep area, the appropriate Soil and Moisture Conservation measures as per approved plan shall be taken by the user agency during the execution of the work;
3.2	The Catchment Area Treatment plan submitted by the State shall be implemented at the cost of the user agency;
3.3	The State Govt. should make all due diligence for formulating the improvement plan for the CA area. The plan should include components/activities which help in improving soil and moisture regime and the biodiversity of the area and make a visible positive impact in due course of time.

Copy To

1. The PCCF (HoFF), Department of Forest, Government of Maharashtra, Nagpur;
2. The Dy. DGF (Central), Regional Office, MoEF&CC, Nagpur;
3. The Nodal Officer, Department of Forest, Government of Maharashtra, Nagpur;
4. User Agency;
5. Monitoring Cell, FC Division, MoEF&CC, New Delhi.

Your's faithfully
 Sd-
 Digitally Signed by : Shri. Suresh Bhardwaj
 Assistant Inspector, General Services, MoEF
 Date: 04/11/2025



Forest Land- Pune & Raigad
Diversion of 20.14 ha. forest land for
Development of Bhivpuri Off-Stream Open
Loop Pumped Storage Project (1000 MW)
in favour of M/s. Tata Power Company
Limited in Pune and Raigad District in the
State of Maharashtra.

Government of Maharashtra
Revenue and Forest Department
Government Order No.: No. FLD -1924/CR-215/F-10
Mantralaya, Mumbai-400 032.
Date: 05.03.2026

Ref.:

- 1) Additional Principal Chief Conservator of Forests & Nodal Officer, Maharashtra State, Nagpur, Letter No. Desk-17/Nodal/S1/PID-447094/Thane/1341/24-25, Dt.05.09.2024.
- 2) Revenue and Forest Department, Government of Maharashtra, Government letter No. FLD -1924/CR-215/F-10, dt.25.10.2024.
- 3) Ministry of Environment, Forests & Climate Change (Forest Conservation Division), Government of India, New Delhi, Letter No. FP/MH/HYD/IRRIG/447097/2023, dt. 12.05.2025.
- 4) Additional Principal Chief Conservator of Forests & Nodal Officer, Maharashtra State, Nagpur, Letter No. Desk-17/FCA-S2/PID-447097/Pune/2024-25/1625, dt.13.10.2025
- 5) Revenue and Forest Department, Government of Maharashtra, Government letter No. FLD -1924/CR-215/F-10, dt.17.10.2025.
- 6) Ministry of Environment, Forests & Climate Change (Forest Conservation Division), Government of India, New Delhi, Letter No. FP/MH/HYD/IRRIG/447097/2023, dt. 04.11.2025.
- 7) Additional Principal Chief Conservator of Forests & Nodal Officer, Maharashtra State, Nagpur, Letter No. Desk-17/FCA-S2/PID-447097/Pune/25-26/2022, dt.27.11.2025
- 8) Deputy Conservator of Forests (T.), Pune, Letter No. Desk-A/Desk-4.2 / Jamin / 1488 / 2025-26, dt.09.01.2026.

Order :

Whereas, the Additional Principal Chief Conservator of Forests & Nodal Officer, Maharashtra State, Nagpur, vide his letter under reference No.1 has submitted a proposal for diversion of 20.15 ha. forest land for Development of Bhivpuri Off-Stream Open Loop Pumped Storage Project (1000 MW), Pune and Raigad District in the State of Maharashtra;

AND whereas, the State Government vide under letter reference No.2 has sent the proposal for approval of Regional Office (Central) Ministry of Environment, Forests & Climate Change, Government of India, Nagpur;

Government Order No.: No. FLD -1924/CR-215/F-10

AND whereas, the Government of India after due consideration, vide letter under reference No.3, accorded 'In-principle' approval to divert the 20.15 ha. Forest Land for the above project under section 2 Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. The said approval is subject to fulfillment of certain conditions by the User Agency;

AND whereas, the Additional Principal Chief Conservator of Forests & Nodal Officer, Maharashtra State, Nagpur, vide letters under reference No.4 has submitted compliance of those conditions to the Government of Maharashtra & Government of India;

AND whereas, the State Government vide letters under reference No.5 has submitted compliance of those conditions to the Government of India;

AND whereas, the Ministry of Environment, Forests & Climate Change, Government of India (FC Division), New Delhi, vide under reference no. 6 accorded 'Final approval' to divert the 20.15 ha of forest land in favour of M/s. Chief Hydros, Tata Power Company Limited for Development of Bhivpuri Off-Stream Open Loop Pumped Storage Project (1000 MW), in Pune and Raigad District in the State of Maharashtra;

AND whereas, the Additional Principal Chief Conservator of Forests & Nodal Officer, Maharashtra State, Nagpur vide letters under reference No.7 has requested State Government to issue diversion order in the matter;

AND whereas, Deputy Conservator of Forests (T.), Pune, vide letters under reference No.8 has informed that out of the total area of Mouje Khand Survey No. 107, an area of 7.63 hectares has been Disforestation under Government Notification No. S36/13/20491 dated 16th November, 1927. The Disforestation area has been given a new Gut number 380. Since, the area of 0.01 ha. of Mouje-Khand Survey No. 107, Gut No. 380 is a private non-forest area, it is necessary to exclude the said area from the diversion area.

NOW, therefore, Government of Maharashtra hereby directs that the area of 20.14 ha. consisting of Reserved Forest & Private Forest Land more specifically described in the proposal submitted vide letter under reference No. 1 and as per details given in the Schedule given below, be diverted to the User Agency, i.e. The Chief Hydros, Tata Power Company Limited for Development of Bhivpuri Off-Stream Open Loop Pumped Storage Project (1000 MW), in Pune and Raigad District in the State of Maharashtra.

The diversion shall be effected subject to the terms and conditions mentioned in the letter dated 12.05.2025 and dated 04.11.2025 of Ministry of Environment, Forests & Climate Change, Government of India (FC Division), New Delhi. This approval for diversion of forest land is also subject to compliance of following conditions by the User Agency-

1. User Agency shall comply with all the conditions stipulated in the 'in-principle' and 'final approval' letters of Regional Office, MoEF&CC, Nagpur, referred above. The Chief Conservator of Forests (T), Pune shall ensure the strict compliance of the conditions by the User Agency and shall furnish the report in this regard to Additional Principal Chief Conservator of Forests and Nodal Officer, Maharashtra State, Nagpur from time to time.

Government Order No.: No. FLD -1924/CR-215/F-10

2. Non-compliance of any of the conditions mentioned in Regional Office, MoEF&CC letters dated 12.05.2025 and dated 04.11.2025, in this order and Rules & Guidelines made / issued under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, shall amount to violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and action would be taken accordingly.
3. For ensuring the compliances and for monitoring the duly prescribed activities and also to carry out other statutory duties, user agency shall facilitate unhindered access/entry in the area to the local forest Officer. In case the user agency prohibits the free access or create hindrances, the permission given under this Order for the diversion of forest area for the non-forest use shall be withdrawn.
4. In case of non-compliance of any of the above conditions, The Chief Conservator of Forests (T), Pune shall report through the State Government to the Ministry of Environment, Forests & Climate Change, Government of India (FC Division), New Delhi as per procedure laid down in guidelines under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

Schedule

Sr. No.	Item wise work/purpose	District	Taluka	Name of Village	Survey No.	Gut. No.	Compt No.	Area (in ha.)	Legal Status
1	Surface Penstock	Raigad	Karjat	Bhivpuri	204 (New Survey No. 21)	---	26	6.23	Reserved Forest
2	Approach Road to Project Component	Pune	Maval	Khand	107	150	37A	0.09	Reserved Forest
3	Surface Penstock	Pune	Maval	Sawle	7	14P	1	0.43	Private Forest
4	Surface Penstock	Pune	Maval	Khand	107	150	37A	10.66	Reserved Forest
5	Approach Road to Project Component	Pune	Maval	Khand	107	150	37A	0.12	Reserved Forest
6	Approach Road to Project Component	Pune	Maval	Khand	107	150	37A	0.18	Reserved Forest
7	Approach Road to Project Component	Pune	Maval	Sawle	7	14P	1	0.78	Private Forest
8	Approach Road to Project Component	Pune	Maval	Sawle	7	14P	1	0.42	Private Forest
9	Adit	Pune	Maval	Khand	107	150	37A	0.25	Reserved Forest
10	Adit	Pune	Maval	Khand	107	150	37A	0.12	Reserved Forest

Government Order No.: No. FLD-1924/CR-215/F-10

- II. Chief Hydros, Tata Power Company Limited, is hereby directed that they should publish the entire order of forest clearances granted in verbatim along with the details of Survey No., Gut No., area and legal status of each Survey, Gut No. etc., along with the conditions and safe guards imposed by the State Government while granting forest clearances in two widely circulated daily newspapers, one in vernacular language and other in English language. Copy of the Newspapers be submitted to Chief Conservator of Forests (T), Pune and Deputy Conservator of Forest, Pune & Alibag.
- III. Heads of Local Bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government are hereby directed to display the same on their notice board for 30 days from the date of receipt for the information of general public.



वन विभाग



प्रधान मुख्य वनसंरक्षक (वनबल प्रमुख) महाराष्ट्र राज्य, यांचे कार्यालय



O/o Principal Chief Conservator of Forests (HoFF), Maharashtra State

Phone No.- 0712-2560953

मुख्य प्रधान वनसंरक्षक (वन्यजीव) महाराष्ट्र राज्य,

E-mail - pccfw/ingp@mahaforest.gov.in Principal Chief Conservator of Forest (Wildlife) Maharashtra State.

Website - www.mahaforest.gov.in "Van Bhavan", 3rd Floor, Rangiri Road, Civil Lines, Nagpur - 440 001.

पत्र-ई मेल क्रमांक :-कक्ष-२३(२)/वजी/सर्व्ह/प्र.क्र.६२/११८३/२०२४-२५ दिनांक १६/०७/२०२४

प्रति,

Shri. Abhijeet Patil, Head-special Projects,
The Tata Power Company Limited,
Old Pune-Mumbai road, NH-4, Dist. Pune,
Maharashtra. E-mail- tatapower@tatapower.com

विषय :- Conservation Plan for Schedule-I species in project area of Bhivpuri Off-Stream open Loop Pumped Storage Project (1000MW) of M/s The Tata Power co.ltd. located near village Vadeshwar and Bhivpuri, Tehsil Karjat and Mawal, Dist. Raigarh and Pune, Maharashtra by submitted-Approval there of.

संदर्भ :- १. पर्यावरण, वने व जलवायु परिवर्तन मंत्रालय, भारत सरकार, आय ए विभाग, नवी दिल्ली
यांचेकडील पत्र क्र. J-१२०११/३९/२०२३-IA.I(R), दिनांक २३/०९/२०२३.
२. आपलेकडील पत्र क्र. LNL/HWS/२०२४/१४४, दिनांक २२/०४/२०२४.

प्रस्तुत विषयांकित प्रकरणी संदर्भ पत्र-१ अन्वये केंद्र शासनाने Environment Impact Assessment अधिसूचना, २००६ च्या तरतुदीनुसार विषयांकित प्रस्तावास घालून दिलेल्या अटीचे अधीन राहून तत्त्वतः मान्यता प्रदान केलेली आहे.

सदरहू प्रस्तावाचे अनुषंगाने अट क्रमांक ४ Environmental Management and Biodiversity Conservation मधील अनु क्र. १३ व १४ खालीलप्रमाणे अनुक्रमे घालून दिलेल्या आहेत.

4.1.13 "A detailed wildlife conservation plan for schedule-I species,duly approved by the Chief wildlife warden, be submitted."

4.1.14 "In case any Wildlife Corridor is located with in 10 km radius of the project site a detailed study shall be conducted to assess the impact of project on safe movement of wild animals."

वरील अट क्र. ४ मधील अनु क्र. १३ चे अनुषंगाने, उपरोक्त संदर्भिय पत्र-२ अन्वये वन्यजीव संवर्धन आराखडा या कार्यालयाचे मान्यतेसाठी सादर केलेला आहे. सदरील वन्यजीव संवर्धन आराखड्यातील ठळक दाबी पुढीलप्रमाणे आहे.

प्रकल्प यंत्रणेने १० वर्षांकरिता एकूण रू. २१०.०० लक्ष आर्थिक तरतुद आराखड्यामध्ये केलेली आहे. बाबनिहाय तपशिल खालीलप्रमाणे आहे.

Total Cost of Biodiversity Management and Wildlife Conservation Plan

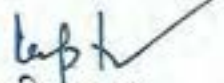
Sr. No.	Conservation Activities	Amount (in rs. Lakhs)
1.	Habitat Improvement by development of vegetation cover by plantation with suitable species.	24.00
2.	Biological fence to control human wildlife conflict	20.00
3.	Farm Forestry	10.00
4.	Maintenance of existing nurseries of state forest department	10.00
5.	Development and Management of Grasslands	20.00
6.	Removal of Invasive species	5.00
7.	Awareness for shifting cultivation and conservation of Natural resources	8.00
8.	Prevention of Forest Fire: Training and Infrastructure facilities	18.00
9.	Construction and filling of water holes and ponds in wildlife habitat.	15.00
10.	Support/ Provision for monkey sterilization and veterinary care, cages, recuse centers, etc.	30.00
11.	Training and capacity building for volunteers and officials of forest department	15.00
12.	Strengthening of Infrastructural facilities of forest department	25.00
13.	Contingencies	10.00
	Total cost	210.00

तरी, केंद्र शासनाने घालून दिलेल्या अटीचे अनुषंगाने वरील रू. २१०.०० लक्ष रक्कम असलेला वन्यजीव संवर्धन आराखडा वन्यजीव व्यवस्थापनाच्या दृष्टीने पोषक स्वरूपाचा असल्यामुळे, त्यांस मान्यता प्रदान करण्यात येत आहे.

तसेच वरील अट क्र. ४ मधील अनु क्र. १४ नुसार प्रकल्प क्षेत्रापासून १० कि.मी. चे परिसरात कोणतेही अभयारण्य, राष्ट्रीय उद्यान किंवा व्याघ्र भ्रमणमार्ग असल्याचे आढळून येत नाही. प्रकल्प क्षेत्रापासून सर्वात जवळचे संरक्षित क्षेत्र हे भिमाशंकर वन्यजीव अभयारण्य आहे. प्रस्तावित प्रकल्प क्षेत्रापासून भिमाशंकर वन्यजीव अभयारण्याचे हवाई अंतर १०.३७ कि.मी. इतके दूर आहे. त्यामुळे सदर प्रस्तावास वन्यजीव मान्यता घेण्याची आवश्यकता नाही.

केंद्र शासनाने प्रकल्प यंत्रणेस घालून दिलेल्या अटीचे अनुषंगाने, संदर्भिय पत्र-२ अन्वये प्राप्त झालेला नकाशा मुख्य वन्यजीव रक्षक, म.रा. यांनी साक्षात्कार करून यासोबत सहपत्रीत करण्यात येत आहे.

सहपत्र : वरीलप्रमाणे.


(महिपा गुप्ता)

प्रधान मुख्य वनसंरक्षक (वन्यजीव),
महाराष्ट्र राज्य

प्रतिलिपी : अपर प्रधान मुख्य वनसंरक्षक (वन्यजीव) पश्चिम, मुंबई यांना माहितीस व आवश्यक कार्यवाहीस अग्रेषित.

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/24010437
Fax: 24023516
Website: <http://mpcb.gov.in>
Email: cac-cell@mpcb.gov.in



Kalpataru Point, 2nd, 3rd
and 4th floor, Opp. Cine
Planet Cinema, Near Sion
Circle, Sion (E),
Mumbai-400022

RED/L.S.I (R9)
No:- Format1.0/CAC/UAN
No.0000223630/CE/2501001061

Date: 13/01/2025

To,
M/s.The Tata Power Company Limited, Bhivpuri Off -
Stream Open Loop Pumped Storage Hydro Project,
1,Bhivpuri Camp,Tal-Karjat,Dist. -Raigad



Sub: Consent to Establish

Ref: 1. Your application for consent to establish vide UAN No. MPCB-
CONSENT-0000223630
2. 14th Consent Appraisal Committee held on dtd. 07/01/2025.

Your application No.MPCB-CONSENT-0000223630 Dated 15.10.2024

For: Grant of Consent to Establish under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 6 and Rule 18(7) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

- The consent to establish is granted for a period up to commissioning of the unit or up to 5 year whichever is earlier.**
- The capital investment of the project is Rs.4743.59 Crs. (As per undertaking submitted by pp)**
- Consent is valid for the manufacture of:**

Sr No	Product	Maximum Quantity	UOM
Products			
1	PP has applied for consent to establish for below mentioned activity. 1 Pump Storage Power Generation (PSP) - 4 X 200 MW + 2 X 100 MW Major civil structures consist of as below a) Upper Reservoir (Existing Structure) b) Upper Intake c) Hear Race Tunnel d) Pressure Shaft/buried Penstock (Right Limb) e) Pressure Shaft/buried Penstock (Left Limb) f) Pit Type Powerhouse & Transformer Bay g) Tailrace Tunnel h) Lower Reservoir and Dam (Geo Membrane Facing Rock Fill Dam - GFRD)	1000	MW

4. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

<i>Sr No</i>	<i>Description</i>	<i>Permitted (in CMD)</i>	<i>Standards to</i>	<i>Disposal Path</i>
1.	Trade effluent	0.0	As per Schedule-I	Not Applicable
2.	Domestic effluent	19	As per Schedule-I	On land for gardening

5. **Conditions under Air (P & CP) Act, 1981 for air emissions:**

<i>Sr No.</i>	<i>Stack No.</i>	<i>Description of stack / source</i>	<i>Number of Stack</i>	<i>Standards to be achieved</i>
1	S1	DG Set 1250 KVA	1	As per Schedule -II

6. **Non-Hazardous Wastes:**

<i>Sr No</i>	<i>Type of Waste</i>	<i>Quantity</i>	<i>UoM</i>	<i>Treatment</i>	<i>Disposal</i>
NA					

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for Collection, Segregation, Storage, Transportation, Treatment and Disposal of hazardous waste:**

<i>Sr No</i>	<i>Category No./ Type</i>	<i>Quantity</i>	<i>UoM</i>	<i>Treatment</i>	<i>Disposal</i>
1	5.1 Used or spent oil	50	MT/A	Recycle	Disposal to MPCB approved recycler
2	Other	5	MT/A	Disposal to MPCB approved recycler	Disposal to MPCB approved recycler
3	Other	5	MT/A	Disposal to MPCB approved recycler	Disposal to MPCB approved recycler

8. The Board reserves the right to review, amend, suspend, revoke this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/ permission from any other Government authorities.
10. The applicant shall obtaining Environmental Clearance.
11. The industry shall obtain necessary permission from the Directorate of Industrial Safety and Health (DISH).
12. The industry shall strictly follow Board Circular for Retro-Fitting of Emission Control Device (RECD) for in-use D.G. Sets vide no. MPCB/JD(APC)/NCAP/DG Set/B-0090 dtd. 02/06/2023.
13. This consent is issued pursuant to the minutes of 14th Consent Appraisal Committee held dtd. 07/01/2025.
14. The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before actual commencement of the Unit/Activity.

15. The industry shall create an Environment Cell by appointing an Environmental Engineer / Expert for looking after day-to-day activities related to Environment / Pollution control.

This consent is issued on the basis of information/documents submitted by the Applicant/Project Proponent, if it has been observed that the information submitted by the Applicant/Project Proponent is false, misleading or fraudulent, the Board reserves its right to revoke the consent & further legal action will be initiated against the Applicant/Project Proponent.

Received Consent fee of -

Sr.No	Amount(Rs.)	Transaction/DR.No.	Date	Transaction Type
1	9487180.00	MPCB-DR-30042	06/11/2024	NEFT

Copy to:

1. Regional Officer, MPCB, Raigad and Sub-Regional Officer, MPCB, Raigad II
- They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB, Sion, Mumbai

SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

1. A] Generation - As per your application the treated effluent generation is Nil.
B] Treatment - NA
C] Disposal - NA
2. A] As per your application, you have provided Sewage Treatment Plant of designed capacity 25.0CMD for the treatment of 19.0 CMD of sewage.
B] The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards.

Sr.No	Parameters	Standards (mg/l)	
1	Suspended Solids	Not to exceed	50
2	BOD 3 days 27°C	Not to exceed	30
3	COD	Not to exceed	100

- C] The treated sewage shall be recycled for secondary purposes to the maximum extent and remaining shall be discharged on land for gardening within premise after confirming above standards. In no case, sewage shall find its way for gardening / outside factory premises.
3. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification there of & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.
4. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
5. The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, by installing water meters and other provisions as contained in the said act:

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	0.00
2.	Domestic purpose	21.00
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	0.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00
5.	Gardening	0.00

6. The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance/ CREP guidelines.

SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have proposed to provide the Air pollution control (APC) system and also to erect following stack (s) to observe the following fuel pattern:

Stack No.	Source	APC System provided/proposed	Stack Height(in mtr)	Type of Fuel	Sulphur Content(in %)	Pollutant	Standard
S1	DG Set 1250 KVA	Acoustic Enclosure Stack	30.00	HSD 260 Ltr/Hr	1	TPM	50 Mg/Nm ³

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.
3. The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards:

Parameters	Standards
Standards for DG Sets	
NOx (as NO ₂) (AT 15% O ₂), dry basis, in ppmv More then 150 MW	360
NMHC (as C)(at 15% O ₂), mg/Nm ³	100
PM (at 15% O ₂), mg/Nm ³ Diesel Fuels- HSD & LDO	75
PM (at 15% O ₂), mg/Nm ³ Furnance Oils- LSHS & FO	100
CO (at 15% O ₂), ng/NM3	150

4. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
5. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

SCHEDULE-III

Details of Bank Guarantees:

Sr. No	Consent (C2E/C2O/C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
NA						

If the above Bank Guarantee is not submitted within stipulated period, then 12% interest will be levied as a penalty as per circular dtd 29/02/2024 No. BO/MPCB/AS(T)/Circular/B-240229FTS0122

BG Forfeiture History

Srno.	Consent (C2E/C2O/C2R)	Amount of BG imposed	Submission Period	Purpose of BG	Amount of BG Forfeiture	Reason of BG Forfeiture
NA						

BG Return details

Srno.	Consent (C2E/C2O/C2R)	BG imposed	Purpose of BG	Amount of BG Returned
NA				



SCHEDULE-IV
General Conditions:

1. The Energy source for lighting purpose shall preferably be LED based
2. The PP shall harvest rainwater from roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial applications within the plant
3. Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.
4. The applicant shall maintain good housekeeping.
5. The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
6. The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipments provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.
7. The Board reserves the right to review, amend, suspend, revoke this consent and the same shall be binding upon you.
8. The industry shall submit quarterly statement in respect of industries obligation towards consent and pollution control compliance's duly supported with documentary evidences (format can be downloaded from MPCB official site).
9. The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
10. The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification No. B-29016/20/90/PCI-L dated. 18.11.2009 as amended.
11. This consent should not be construed as exemption from obtaining necessary NOC/ permission from any other Government authorities.

12. The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
13. You shall operate OCEMS installed for source emission round 'O' clock and transmit data online to CPCB and MPCB server. You shall also monitor effluent quality, stack emissions and ambient air quality monthly/quarterly. You shall conduct Dioxin Furan monitoring by third party NABL Accredited agency once in year and submit report to Sub Regional Officer.
14. You shall ensure collection, and segregation of BMW regularly to treat and dispose Off within 48 hrs from generation.
15. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
16. The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
17. The industry shall recycle/reprocess/reuse/recover Hazardous Waste as per the provision contain in the Hazardous and Other Wastes (M & TM) Rules 2016, which can be recycled /processed /reused /recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/reprocessed etc. should go for that purpose, in order to reduce load on incineration and landfill site/environment.
18. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
19. You shall not Rent, Lend, Sell, Transfer or Close Down the facility or otherwise transport the Bio Medical waste for any other purpose without obtaining prior written permission of the MPC Board.
20. Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
21. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
22. The industry should not cause any nuisance in surrounding area.
23. The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
24. You shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the facility premises.

25. The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
26. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto
27. The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
28. The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end.
29. The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions.
30. The firm shall submit to this office, the 30th day of September every year, the Environment Statement Report for the financial year ending 31st March in the prescribed FORM-V as per the provisions of Rule 14 of the Environment (Protection) (second Amendment) Rules, 1992.
31. You should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly. You shall conduct Dioxin Furan monitoring by third party NABL Accredited agency once in every year and submit report to Sub Regional Officer.
32. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
33. The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
34. You shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
35. You shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Environmental Protection Act, 1986 and industry specific standard under EP Rules 1986 which are available on MPCB website (www.mpcb.gov.in).
36. You shall create the Environmental Cell by appointing an Environmental Engineer and Chemist for looking after day-to-day activities related to compliance of CCA.

37. You should comply with the Hazardous and Other Wastes (M & TM) Rules, 2016 , Bio Medical Waste Management Rules,2016 and submit the Annual Returns as per Rule 6(5) & 20(2) of Hazardous and Other Wastes (M & TM) Rules, 2016 for the preceding year in Form-IV by 30th June of every year

This certificate is digitally & electronically signed.





No. 2/2/2024/FE&SA/74

Dated: 29/05/24

To,
Sh. Abhijeet Patil
Head-special projects,
Tata Power Co. Ltd.

Sub: Observations of NCSDP Committee on site specific seismic study report of Bhivpuri Pumped Storage Project, Maharashtra

Ref: Your email dated 01.04.2024.

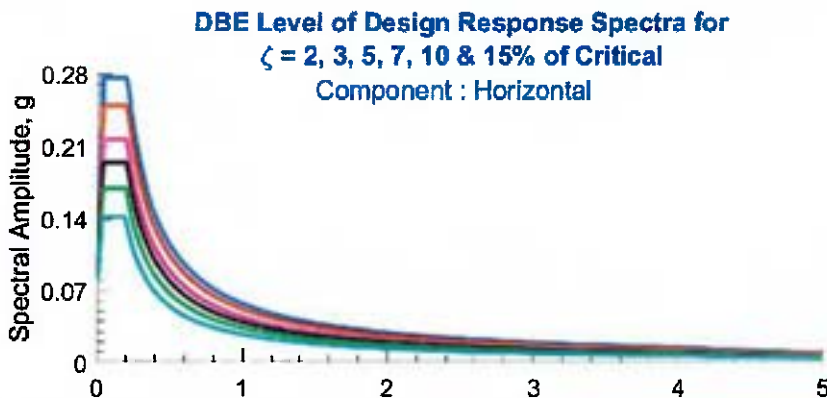
Sir,

This is with reference to the email cited above vide which the site specific seismic study report of the **Bhivpuri Pumped Storage Project, Maharashtra** was submitted to the Secretariat for consideration of the National Committee on Seismic Design Parameters (NCSDP).

In this regard, it is to inform that the committee (NCSDP) in its 38th meeting held on 10.05.2024 considered and discussed the aforesaid mentioned report and the Committee approved the site specific seismic design parameters of lower reservoir of Bhivpuri Pumped Storage Project, Maharashtra, with the upper bound pseudo-static horizontal and vertical seismic coefficients for the dam (α_h & α_v) at 0.12 and 0.08, respectively.

The summarized approved seismic design parameters of the lower reservoir of Bhivpuri PSP are given below:

(a) Response Spectra (DBE-H) for Bhivpuri PSP site (Lower Dam)

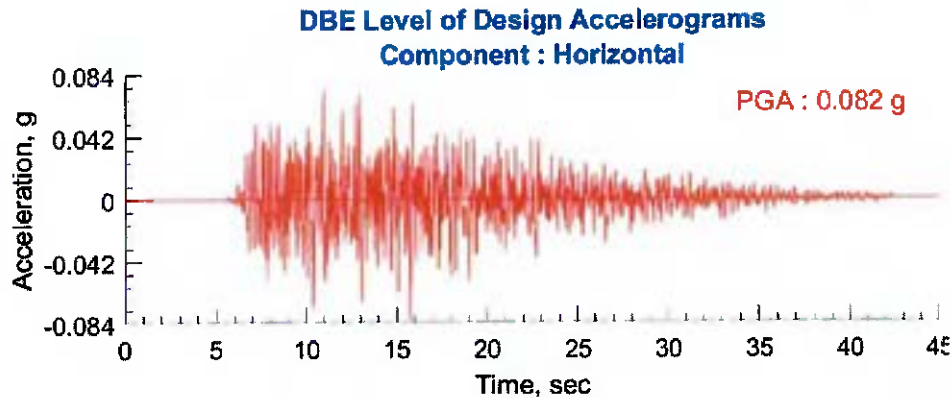
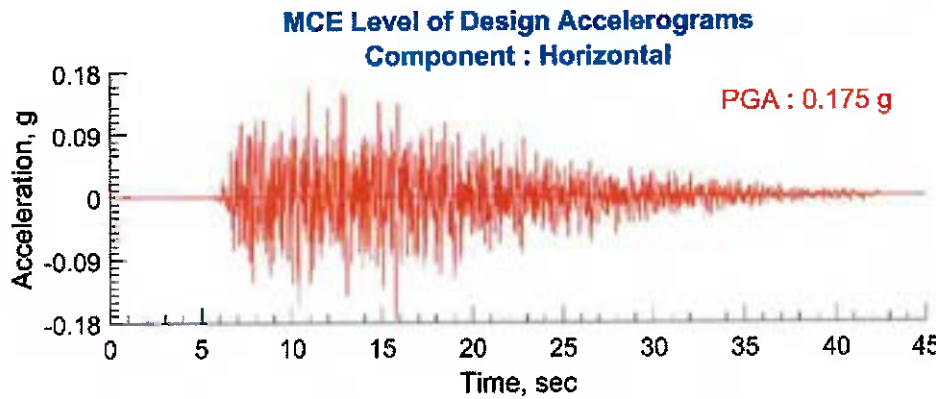




(b) Other seismic parameters

Max. Credible Earthquake	6.5	Horizontal distance to surface projection of fault (R_{fB}) (km)	42.65
Horizontal seismic co-efficient (α_h)	0.12	Vertical seismic co-efficient (α_v)	0.08
Strong motion duration (second)	8.82		

(c) Time History: As contained in the report for both DBE & MCE for the Bhivpuri PSP site
(Lower Dam)



भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास
एवं गंगा संरक्षण विभाग केन्द्रीय जल आयोग
नींव अभियांत्रिकी एवं
विशेष विश्लेषण निदेशालय



Government of
Ministry of Jal Shakti
D/o Water Resources, River Development
& Ganga Rejuvenation
Foundation Engineering &
Special Analysis Directorate

Accordingly, the lower reservoir of Bhivpuri Pumped Storage Project, Maharashtra may be designed for the approved parameters.

However, the Committee directed to evaluate the site-specific seismic design parameters for the existing upper reservoir and check its stability using the obtained parameters. The site-specific seismic study report for the upper reservoir incorporating the observations above may be submitted to the secretariat for consideration by the committee.

Accordingly, the report of the project, prepared as per the then existing guideline of NCSDP, as per the direction above may be submitted to the secretariat for consideration by the committee.

Yours faithfully

सत्यम अग्रवाल
29/05/24

(Satyam Aggarwal)
Deputy Director (FE&SA)

कमरा सं० 2F(N), अष्टम तल, सेवा भवन,
राम कृष्ण पुरम, नई दिल्ली- 110066



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भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

जल विद्युत परियोजना मूल्यांकन प्रभाग

Hydro Project Appraisal Division

OFFICE MEMORANDUM

Subject: Accord of Concurrence to Bhivpuri Off-stream Open Loop Pumped Storage Project, 1000 MW (4 x 200 MW + 2 x 100 MW) in Maharashtra by M/s. Tata Power Company Limited under Section 8 of the Electricity Act, 2003 - regarding.

Detailed Project Report (DPR) of the Bhivpuri Off-stream Open Loop Pumped Storage Project, 1000 MW (4x200 MW + 2 x 100 MW) in Maharashtra by M/s. Tata Power Company Limited was uploaded in the DPR Approval Process Monitoring System (DAPMS) portal of CEA on 16.07.2024 for concurrence, as per Guidelines for Acceptance, Examination and Concurrence of Detailed Project Reports for Pumped Storage Schemes Version 3.0. Thereafter, developer has submitted revised DPR to HPA Division, CEA after obtaining all necessary pre-DPR clearances on 05.09.2024.

2. Undersigned is directed to convey the decision of Authority taken in the meeting held on 06.09.2024, to accord concurrence to Bhivpuri Off-stream Open Loop Pumped Storage Project (PSP) in exercise of the powers conferred upon the Authority under Section 8 of the Electricity Act, 2003.

3. The undertaking by M/s. Tata Power Company Limited is attached at **Annex- I**. The salient features of the scheme are given in **Annex-II**.

4. This concurrence is subject to fulfillment of the following conditions: -

- i. M/s. Tata Power Company Limited shall comply with the suggestions/ observations of Central Water Commission (CWC) as given in **Annex-III**. Further, M/s. Tata Power Company Limited shall submit the site-specific seismic study report for upper reservoir (existing) of Bhivpuri PSP and get it vetted by NCSDP before taking up any construction activity in the upper reservoir area.
- ii. M/s. Tata Power Company Limited shall comply with the suggestions/ observations of Central Electricity Authority (CEA) as given in **Annex-IV**.

- iii. M/s. Tata Power Company Limited shall comply with the suggestions/ observations of Geological Survey of India as given in **Annex- V**.
- iv. M/s. Tata Power Company Limited shall comply with the suggestions/ observations of CSMRS as given in **Annex-VI**.
- v. M/s. Tata Power Company Limited shall communicate results of explorations/ investigations from time to time for appraisal of CEA/ CWC/ GSI/ CSMRS regularly.
- vi. Examination of Cost Estimates of Pumped Storage Projects is exempted from Concurrence Process. However, additional chapters as per Guidelines for Formulation of Detailed Project Reports for Pumped Storage Schemes Version 3.0, shall be submitted by M/s. Tata Power Company Limited to the Authority within 60 days from date of uploading the DPR on CEA portal so as to ascertain the project cost in accordance with the limit specified by the Central government from time to time. It will not be vetted by CEA/CWC.
- vii. M/s. Tata Power Company Limited shall use the NCS DP approved parameters for design purposes.
- viii. In case geological surprises in works of the project are met, M/s. Tata Power Company Limited shall systematically maintain a record of geological surprises and treatment provided. The same may be immediately brought to the knowledge of Standing Committee for matters pertaining to Geological Uncertainties/ Surprises and Natural Disaster Events faced in the Hydroelectric Projects constituted vide OM date 23.10.2023 (**Annex-VII**).
- ix. M/s. Tata Power Company Limited shall obtain Environment and Forest clearance from MoEF&CC and shall submit a copy to CEA.
- x. M/s. Tata Power Company Limited shall obtain Clearance from National Board of Wildlife and shall submit a copy to CEA, if applicable.
- xi. M/s. Tata Power Company Limited shall obtain Land availability certificate before actual start of the project and shall submit a copy to CEA.
- xii. M/s. Tata Power Company Limited shall obtain NoC from Ministry of Defence and shall submit a copy to CEA, if applicable.
- xiii. If Scheduled Tribe population is getting affected at project site, clearance under Forest Right Act/Ministry of Social Justice & Empowerment/ State Government shall be obtained by M/s. Tata Power Company Limited and shall submit the same to CEA.
- xiv. Suitable R&R plan shall be prepared by M/s. Tata Power Company Limited and submitted to MoEF&CC for obtaining their clearance.
- xv. M/s. Tata Power Company Limited shall set up a sound and scientific safety management system which shall include:
 - Establishing procedures to identify hazards that could give rise to the potential of injury, health impairment or death and measures to control impact of such hazards.
 - Setting up an Early Warning System to deal with hazardous events such as Glacial Lake and Landslide Outburst Floods, Earthquakes,

- cloudburst, Flash Floods, Avalanches, Dam Break event, etc.
- Establishing Standard Operating Procedure to deal with these hazardous events.
- xvi. M/s. Tata Power Company Limited shall obtain clearance from Ministry of Home Affairs regarding participation of foreign companies in tender works packages and shall comply with the conditioned stipulated therein.
 - xvii. M/s. Tata Power Company Limited shall take measures for averting the flooding of the powerhouse as per conditions contained in **Annex-VIII** and appropriate preventive measures of Disaster Management in case of Dam failure or sudden release of water as per conditions contained in **Annex-IX**.
 - xviii. M/s. Tata Power Company Limited shall comply with the “Guidelines for participation of foreign Companies in tender work packages of Hydroelectric Projects in sensitive areas, 2009” as issued by Ministry of Power vide letter no. 7/1/2002-DO (NHPC Limited) [Vol.II] dated 03.09.2009 (**Annex-X**).
 - xix. M/s. Tata Power Company Limited shall deploy modern tools/software for construction monitoring of the project by establishing IT based monitoring systems and linking the same to CEA network.
 - xx. M/s. Tata Power Company Limited shall ensure availability of adequate quantities of rock/sand from quarries/excavated muck/burrow areas to meet the requirement of coarse & fine aggregates for both wearing & non-wearing surfaces.
 - xxi. Fly ash and fly ash based products shall be used in the construction of various works to the extent possible in accordance with MoEF&CC (Erstwhile MoEF) notification dated 14.09.1999 and its amendment dated 27.08.2003 and as revised on 06.11.2008. Construction material surveys shall include the required investigations for use of fly ash and fly ash based products in various works, infrastructure facilities etc. and their feasibility shall be ascertained by M/s. Tata Power Company Limited.
 - xxii. Information in respect of tying up essential inputs/statutory clearances, results of investigations/ studies shall be submitted by M/s. Tata Power Company Limited to CEA/ CWC/ GSI/ CSMRS on receipt of same from time to time.
 - xxiii. The broad technical aspects of the project proposal in the project report have been scrutinized in CEA in consultation with CWC, GSI and other concerned agencies. The scrutiny is based on the data, assessment and certificates presented in the report and information/ clarifications received as compliances to the observations on the assumption that the data and information furnished are accurate and have been collected reliably by the project authorities from dependable sources and/or after carrying out detailed surveys and investigations as presented in the report.
 - xxiv. M/s. Tata Power Company Limited shall comply strictly the “Public Procurement (Preference to make in India) Order, 2017 (PPP-MII Order)” issued by Department of Industrial Policy and Promotion,

- Ministry of Commerce & Industry, Govt. of India vide its letter no. P-45021/2/2017-B.E.-II dated 15.06.17. **(Copy enclosed Annex-XI).**
- xxv. M/s. Tata Power Company Limited shall register units of the project in e-gen portal and map data on PM Gati Shakti Portal.
- xxvi. M/s. Tata Power Company Limited shall strictly comply with the provisions mentioned in Central Electricity Authority regulations for "Safety requirements for construction, operation and maintenance of electrical plants and electrical lines, 2011" and amendment thereof, if any.
- xxvii. M/s. Tata Power Company Limited shall strictly comply with the provisions mentioned in Central Electricity Authority regulations for "Measures relating to Safety and Electric Supply, 2023" and amendment thereof, if any.
- xxviii. M/s. Tata Power Company Limited shall approach CTU to seek connectivity as per CERC Regulations.
- xxix. M/s. Tata Power Company Limited shall submit the updated DPR to the State Govt., Appropriate Electricity Regulatory Commission, Central Transmission Utility and co-basin States within seven days from the date of issue this Office Memorandum.
5. Developer has informed that project is scheduled to be completed in 48 months from zero date, i.e., 01.10.2024.
6. Concurrence is subject to compliance by M/s. Tata Power Company Limited of various policies/ guidelines etc. issued by Govt. of India from time to time.
7. Monthly Status Report of compliance of the conditions stipulated in para 4 of this Concurrence letter shall be submitted by M/s. Tata Power Company Limited to HPA division, CEA.
8. Monthly Progress Report of the project shall be submitted to Hydro Project Monitoring (HPM) Division of CEA. Three (3) copies of half-yearly reports both on physical progress of the scheme and expenditure actually incurred, duly certified by statutory auditors shall be submitted to the Authority till the Commercial Operation Date of the plant. The project authorities shall give free accessibility to CEA officers and staff to have on the spot assessment of various aspects of the project.
9. Monthly status of the project from date of concurrence to date of Commercial Operation (COD) shall be furnished by M/s. Tata Power Company Limited to HPA division, CEA as per the proforma enclosed at **Annex -XII.**
10. In case time gap between Concurrence accorded to the scheme by CEA and award of one of major civil packages (either Dam/ Embankment/ HRT/ Powerhouse) by M/s. Tata Power Company Limited is three years or more, a fresh Concurrence of CEA shall be obtained by M/s Tata Power Company Limited.

Revalidation of Concurrence can also be considered, in case, the reason for delay in award of one of major civil packages (either Dam/

Embankment/ HRT/ Powerhouse) is beyond the control of developer. However, proposal for revalidation shall be submitted three months before the expiry of validity of the Concurrence, which is three years from the date of issue of this Concurrence Memorandum.

11. In case, changes are made in design parameters, during construction, due to site conditions or otherwise, the same shall be submitted to CEA under intimation to concerned appraising Organization (CWC/ GSI/ CSMRS) for their approval at the design stage itself, well before execution of work in the form of Memorandum of Changes (MoC). The execution of such changes shall remain suspended till approval of the Authority on MoC.

12. The Authority reserves the right to revoke the concurrence, if the conditions stipulated in the concurrence letter are not complied with to the satisfaction of the Authority.

This issues with the approval of the Competent Authority.

Encl: Annex I, II, III, IV, V, VI, VII, VIII, IX, X, XI, & XII

Signed by Jyoti Singh

Date: 30-09-2024 15:06:49

(Jyoti Singh),
Deputy Director

To,

1. Chief Hydros, M/s. Tata Power Company Limited, Khopoli Power House, Khalapur, District Raigad, Maharashtra - 410204.
2. Secretary, MoEF&CC, Govt. of India, Paryavaran Bhawan, CGO Complex, Lodhi Road, New Delhi-110003.
3. Chairperson, Central Electricity Regulatory Commission, 3rd & 4th Floor, Chanderlok Building, 36, Janpath, New Delhi-110001.
4. Chairperson, Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi-110066.
5. Additional Chief Secretary to Government, Department of Energy, Maharashtra, 3rd Floor, Main Building, Mantralay, Mumbai-32. (email: ministertanpure@gmail.com)
6. Chairman-cum-Managing Director, Power Grid Corporation of India Limited, Saudamini, Plot No.2, Sector 29, Gurgaon-122001 (Haryana).
7. Chairman, Central Transmission Utility of India Limited, Floors No. 5-10, Tower 1, Plot No. 16, IRCON International Tower, Institutional Area, Sector 32, Gurugram, Haryana - 122001
8. Adviser (Energy), NITI Aayog, Yojana Bhawan, New Delhi-110001.
9. Member (D&R), Central Water Commission, Sewa Bhawan, RK Puram, New Delhi-110066.
10. Joint Secretary (Hydro), Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110119.

11. Chief Engineer (HPA/ PSP&PA-I/ F&CA/ CD/ Legal/ HPP&I/ HETD&RM/ HPM), CEA, Sewa Bhawan, RK Puram, New Delhi-110066.
12. Chief Engineer Design (NW&S) & Nodal Officer for Single Window Clearance Cell, CWC, Sewa Bhawan (S), RK Puram, New Delhi-110066.
13. Director (LHIM & EPE Division), Geological Survey of India, A-II, Pushpa Bhawan, Madangir Road, New Delhi-110062.
14. Director, CSMRS, Olof Palme Marg, Hauz Khas, New Delhi-110016.
15. Director PA (N) & Nodal Officer for Single Window Clearance Cell, CWC, Sewa Bhawan (S), RK Puram, New Delhi-110066.
16. Director {Hydrology(S)/ Embankment (E&NE)/ HCD (E&NE)/ Gates Design (E&NE)/ FE&SA/ ISM-1/ CA-HWF/ CMC&PM/ Instrumentation}, CWC, Sewa Bhawan (S), RK Puram, New Delhi-110066.

Copy to:

17. Chairperson, Central Electricity Authority, Sewa Bhawan, RK Puram, New Delh-110066.
18. Member (Power System/ Hydro/ Planning/ Grid Operation & Distribution/ Thermal/ Economic & Commercial), CEA, Sewa Bhawan, RK Puram, New Delhi-110066.

MONTHLY REPORT OF ENVIRONMENTAL MONITORING

NOV 2025, DEC 2025, JANUARY, 2026

M/s. TPL-HCC BHIVPURI PSP Joint Venture

*Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
Maharashtra*

Prepared by:

M/s. SKY LAB ANALYTICAL LABORATORY

202, CFC-3, Asmeeta Texpa, Addl. Kalyan-Bhiwandi Industrial Area, MIDC,
Village Kon, Tal. Bhiwandi, Dist. Thane, Maharashtra, INDIA, Pincode-421311.

MOB - 9820386785, 9867577309, 9867577310

Web: www.skylabenviro.com, E-mail: mails@skylabenviro.com

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Rajgad | Maharashtra -410201 | India,
 Maharashtra

REPORT NO : SAL/MSP/10VFM01/11/AM(25-26-1014)

REPORT DATE : 28/11/2025

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 11/AA(25-26-1014)

LOCATION : Near Blatching Plant

SAMPLING PLAN & METHOD NO.: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 24/11/2025

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 14:45:00

SAMPLE COLLECTED BY : Mr. Gulshan Yadav (Skylab)

ANALYSIS START DATE : 26/11/2025

AMBIENT TEMPERATURE : 20°C To 36°C

ANALYSIS COMPLETE DATE : 28/11/2025

HUMIDITY : 58% To 69%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	78.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	38.8	60	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	24.8	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	38.4	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	22.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	0	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.5)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	0	Method 802, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	0.51	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.84	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above listed sample are within limit as per NAAQ Standards.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


F Tejaswri Chavan
 Sr Analyst




Dr. Datta Mandhara
 (Authorized Signatory)

END OF REPORT

- This report reflects finding only for the above sample tested/monitored and only for time and place of monitoring/testing.
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TEST REPORT

NAME & ADDRESS OF CUSTOMER:	REPORT NO : SAL/MSP/96/M01/11/AM/25-26-1915
M/s. TPL-HCC BHIVPURI PSP Joint Venture	REPORT DATE : 28/11/2025
P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1	CUSTOMER REF : 5700053863
Taluka- Karjat Dist-Raigad Maharashtra - 410201 India,	REF DATE : 17/11/2025
Maharashtra	

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 11/AM(25-26-1915)	LOCATION : Near SRM Site Office
SAMPLING PLAN & METHOD NO: As per Reference Method	COORDINATES : NA
SAMPLING DATE : 24/11/2025	SAMPLING DURATION : 24 Hrs
SAMPLING TIME : 15:15:00	SAMPLE COLLECTED BY : Mr. Gulshan Yadav (SkyLab)
ANALYSIS START DATE : 28/11/2025	AMBIENT TEMPERATURE : 20°C To 36°C
ANALYSIS COMPLETE DATE : 28/11/2025	HUMIDITY : 55% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	74.6	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	35.6	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	25.8	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	36.4	90	IS 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	14.8	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.5)	1	Method 472, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.58	3	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


Tejashri Chavan
 Sr Analyst



For SKYLAB ANALYTICAL LABORATORY


Dr. Datta Mahadare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIHPURI PSP Joint Venture
 P. O. Bhihpuri Camp, Karjat, Survey No-1, PO-Bhihpuri Camp I
 Taluka-Karjat | Dist-Raigad | Maharashtra - 410201 | India.
 Maharashtra

REPORT NO : SAL/MSP19/FM01/11/AM(25-26-1916)

REPORT DATE : 28/11/2025

CUSTOMER REF : 5700055863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 11/AM(25-26-1916)

LOCATION : Near JV Admin Office

SAMPLING PLAN & METHOD NO: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 24/11/2025

SAMPLING DURATION : 24 hrs

SAMPLING TIME : 15:50:00

SAMPLE COLLECTED BY : Mr. Gushan Yadav (SkyLab)

ANALYSIS START DATE : 26/11/2025

AMBIENT TEMPERATURE : 20°C To 36°C

ANALYSIS COMPLETE DATE : 28/11/2025

HUMIDITY : 58% To 69%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter: PM10	µg/m ³	80.2	100	IS 5182 (Part 20)
2	Particulate Matter PM 2.5	µg/m ³	30.4	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	35.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	18.6	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.5)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.58	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

F. Tejashri Chavan
 Sr Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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MLM/TC5150230000247677

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 |
India, Maharashtra

REPORT NO : SAL/MSP19/FM05/11/ANC(25-26-1917)

REPORT DATE : 29/11/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 11/ANC(25-26-1917)

SAMPLE COLLECTED BY : Mr. Gajanan Yadav
(Skylab)

SAMPLING PLAN & METHOD NO. : IS 9889

SAMPLE LOCATION : Near Batching Plant

SAMPLING DATE : 24/11/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	48.5	82.9	72.6
07.00 to 08.00	45.5	79.7	61.1
08.00 to 09.00	45.5	96.7	69.3
09.00 to 10.00	50.8	95.2	68.6
10.00 to 11.00	45.1	95.2	60.2
11.00 to 12.00	45.2	83.5	69.3
12.00 to 13.00	49.7	81.9	69.4
13.00 to 14.00	56.6	98.4	86.3
14.00 to 15.00	50.4	74.9	63.9
15.00 to 16.00	43.4	94.7	68.6
16.00 to 17.00	50.5	95.2	63.8
17.00 to 18.00	52.7	71.1	68.6
18.00 to 19.00	48.5	74.8	62.6
19.00 to 20.00	50.5	75.8	69.2
20.00 to 21.00	49.4	98.3	68.3
21.00 to 22.00	52.7	101.9	59.2

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.4	71.7	59.4
23.00 to 00.00	43.4	78.3	59.7
00.00 to 01.00	43.4	74.4	62.4
01.00 to 02.00	40.8	70.1	58.8
02.00 to 03.00	47.4	75.4	57.8
03.00 to 04.00	39.4	69.6	61.5
04.00 to 05.00	43.9	78.6	59.9
05.00 to 06.00	43.4	72.5	59.7

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	43.4	101.9	64.5	55.6	46.5	67.9	66.4
Night Time (22.00 Hrs to 06.00 Hrs)	39.4	78.6	59.8	52.4	42.5		59.9 *

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Nikita

Technical Executive




 Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

1. This report reflects finding only for the above sample(s) as mentioned and only for time and place of monitoring/testing.
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ULR:TCN1802SD00024758F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/S. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp |
 Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 |
 India, Maharashtra

REPORT NO : SAL/MSP10/FM05/11/VANC(25-26-1910)

REPORT DATE : 29/11/2025

CUSTOMER REF : 5700053803

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 11/VANC(25-26-1910)

SAMPLE COLLECTED BY : Mr. Gulshan Yadav
 (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Near SRM Site Office

SAMPLING DATE : 24/11/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	54.6	96.3	70.4
07.00 to 08.00	42.4	71.1	68.8
08.00 to 09.00	45.5	94.7	63.3
09.00 to 10.00	56.6	92.4	65.9
10.00 to 11.00	43.8	83.3	61.9
11.00 to 12.00	52.5	83.1	65.6
12.00 to 13.00	48.8	84.95	66.8
13.00 to 14.00	50.5	90.7	65.4
14.00 to 15.00	49.7	75.5	71.7
15.00 to 16.00	43.14	79.3	71.7
16.00 to 17.00	54.6	75.7	70.4
17.00 to 18.00	56.6	79.3	64.7
18.00 to 19.00	43.4	73.5	59.3
19.00 to 20.00	50.5	74.9	60.5
20.00 to 21.00	52.7	90.9	68.8
21.00 to 22.00	49.5	74.5	60.5

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.8	72.5	61.6
23.00 to 00.00	43.8	74.4	59.4
00.00 to 01.00	45.2	70.5	62.6
01.00 to 02.00	39	76.2	58.4
02.00 to 03.00	43.4	72.3	59.1
03.00 to 04.00	41.3	74.7	59.7
04.00 to 05.00	43.4	73.5	60
05.00 to 06.00	59.7	72.4	59.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (08.00 Hrs to 22.00 Hrs)	42.4	66.3	65.4	54.6	43.5	67.8	66.1
Night Time (22.00 Hrs to 06.00 Hrs)	39.0	75.2	66.5	52.4	41.2		60.0

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:-

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Nikita

Technical Executive




 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

1. This report is valid only for the above sample (limit/condition) and only for time and place of monitoring/testing.
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ULR:TC515025000024759F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp-1
Taluka - Karjat Dist-Raigad | Maharashtra - 410201 |
India, Maharashtra

REPORT NO : SAL/MSP19/FM05/11/ANC(25-26-19) (1)

REPORT DATE : 28/11/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 11/ANC(25-26-19) (9)

SAMPLE COLLECTED BY : Mr. Gulshan Yadav
(SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Near JV Admin Office

SAMPLING DATE : 24/11/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	48.1	71.6	71.1
07.00 to 08.00	52.6	83.8	80.9
08.00 to 09.00	49.7	99.4	86.6
09.00 to 10.00	48	74.4	68.7
10.00 to 11.00	49.6	77.9	69.8
11.00 to 12.00	50.6	79.5	72.2
12.00 to 13.00	62.5	79.4	73.5
13.00 to 14.00	42.4	76.5	73.9
14.00 to 15.00	50.1	74.4	63.9
15.00 to 16.00	54.9	90.7	69.4
16.00 to 17.00	56.4	80.4	72.2
17.00 to 18.00	52.3	96.5	67.7
18.00 to 19.00	45.7	82.2	71.7
19.00 to 20.00	56.4	79	67.9
20.00 to 21.00	48.5	82.4	65.8
21.00 to 22.00	50.1	78.2	60.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	39.0667	72.3	58.7
23.00 to 00.00	43.4	75.2	66.6
00.00 to 01.00	43.8	78.7	58.6
01.00 to 02.00	41.4	71.4	57.8
02.00 to 03.00	46.4	75.2	60.9
03.00 to 04.00	43.7	72.6	62.7
04.00 to 05.00	43.7	72.2	61.6
05.00 to 06.00	40.8	67.2	57.5

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Page 2 of 2

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.4	99.4	62.5	56.5	47.8	69.1	68.8
Night Time (22.00 Hrs to 06.00 Hrs)	39.1	76.7	57.8	51.2	41.2		59.6

ND: Not Detected; NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guideline for Industrial Area.

Date:

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



NIRTA

Technical Executive




Dr. Datta Mandhara

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIYPURI PSP Joint Venture

 Bhiypuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),

 Maharashtra

REPORT NO : SAL/MSP19/FM01/12/AM(25-26-2246)

 REPORT DATE : 03/01/2020

 CUSTOMER REF : 0700053853

 REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-2246)

 SAMPLING PLAN & METHOD NO.: As per reference method

 SAMPLING DATE : 20/12/2025

 SAMPLING TIME : 15:25:00

 ANALYSIS START DATE : 20/12/2025

 ANALYSIS COMPLETE DATE : 01/01/2026

LOCATION : Near Batching Plant

 COORDINATES : NA

 SAMPLING DURATION : 24 HRS

 SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

 AMBIENT TEMPERATURE : 25°C To 36°C

 HUMIDITY : 54% To 84%

Sr.No.	Test Parameters	Unit	Result	Norms	Reference Method
1	Particulate Matter PM10	µg/m ³	80.2	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	44.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	25.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.7	80	IS 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	33.8	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.59	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha

Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



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TEST REPORT

NAME & ADDRESS OF CUSTOMER: M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER), Maharashtra

REPORT NO : GAL/MSP19/FM01/12/AM/25-26-2247

REPORT DATE : 03/01/2025

CUSTOMER REF : 5700053183

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-2247)

SAMPLING PLAN & METHOD NO.: As per reference method

SAMPLING DATE : 26/12/2025

SAMPLING TIME : 15:55:00

ANALYSIS START DATE : 26/12/2025

ANALYSIS COMPLETE DATE : 01/01/2025

LOCATION : Near SRM Site Office

COORDINATES : NA

SAMPLING DURATION : 24 HRS

SAMPLE COLLECTED BY : Mr. Datta Kulkarni (SkyLab)

AMBIENT TEMPERATURE : 25°C To 36°C

HUMIDITY : 54% To 64%


Sr.No.	Test Parameters	Unit	Result	Norms *	Reference Method
1	Particulate Matter PM10	µg/m3	75.8	130	IS 5182 (Part-03)
2	Particulate Matter PM 2.5	µg/m3	30.4	60	IS 5182, (Part- 24)
3	Sulphur Dioxide	µg/m3	28.5	80	IS 5182 (Part-2)
4	Nitrogen Oxides	µg/m3	99.4	80	IS 5182, (Part-6)
5	Ozone	µg/m3	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m3	16.7	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m3	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m3	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m3	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m3	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m3	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m3	0.00	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: Ms. TPL-HCC BHIVPURI P&P Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Tanaka Karjal (LOWER),
 Maharashtra

REPORT NO : BSL/MSP16/FMD1/12/AM/25-26-22(01)

REPORT DATE : 03/01/2025

CUSTOMER REF : 5700059863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-2248)

SAMPLING PLAN & METHOD NO.: As per reference method

SAMPLING DATE : 28/12/2025

SAMPLING TIME : 15:00:00

ANALYSIS START DATE : 29/12/2025

ANALYSIS COMPLETE DATE : 01/01/2026

LOCATION : Near JV Admin Office

COORDINATES : NA

SAMPLING DURATION : 24 HRS

SAMPLE COLLECTED BY : Mr. Datta Konde (SkyLab)

AMBIENT TEMPERATURE : 25°C To 30°C

HUMIDITY : 54% To 64%


Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	84.2	100	IS 5182 (Part-2)
2	Particulate Matter PM 2.5	µg/m ³	41.8	80	IS 5182, (Part - 24)
3	Sulphur Dioxide	µg/m ³	28.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	37.6	80	IS: 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	19.5	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By



 Neha

 Analyst



For SKYLAB ANALYTICAL LABORATORY



 Datta Konde

 (Authorized Signatory)

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U.L.R.TC515026000000051F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP19/FM05/12/ANC(25-26-2252)

REPORT DATE : 03/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-2252)

SAMPLE COLLECTED BY : Mr. Datta Korte (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9909

SAMPLE LOCATION : Near Balching Plant

SAMPLING DATE : 26/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	54.5	79.2	72.3
07.00 to 08.00	57.5	82.2	59.8
08.00 to 09.00	54.5	72.7	60.2
09.00 to 10.00	46.1	69.6	74.5
10.00 to 11.00	58.7	72.4	73.7
11.00 to 12.00	42.4	72.5	72.3
12.00 to 13.00	49.5	72.9	72.5
13.00 to 14.00	51.7	90.9	68.8
14.00 to 15.00	48.5	72.5	72.5
15.00 to 16.00	48.1	70.6	58.1
16.00 to 17.00	51.6	77.8	69.9
17.00 to 18.00	48.7	99.4	64.6
18.00 to 19.00	47	72.4	68.7
19.00 to 20.00	48.6	75.9	64.6
20.00 to 21.00	55.6	79.5	71.2
21.00 to 22.00	51.5	79.4	73.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	46.7	80.2	61.6
23.00 to 00.00	54.4	78.2	56.9
00.00 to 01.00	48.5	66.4	55.8
01.00 to 02.00	46.5	64.4	58.8
02.00 to 03.00	46.8	73.9	58.8
03.00 to 04.00	51.5	78.9	55.8
04.00 to 05.00	46.5	73.4	62.2
05.00 to 06.00	39.9	64.9	59.1

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Page 1 of 2

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L_{eq}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.4	99.4	67.8	60.4	50.1	68.6	68.6
Night Time (22.00 Hrs to 06.00 Hrs)	39.9	80.2	60.1	51.6	42.3		58.5

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (L_{eqdB} (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

Nikita

Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandharkare

(Authorized Signatory)

END OF REPORT

1. This report reports finding only for the above sample identification and only for the work done at the time of monitoring.
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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture

 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat

 (LOWER), Maharashtra

REPORT NO : SAL/MSP111/PM05/12/ANC(25-26-2253)

REPORT DATE : 03/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-2253)

SAMPLE COLLECTED BY : Mr. Datta Konde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9889

SAMPLE LOCATION : Near SRM Site Office

SAMPLING DATE : 26/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	49.6	79.4	72.3
07.00 to 08.00	48.4	82.8	70.3
08.00 to 09.00	49.1	75.1	67.1
09.00 to 10.00	55.1	82.9	62.9
10.00 to 11.00	55.2	92.2	70.3
11.00 to 12.00	43.9	82.5	67.5
12.00 to 13.00	51.7	79.3	70.3
13.00 to 14.00	48.8	82.1	69.3
14.00 to 15.00	42.1	99.1	72.9
15.00 to 16.00	44.5	75.3	62.6
16.00 to 17.00	44.4	90.2	68.3
17.00 to 18.00	55.4	79	65.2
18.00 to 19.00	47.5	95.4	69.4
19.00 to 20.00	44.5	73.3	67.9
20.00 to 21.00	44.2	80.9	69.8
21.00 to 22.00	48.7	90.7	70.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	55.6	85.2	63.5
23.00 to 00.00	47.5	82.6	64.6
00.00 to 01.00	49.1	81.7	63.4
01.00 to 02.00	40.8	72.6	58.8
02.00 to 03.00	49.3	72.6	50.5
03.00 to 04.00	59.5	73.9	58.6
04.00 to 05.00	44.6	68.2	60.3
05.00 to 06.00	42.4	73.2	59.5

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.1	99.1	68.6	60.1	51.4	70.9	68.6
Night Time (22.00 Hrs to 06.00 Hrs)	40.8	85.2	63.5	56.8	45.2		63.5

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By



Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-NCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP18/FMD5712/ANG(25-26-2254)

REPORT DATE : 08/12/2025

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANG(25-26-2254)

SAMPLE COLLECTED BY : Mr. Datta Konde (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9380

SAMPLE LOCATION : Near JV Admin Office

SAMPLING DATE : 20/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	49.1	62.2	59.9
07.00 to 08.00	51.2	71.6	59.1
08.00 to 09.00	54.4	73.9	66.6
09.00 to 10.00	49.5	72.2	72.2
10.00 to 11.00	44.1	72.8	69.2
11.00 to 12.00	54.5	72.8	68.7
12.00 to 13.00	44.2	95.5	69.3
13.00 to 14.00	51.3	73.3	70.6
14.00 to 15.00	48.5	77.8	72.8
15.00 to 16.00	55.6	82.9	68.5
16.00 to 17.00	49.5	82.2	60.6
17.00 to 18.00	49.4	82.2	70.3
18.00 to 19.00	47.8	79.7	69.9
19.00 to 20.00	43.5	80.9	74.5
20.00 to 21.00	43.5	80.9	65.7
21.00 to 22.00	51.5	79.9	71.7

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	47.8	70.7	69.6
23.00 to 00.00	39.5	76.3	60.4
00.00 to 01.00	46.4	75.3	59.5
01.00 to 02.00	51.5	74.9	60.8
02.00 to 03.00	40.8	85.3	59.9
03.00 to 04.00	48.2	68.9	57.2
04.00 to 05.00	51.5	61.1	55.5
05.00 to 06.00	48.8	74.9	58.8

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dBi(A)
Day Time (06.00 Hrs to 22.00 Hrs)	43.5	55.5	52.5	51.4	41.5	69.7	67.3
Night Time (22.00 Hrs to 06.00 Hrs)	39.5	55.5	50.4	50.2	38.2		60.3

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By


 Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:	REPORT NO : BAL/MSR1WFMD1/12/AM(25-26-0809)
M/s. TPL-HCC BHIWPURI PSP Joint Venture	REPORT DATE : 15/12/2025
P O Bhiwari Camp, Karjat, Survey No-1, PO-Bhiwari Camp 1	CUSTOMER REF : 5700053083
Taluka- Karjat Dist-Rajgad Maharashtra - 410201 India,	REF DATE : 17/11/2025
Maharashtra	

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-0809)	LOCATION : Office Area
SAMPLING PLAN & METHOD NO.: As per reference method	COORDINATES : NA
SAMPLING DATE : 11/12/2025	SAMPLING DURATION : 24 HRS
SAMPLING TIME : 11:00:00	SAMPLE COLLECTED BY : Mr. Gauram Mhagankar (SkyLab)
ANALYSIS START DATE : 13/12/2025	AMBIENT TEMPERATURE : 26°C To 36°C
ANALYSIS COMPLETE DATE : 15/12/2025	HUMIDITY : 54% To 64%


Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	79.5	100	IS 5182 (Part-20)
2	Particulate Matter PM 2.5	µg/m ³	42.5	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	28.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	37.5	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	15.9	800	Method 461, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL (<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL (<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhate
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 | India,
 Maharashtra

REPORT NO : SAL/MSP19/FM01/12/AM(25-26-0810)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-0810)

LOCATION : Batching Plant

SAMPLING PLAN & METHOD NO: As per reference method

COORDINATES : NA

SAMPLING DATE : 11/12/2025

SAMPLING DURATION : 24 HRS

SAMPLING TIME : 12:00:00

SAMPLE COLLECTED BY : Mr. Gautam Mhapankar (Skylab)

ANALYSIS START DATE : 13/12/2025

AMBIENT TEMPERATURE : 26°C To 36°C

ANALYSIS COMPLETE DATE : 15/12/2025

HUMIDITY : 54% To 64%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	80.5	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	40.1	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.2	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	BDL(<0.1)	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare
Dr. Datta Mandhare
(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 |
 India, Maharashtra

REPORT NO : SAL/MSP19/FM05/12/ANC(25-26-0811)

REPORT DATE : 16/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-0811)

SAMPLE COLLECTED BY : Mr. Gautam Mhapankar (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9909

SAMPLE LOCATION : Office Area

SAMPLING DATE : 11/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	56.0	75.7	67.7
07.00 to 08.00	48.5	95.9	60.1
08.00 to 09.00	44.4	76.9	67.6
09.00 to 10.00	56.9	82.2	73.8
10.00 to 11.00	47.5	74.7	60.1
11.00 to 12.00	43.5	72.1	60.5
12.00 to 13.00	47.8	74.2	73.8
13.00 to 14.00	42.3	97.8	72.7
14.00 to 15.00	44.9	71.5	59.3
15.00 to 16.00	42.4	98.2	66.7
16.00 to 17.00	47.5	79.7	67.6
17.00 to 18.00	51.5	74.9	70.6
18.00 to 19.00	43.4	81.8	67.6
19.00 to 20.00	56.5	79.9	83.3
20.00 to 21.00	47.7	74.8	65.3
21.00 to 22.00	52.5	78.2	59.5

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	42.4	70.2	60.9
23.00 to 00.00	40.4	77.3	58.8
00.00 to 01.00	47.7	72.2	60.9
01.00 to 02.00	42.3	72.3	61.1
02.00 to 03.00	40.4	74.7	59.5
03.00 to 04.00	47.4	70.2	61.1
04.00 to 05.00	43.8	71.2	58.8
05.00 to 06.00	47.4	73.4	61.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40




Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.0	98.2	63.5	51.4	43.5	67.7	65.9
Night Time (22.00 Hrs to 06.00 Hrs)	40.4	75.3	57.4	48.7	40.2		60.0

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



 F Nikita

 Technical Executive





 Dr. Datta Mandhare

 (Authorized Signatory)

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ULR:TC515025000026164F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 |
 India, Maharashtra

REPORT NO : SAL/MSP19/FM05/12/ANC(25-26-0812)

REPORT DATE : 16/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-0812)

SAMPLE COLLECTED BY : Mr. Gautam Mhapankar
 (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Batching Plant

SAMPLING DATE : 11/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	43.2	95.9	67.6
07.00 to 08.00	49.5	76.4	68.3
08.00 to 09.00	49.5	72.2	60.8
09.00 to 10.00	42.2	82.4	69.6
10.00 to 11.00	47.6	83.9	70.6
11.00 to 12.00	42.7	92.2	65.6
12.00 to 13.00	43.8	83.3	61.8
13.00 to 14.00	51.8	85.4	66.2
14.00 to 15.00	44.4	97.1	69.8
15.00 to 16.00	51.5	74.8	70.8
16.00 to 17.00	56.9	74.7	66.9
17.00 to 18.00	48.2	102.9	64.9
18.00 to 19.00	52.5	79.9	66.1
19.00 to 20.00	52.6	76.3	61.9
20.00 to 21.00	42.4	79.7	67.5
21.00 to 22.00	47.6	78.8	69.9

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	40.4	73.4	59.5
23.00 to 00.00	44.4	71.2	60.9
00.00 to 01.00	47.4	73.9	59.7
01.00 to 02.00	42.4	73.8	56.3
02.00 to 03.00	47.4	65.5	62.6
03.00 to 04.00	40.9	69.5	63.9
04.00 to 05.00	47.8	73.4	62.2
05.00 to 06.00	42.3	68.6	61.2

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Low	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.0	102.9	59.8	51.2	44.5	68.6	66.1
Night Time (22.00 Hrs to 06.00 Hrs)	40.4	73.9	56.2	43.5	39.8		61.3

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



 F Nikita

 Technical Executive





 Dr. Datta Mundhare

 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIYPURI PSP Joint Venture
 Bhiypuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/12/AM/25-26-2283

REPORT DATE : 03/01/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM/25-26-2283

LOCATION : Office Area

SAMPLING PLAN & METHOD NO.: SAL/MSP07/SOP/VIB
 M/07

COORDINATES : NA

SAMPLING DATE : 26/12/2025

SAMPLING DURATION : 24 Hrs.

SAMPLING TIME : 11:00:00

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

ANALYSIS START DATE : 29/12/2025

AMBIENT TEMPERATURE : 28°C To 35°C

ANALYSIS COMPLETE DATE : 01/01/2026

HUMIDITY : 44% To 58%

Sr.No.	Test Parameters	Unit	Result	Norms	Reference Method
1	Particulate Matter PM10	µg/m ³	80.3	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	42.8	60	IS 5182 (Part-24)
3	Sulphur Dioxide	µg/m ³	29.1	80	IS 5182 (Part-2)
4	Nitrogen Oxides	µg/m ³	37.5	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	100	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	19.4	800	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	8	IS 5182 (Part-11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part-12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	5	Method 302, Methods of Air Sampling and Analysis 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	25	Method 827, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.67	2	IS 5182 (Part-10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Manohare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO. : SALMSP19/FM01/TZ/AM/25-26-2284

REPORT DATE : 03/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM/25-26-2284

LOCATION : Ducting Plant

SAMPLING PLAN & METHOD NO.: SALMSP07/SOPVIB
 M01

COORDINATES : NA

SAMPLING DATE : 20/12/2025

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 11:15:00

SAMPLE COLLECTED BY : Mr. Datta Konde (SkyLab)

ANALYSIS START DATE : 20/12/2025

AMBIENT TEMPERATURE : 28°C To 35°C

ANALYSIS COMPLETE DATE : 01/01/2026

HUMIDITY : 44% To 56%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	82.5	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	42.8	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.3	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	40.4	80	IS 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.95	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per N/AQ Standards.

Note :

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta M. Jadhav
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal
 (UPPER) Maharashtra

REPORT NO : SAL/MSP10/FM05/12/ANC(25-26-2280)

REPORT DATE : 03/01/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-2280)

SAMPLE COLLECTED BY: Mr Datta Forde (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9969

SAMPLE LOCATION : Building Plant

SAMPLING DATE : 26/12/2025

COORDINATES : N/A

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	50.25	92.4	73.2
07.00 to 08.00	44.8	79.6	73.8
08.00 to 09.00	53.6	91.1	70.2
09.00 to 10.00	58.9	77.8	72.4
10.00 to 11.00	47.1	82.2	72.6
11.00 to 12.00	48.2	77.9	62.8
12.00 to 13.00	47.2	92.2	64.6
13.00 to 14.00	42.8	72.3	60.2
14.00 to 15.00	47.4	86.2	65.8
15.00 to 16.00	42.5	72.8	59.7
16.00 to 17.00	55.5	90.2	72.8
17.00 to 18.00	54.5	79.2	74.2
18.00 to 19.00	46.4	91.1	72.2
19.00 to 20.00	44.5	74.4	60.8
20.00 to 21.00	44.2	79.9	71.4
21.00 to 22.00	48.7	86.5	60.2

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	53.6	75.3	62.9
23.00 to 00.00	47	74.8	60.8
00.00 to 01.00	40.5	81.3	68.6
01.00 to 02.00	47.4	78.2	59.6
02.00 to 03.00	47.4	83.4	59.2
03.00 to 04.00	48.6	79.1	67.2
04.00 to 05.00	47.5	88.4	60.6
05.00 to 06.00	49.4	75.9	62.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.5	92.4	83.5	52.4	41.7	69.2	67.5
Night Time (22.00 Hrs to 06.00 Hrs)	40.5	83.4	59.8	48.7	40.2		61.4

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By


 Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Dalta Mandhare

(Authorized Signatory)

END OF REPORT

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ULR:TC515026000000091F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP/19/FM05/12/ANG(25-26-2285)

REPORT DATE : 03/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANG(25-26-2285)

SAMPLE COLLECTED BY : Mr Datta Korda (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Office Area

SAMPLING DATE : 26/12/2025

COORDINATES : (A)

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	57.8	72.4	59.1
07.00 to 08.00	44.3	71.3	65.6
08.00 to 09.00	48.6	72.3	72.3
09.00 to 10.00	51.8	98.5	59.9
10.00 to 11.00	44.5	79.7	62.4
11.00 to 12.00	48.5	78.8	59.8
12.00 to 13.00	53.4	73.4	68.5
13.00 to 14.00	54.5	99.8	59.8
14.00 to 15.00	55.7	86.9	65.7
15.00 to 16.00	50.5	73.4	71.4
16.00 to 17.00	43.7	82.5	58.9
17.00 to 18.00	42.4	74.3	71.4
18.00 to 19.00	46.2	77.2	64.9
19.00 to 20.00	48.8	93.6	71.6
20.00 to 21.00	46.5	70.6	70.5
21.00 to 22.00	51.6	82.2	58.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	54.9	68.4	53.3
23.00 to 00.00	50.5	74.4	62.4
00.00 to 01.00	44.7	73.1	53.5
01.00 to 02.00	40.5	74.4	48.3
02.00 to 03.00	50.2	69.2	61.6
03.00 to 04.00	53.4	68.4	62.4
04.00 to 05.00	46	78.8	62.2
05.00 to 06.00	46.5	71.9	48.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{0N}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.4	99.8	64.5	54.7	44.5	65.2	64.4
Night Time (22.00 Hrs to 06.00 Hrs)	40.5	78.8	62.5	52.1	42.5		66.5

ND: (Not Detected), NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



 Nikita

Technical Executive



END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2481)
 REPORT DATE : 15/01/2026
 CUSTOMER REF : 5700053863
 REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2481) LOCATION : Mr. Batching Plant
 SAMPLING PLAN & METHOD NO: As per Reference Method COORDINATES : NA
 SAMPLING DATE : 05/01/2026 SAMPLING DURATION : 24 Hrs
 SAMPLING TIME : 12:10:00 SAMPLE COLLECTED BY : Mr. Datta Korde (Skylab)
 ANALYSIS START DATE : 07/01/2026 AMBIENT TEMPERATURE : 25°C To 37°C
 ANALYSIS COMPLETE DATE : 09/01/2026 HUMIDITY : 49% To 80%

Sr. No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	89.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.7	80	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	29.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	44.3	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	23.6	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 672, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	8	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(0.5)	20	Method 622, Methods of Air Sampling and Analysis, 3rd Edition
12	Cadmium Nitrate	ng/m ³	0.57	3	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note:

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: M/s. TPL-HGG BHIWURI PSP Joint Venture
 Bhivpur Gamga, Karjat, Gurvey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM/01/02/AM/25-26-24921
REPORT DATE : 15/01/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM/25-26-24921
SAMPLING PLAN & METHOD NO. : As per Reference Method
SAMPLING DATE : 05/01/2026
SAMPLING TIME : 13.05.00
ANALYSIS START DATE : 07/01/2026
ANALYSIS COMPLETE DATE : 09/01/2026

LOCATION : Nr. SRM Site Office
COORDINATES : NA
SAMPLING DURATION : 24 Hrs
SAMPLE COLLECTED BY : Mr Datta Korde (Skylab)
AMBIENT TEMPERATURE : 25°C To 37°C
HUMIDITY : 40% To 60%

Sl.No	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	88.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	48.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	31.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	43.6	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Arsenic	µg/m ³	22.1	600	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.53	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note:

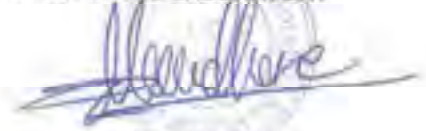
Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2493)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2493)

LOCATION : Nr. JV Admin Office

SAMPLING PLAN & METHOD NO: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 05/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 14:30:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 07/01/2026

AMBIENT TEMPERATURE : 25°C To 37°C

ANALYSIS COMPLETE DATE : 09/01/2026

HUMIDITY : 49% To 60%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	43.1	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	30.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.1	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.55	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:-

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO - : SAL/MSP10/FMD1/02/AM/25-26-0491

REPORT DATE : 15/01/2020

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-0491)

LOCATION : Nr. Balching Puri

SAMPLING PLAN & METHOD NO: As per Referencal Method

COORDINATES : NA

SAMPLING DATE : 05/01/2020

SAMPLING DURATION : 24 hrs

SAMPLING TIME : 12:10:00

SAMPLE COLLECTED BY : Mr. Jatta Konde (SkyLab)

ANALYSIS START DATE : 07/01/2020

AMBIENT TEMPERATURE : 25°C To 37°C

ANALYSIS COMPLETE DATE : 09/01/2020

HUMIDITY : 49% To 60%

Sr.No	Test Parameters	Unit	Resul	Norms *	Reference Method
1	Particulate Matter PM10	µg/m ³	88.4	100	IS 5182 (Part-2)
2	Particulate Matter PM 2.5	µg/m ³	46.7	60	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	29.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	44.3	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL (<20)	100	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	23.8	400	Method 405, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL (<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL (<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL (<0.1)	1	Method 802, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL (<1)	8	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL (<0.1)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.57	3	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By



Neha
Analyst



20-04-2019

For SKYLAB ANALYTICAL LABORATORY



Dr. Jatta Mandhare
(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: **REPORT NO :** SAL/MSP19/FM01R02/AM/25-26-04821
Ms. TPL-HCC BHIVPURI PSP Joint Venture
Bhivpur Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
Maharashtra
REPORT DATE : 15/01/2026
CUSTOMER REF : 5700053883
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO : 02/AM(25-26-0482)
SAMPLING PLAN & METHOD NO: As per Reference Method
LOCATION: Nr. SRM Site Office
COORDINATES: WA
SAMPLING DATE : 05/01/2026
SAMPLING DURATION : 24 Hrs
SAMPLING TIME : 13:05:00
SAMPLE COLLECTED BY : Mr Datta Korde (SkyLab)
ANALYSIS START DATE : 07/01/2026
AMBIENT TEMPERATURE : 25°C To 37°C
ANALYSIS COMPLETE DATE : 08/01/2026
HUMIDITY : 49% To 60%

Sr.No.	Test Parameters	Unit	Result	Norms *	Reference Method
1	Particulate Matter TSP10	µg/m ³	98.5	300	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	31.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	43.6	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Aeromonas	µg/m ³	32.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	µg/m ³	BDL(<1)	5	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.53	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha

Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Datta Korde

Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:	REPORT NO : SAL/MSP19/FM01/02/AM(25-26-0493)
M/s. TPL-HCC BHIVPURI PSP Joint Venture	REPORT DATE : 15/01/2026
Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER), Maharashtra	CUSTOMER REF : 5700053863
	REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-0493)	LOCATION : Nr. JV Admin Office
SAMPLING PLAN & METHOD NO. : As per Reference Method	COORDINATES : NA
SAMPLING DATE : 05/01/2026	SAMPLING DURATION : 24 Hrs
SAMPLING TIME : 14:30:00	SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 07/01/2026	AMBIENT TEMPERATURE : 25°C To 37°C
ANALYSIS COMPLETE DATE : 09/01/2026	HUMIDITY : 49% To 60%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	43.1	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	30.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.1	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.55	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-0452)

REPORT DATE : 16/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-0452)

LOCATION : Batching Plant

SAMPLING PLAN & METHOD NO: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 09/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 11:21:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 12/01/2026

AMBIENT TEMPERATURE : 27°C To 36°C

ANALYSIS COMPLETE DATE : 14/01/2026

HUMIDITY : 59% To 62%

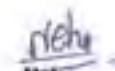
Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	81.2	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	41.7	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.3	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.60	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: M/s. TPL-HCC BHIHPURI PSP Joint Venture
 Bhihpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-0453)
REPORT DATE : 16/01/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-0453) **LOCATION :** Office Area
SAMPLING PLAN & METHOD NO: As per Reference Method **COORDINATES :** NA
SAMPLING DATE : 09/01/2026 **SAMPLING DURATION :** 24 Hrs
SAMPLING TIME : 11:49:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 12/01/2026 **AMBIENT TEMPERATURE :** 27°C To 36°C
ANALYSIS COMPLETE DATE : 14/01/2026 **HUMIDITY :** 59% To 62%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m3	78.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m3	38.3	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m3	25.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m3	40.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m3	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m3	44.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m3	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m3	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m3	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m3	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m3	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m3	0.54	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

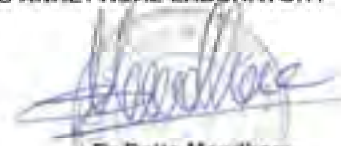
Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIYPURI PSP Joint Venture
 Bhiypuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/01/ANC(25-26-0454)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-0454)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Batching Plant

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	53.6	77.9	72.8
07.00 to 08.00	49.2	83.5	69.8
08.00 to 09.00	51.1	86.5	62.1
09.00 to 10.00	51.7	72.8	68.6
10.00 to 11.00	48.4	70.1	69.6
11.00 to 12.00	48.4	71.2	68.1
12.00 to 13.00	54.5	72.4	69.3
13.00 to 14.00	55.5	72.9	72.8
14.00 to 15.00	47.6	69.3	70.9
15.00 to 16.00	45.5	71.2	70.8
16.00 to 17.00	47.4	72.9	69.2
17.00 to 18.00	49.5	72.8	72.6
18.00 to 19.00	48.4	79.5	70.4
19.00 to 20.00	46.9	85.3	70.3
20.00 to 21.00	48.8	72.4	72.8
21.00 to 22.00	53.3	86.6	84.9

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	49.2	68.5	56.5
23.00 to 00.00	50.2	73.7	58.2
00.00 to 01.00	51.2	71.2	62.8
01.00 to 02.00	56.7	81.3	61.8
02.00 to 03.00	49.6	69.6	54.8
03.00 to 04.00	51.6	79.8	53.5
04.00 to 05.00	50.8	73.7	55.4
05.00 to 06.00	39.2	73.4	61.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	Leq dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	45.5	86.6	65.4	56.4	44.5	69.2	69.7
Night Time (22.00 Hrs to 06.00 Hrs)	39.2	81.3	60.2	51.2	41.2		58.1

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise Level (Leq db (A)) is exceeding the limits specified as per CPCB guidelines for Residential Area.

Note :

Analyzed By



Nikita

Technical Executive



27-9-1980

For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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ULR:TC51502600000940F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/01/ANC(25-26-0455)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-0455)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9089

SAMPLE LOCATION : Office Area

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	55.5	72.4	63.2
07.00 to 08.00	47.4	73.8	70.2
08.00 to 09.00	53.5	70.1	68.6
09.00 to 10.00	49.5	72.9	68.5
10.00 to 11.00	48.4	79.7	64.5
11.00 to 12.00	47.4	79.9	70.9
12.00 to 13.00	56.5	72.4	72.5
13.00 to 14.00	45.5	71.2	72.9
14.00 to 15.00	47.4	72.9	72.7
15.00 to 16.00	49.5	72.8	65.3
16.00 to 17.00	48.4	79.5	71.7
17.00 to 18.00	46.9	90.5	61.9
18.00 to 19.00	48.8	72.4	67.2
19.00 to 20.00	53.3	86.6	71.2
20.00 to 21.00	47	97.2	71.2
21.00 to 22.00	51.2	71.2	67.7

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	56.7	81.3	61.9
23.00 to 00.00	49.6	69.6	57.2
00.00 to 01.00	50.4	79.8	53.8
01.00 to 02.00	50.8	73.7	55.8
02.00 to 03.00	48.4	73.4	57.9
03.00 to 04.00	56.7	84.8	61.7
04.00 to 05.00	49.8	68.5	59.7
05.00 to 06.00	43.8	81.2	58.1

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Page 1 of 2

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	45.5	97.2	64.7	55.4	43.5	68.5	68.8
Night Time (22.00 Hrs to 06.00 Hrs)	43.8	84.8	57.8	50.1	41.2		58.2

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise Level (Leq db (A)) is exceeding the limits specified as per CPCB guidelines for Residential Area.

Note :

Analyzed By



Nikita

Technical Executive



PL-5100

For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-0444)

REPORT DATE : 16/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-0444)

LOCATION : Near Batching Plant

SAMPLING PLAN & METHOD NO.: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 09/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 16:18:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 12/01/2026

AMBIENT TEMPERATURE : 24°C To 35°C

ANALYSIS COMPLETE DATE : 14/01/2026

HUMIDITY : 55% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	80.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	40.1	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.6	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	40.1	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.7	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	5	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.58	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-0445)

REPORT DATE : 16/01/2026

CUSTOMER REF : 5700053653

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-0445)

LOCATION : Nr. SRM Site Office

SAMPLING PLAN & METHOD NO.: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 09/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 16:25:00

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

ANALYSIS START DATE : 12/01/2026

AMBIENT TEMPERATURE : 24°C To 35°C

ANALYSIS COMPLETE DATE : 14/01/2026

HUMIDITY : 55% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	75.8	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	36.6	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	37.4	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	15.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.00	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI P9P Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra.

REPORT NO : SAL/MSPT/9/FM01/01/AM(25-26-0446)
 REPORT DATE : 18/01/2026
 CUSTOMER REF : 5700053063
 REF DATE : 17/11/2025

SAMPLE REGISTRATION NO. : 01/AM(25-26-0446)
SAMPLING PLAN & METHOD NO. : As per Reference Method
SAMPLING DATE : 08/01/2026
SAMPLING TIME : 10:35:00
ANALYSIS START DATE : 12/01/2026
ANALYSIS COMPLETE DATE : 14/01/2026

SAMPLE TYPE: Ambient Air
LOCATION : Nn JV Admin Office
COORDINATES : NA
SAMPLING DURATION : 24 Hrs
SAMPLE COLLECTED BY : Mr Datta Mandhare (SkyLab)
AMBIENT TEMPERATURE : 24°C To 36°C
HUMIDITY : 55% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	84.0	100	IS 5182 (Part 23)
2	Particulate Matter PM 2.5	µg/m ³	40.7	90	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	27.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	26.8	80	IS 5182 (Part 6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	18.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.60	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

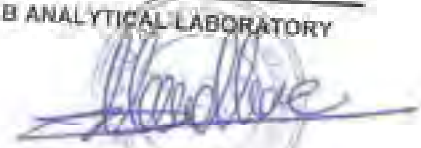
Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SÁLMSP19/FM05/01/ANC(25-26-0447)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053603

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-0447)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9889

SAMPLE LOCATION : Near Batching Plant

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	47.4	81.4	68.2
07.00 to 08.00	54.2	71.6	65.6
08.00 to 09.00	56.5	90.2	72.3
09.00 to 10.00	47.4	77	65.9
10.00 to 11.00	48.5	95.4	68.9
11.00 to 12.00	58.9	75.2	71
12.00 to 13.00	46.9	81.9	68.9
13.00 to 14.00	50.7	89.7	69.3
14.00 to 15.00	47.7	75.1	71.3
15.00 to 16.00	46.4	86.4	58.9
16.00 to 17.00	54.7	75.1	72.5
17.00 to 18.00	47.5	72.4	72.8
18.00 to 19.00	47.2	75.7	65.6
19.00 to 20.00	42.6	86.4	70.3
20.00 to 21.00	47.5	79.3	70.3
21.00 to 22.00	47.4	101.7	69.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	53.9	75.1	59.4
23.00 to 00.00	41.3	73.1	62.2
00.00 to 01.00	44.3	75.2	60.3
01.00 to 02.00	41.8	70.9	63.6
02.00 to 03.00	43.7	67.9	63.6
03.00 to 04.00	59.4	69.1	62.6
04.00 to 05.00	59.2	67.5	59.9
05.00 to 06.00	41.4	72.4	63.6

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40


 13/1/2026

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.5	101.7	56.0	51.4	42.1	70.1	58.0
Night Time (22.00 Hrs to 06.00 Hrs)	41.5	75.2	50.4	46.5	39.8		61.0

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By


 Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Ms. TRL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP/9/FM05/01/ANG(25-26-0446)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053003

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANG(25-26-0446)

SAMPLE COLLECTED BY : Mr. Dajila Konde (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Mr. SRM Site Office

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	47.2	87.7	68.4
07.00 to 08.00	43.2	89.2	70.6
08.00 to 09.00	50.5	89.8	72.9
09.00 to 10.00	48.5	95.9	68.6
10.00 to 11.00	48.7	72.4	65.7
11.00 to 12.00	43.1	88.4	72.3
12.00 to 13.00	46.3	83.9	70.2
13.00 to 14.00	46.8	75.9	68.6
14.00 to 15.00	47.8	75.2	70.7
15.00 to 16.00	46.8	79.7	65.6
16.00 to 17.00	47.2	81.4	72.3
17.00 to 18.00	51.5	77.3	65.8
18.00 to 19.00	47.4	81.9	72.2
19.00 to 20.00	43.8	77.4	64.9
20.00 to 21.00	47.1	90.6	65.8
21.00 to 22.00	42.6	72.1	69.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	46.8	70.2	59.2
23.00 to 00.00	43.3	70.9	63.6
00.00 to 01.00	42.6	73.1	60.5
01.00 to 02.00	41.4	72.7	59.5
02.00 to 03.00	41.4	69.7	58.7
03.00 to 04.00	41.4	73.4	63.8
04.00 to 05.00	46.8	75.1	56.6
05.00 to 06.00	41.4	69.3	63.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L ₉₀	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.0	95.9	63.5	52.4	42.5	89.8	89.8
Night Time (22.00 Hrs to 06.00 Hrs)	47.4	75.1	52.4	43.5	37.8		80.8

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

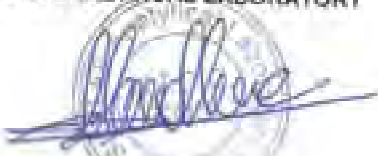


 Nikita

 Technical Executive



For SKYLAB ANALYTICAL LABORATORY



 Dr. Datta Mandhare

 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karaj, Survey No-1, Taluka Karaj
 (LOWER), Maharashtra

REPORT NO : GAL/MBP19/FM05/01VANC(25-26-0440)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/VANC(25-26-0440)

SAMPLE COLLECTED BY : Mr.Datta Konde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr JV Admin Office

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	51.2	82.2	59.2
07.00 to 08.00	46.7	77.1	72.5
08.00 to 09.00	54.5	77.3	69.3
09.00 to 10.00	48.8	81.9	58.9
10.00 to 11.00	47.6	83.8	71.3
11.00 to 12.00	54.4	76.7	64.3
12.00 to 13.00	54.4	71.6	65.6
13.00 to 14.00	48.2	72.3	64.5
14.00 to 15.00	48.4	75	64.3
15.00 to 16.00	47.6	77.3	67.7
16.00 to 17.00	51.4	81.6	68.2
17.00 to 18.00	52.2	83.8	68.9
18.00 to 19.00	49.3	86.1	68.9
19.00 to 20.00	47.6	79.2	71.3
20.00 to 21.00	56.5	78.8	72.5
21.00 to 22.00	52.2	101.1	69.4

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	46.8	73.1	62.2
23.00 to 00.00	44.3	75.2	60.3
00.00 to 01.00	41.2	76.8	62.6
01.00 to 02.00	43.7	67.9	63.6
02.00 to 03.00	46.4	67.4	61.6
03.00 to 04.00	58.4	75.4	59.3
04.00 to 05.00	41.7	76.7	62.9
05.00 to 06.00	43.9	68.3	60.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40





Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Low	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	48.0	101.1	65.7	56.4	45.8	68.5	67.3
Night Time (22.00 Hrs to 06.00 Hrs)	41.2	76.0	60.4	51.4	40.2		61.6

ND: Not Detected, NS: Not Specified

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By


 Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIYPURI PSP Joint Venture
 Bhiypuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : SALMSPT16T/M01/02/AM(25-26-2494)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5706050863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM/25-26-2494

SAMPLING PLAN & METHOD NO.: A6 Per Reference Method

LOCATION : No. Bidding Plant

COORDINATES : NA

SAMPLING DATE : 12/01/2026

SAMPLING TIME : 11:40:00

ANALYSIS START DATE : 14/01/2026

ANALYSIS COMPLETE DATE : 16/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr Datta Konde (SkyLab)

AMBIENT TEMPERATURE : 27°C To 38°C

HUMIDITY : 54% To 66%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	86.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	48.1	60	IS 5182 (Part-24)
3	Sulphur Dioxide	µg/m ³	26.3	80	IS 5182 (Part-2)
4	Nitrogen Oxides	µg/m ³	46.2	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	23.7	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	5	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.61	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : SAL/MSP18/FMGT/02/AM(25-26-2495)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5700053963

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2495)

SAMPLING PLAN & METHOD NO. : As Per Reference Method

SAMPLING DATE : 12/01/2026

SAMPLING TIME : 12:00:00

ANALYSIS START DATE : 14/01/2026

ANALYSIS COMPLETE DATE : 16/01/2026

LOCATION : Nr. SRM Site Office

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

AMBIENT TEMPERATURE : 27°C To 38°C

HUMIDITY : 54% To 66%

Sr.No.	Test Parameters	Unit	Result	Norms	Reference Method
1	Particulate Matter PM10	µg/m ³	88.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	43.9	60	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	31.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	26.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	8	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरI PSP Joint Venture
 Bhiwपुरi Camp, Karjal, Survey No-1, Taluka-Karjal (LOWER)
 Maharashtra

REPORT NO : SAL/MSP19/FMD1/02/AM(25-26-2496)

REPORT DATE : 01/01/2026

CUSTOMER REF : 570003883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2496)

LOCATION : N. JY Admin Office

SAMPLING PLAN & METHOD NO. : As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 12/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 14:00:00

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

ANALYSIS-START DATE : 14/01/2026

AMBIENT TEMPERATURE : 27°C To 28°C

ANALYSIS COMPLETE DATE : 16/01/2026

HUMIDITY : 54% To 66%

Sr.No.	Test Parameters	Unit	Result	Norms [®]	Reference Method
1	Particulate Matter PM10	µg/m ³	89.5	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.7	60	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	33.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	43.6	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.6	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.58	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Menbhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: **REPORT NO :** SAL/MSP19/FM01/01/AM(25-28-1028)
 M/s. TPL-HCC BHIWपुरI PSP Joint Venture
 Bhiwपुरi Camp, Karjal, Survey No-1, Taluka Karjal (UPPEB),
 Maharashtra. **REPORT DATE :** 22/01/2025
CUSTOMER REF : 5700053803
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-28-1028) **LOCATION :** Office Area
SAMPLING PLAN & METHOD NO.: As Per Reference Method **COORDINATES :** NA
SAMPLING DATE : 16/01/2025 **SAMPLING DURATION :** 24 Hrs
SAMPLING TIME : 11:45:00 **SAMPLE COLLECTED BY :** Mr. Delta Karde (SkyLab)
ANALYSIS START DATE : 18/01/2025 **AMBIENT TEMPERATURE :** 27°C To 35°C
ANALYSIS COMPLETE DATE : 21/01/2025 **HUMIDITY :** 55% To 67%


Sr.No.	Test Parameters	Unit	Result	Norms *	Reference Method
1	Particulate Matter PM10	µg/m ³	85.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	44.1	60	IS 5182, (Part -24)
3	Sulphur Dioxide	µg/m ³	29.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	38.5	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	20.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.69	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI P&P Joint Venture
 Bhivpur Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM/25-26-1026

REPORT DATE : 22/01/2026

CUSTOMER REF : 5700053663

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 011/AM(25-26-1026)

LOCATION : Batching Plant

SAMPLING PLAN & METHOD NO.: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 16/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 15:40:00

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

ANALYSIS START DATE : 19/01/2026

AMBIENT TEMPERATURE : 27°C To 35°C

ANALYSIS COMPLETE DATE : 21/01/2026

HUMIDITY : 55% To 67%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	84.5	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	44.7	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.5	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 902, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 922, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरI PSP Joint Venture
 Bhiwपुर Camp, Karjal, Survey No-1, Taluka Karjal
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/01/ANC(25-26-1031)
 REPORT DATE : 20/01/2026
 CUSTOMER REF: 5700053863
 REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1031)
 SAMPLING PLAN & METHOD NO. : IS 9989
 SAMPLING DATE : 16/01/2026

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
 SAMPLE LOCATION : Baiching Plant
 COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	56.6	81.2	65.8
07.00 to 08.00	47.6	69.1	64.5
08.00 to 09.00	47.1	69.1	61.4
09.00 to 10.00	56.5	81.3	66.6
10.00 to 11.00	57.9	74.3	71.3
11.00 to 12.00	46.5	79.8	65.6
12.00 to 13.00	54.5	77.9	72.9
13.00 to 14.00	47.2	72.8	65.3
14.00 to 15.00	50.5	77.2	64.7
15.00 to 16.00	57.5	73.4	67.8
16.00 to 17.00	49.5	69.1	67.4
17.00 to 18.00	57.5	74.9	65.5
18.00 to 19.00	55.4	82.3	59.8
19.00 to 20.00	46.7	81.3	72.7
20.00 to 21.00	56.7	81.2	65.8
21.00 to 22.00	45.6	92.7	59.9

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.4	72.4	62.8
23.00 to 00.00	40.8	69.1	60.2
00.00 to 01.00	51.4	72.4	61.9
01.00 to 02.00	41.2	73.7	62.7
02.00 to 03.00	51.2	71.3	57.3
03.00 to 04.00	40.4	70.2	60.8
04.00 to 05.00	41.6	72.9	55.7
05.00 to 06.00	48.4	75.1	58.6

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{eq}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	45.8	62.7	57.8	58.8	51.2	67.9	66.3
Night Time (22.00 Hrs to 06.00 Hrs)	40.4	75.7	64.5	54.2	44.4		60.0

ND: Not Detected, NS: Not Specified

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By



Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/o. TPL-HCC BHIVPURI (PSP Joint Venture)
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal
 (UPPER), Maharashtra

REPORT NO : SALMSP19/FM06/01/ANC(25-26-1030)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5700058865

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1030)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Office Area

SAMPLING DATE : 16/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	57.2	96.2	71.2
07.00 to 08.00	46.2	81.3	65.6
08.00 to 09.00	53.5	77.9	67.7
09.00 to 10.00	57.2	69.5	69.3
10.00 to 11.00	45.5	80	59.9
11.00 to 12.00	43.5	70.7	69.7
12.00 to 13.00	48.8	90.5	64.5
13.00 to 14.00	49.9	82.1	71.7
14.00 to 15.00	50.4	90.7	65.4
15.00 to 16.00	50.7	69.1	69.5
16.00 to 17.00	55.4	79.2	71.3
17.00 to 18.00	49.8	72.8	72.7
18.00 to 19.00	55.2	80.2	65.7
19.00 to 20.00	47.7	70.1	73.3
20.00 to 21.00	55.6	77.9	70.7
21.00 to 22.00	45.5	92.6	67.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	40.2	76.8	63.9
23.00 to 00.00	53.2	64.9	60.3
00.00 to 01.00	38.4	64.6	62.6
01.00 to 02.00	43.9	78.8	57.4
02.00 to 03.00	39.4	72.9	60.7
03.00 to 04.00	38.4	71.2	64.3
04.00 to 05.00	39.4	70.1	60.6
05.00 to 06.00	38.7	76.8	58.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Low	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	43.5	86.2	70.5	61.5	53.4	69.5	66.5
Night Time (22.00 Hrs to 06.00 Hrs)	38.4	78.0	65.4	56.4	48.9		61.0

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for industrial Area.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



Nikita

Technical Executive



TC-6158



Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpur Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-1032)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700050883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-1032)

LOCATION : Nr. SRM Site Office

SAMPLING PLAN & METHOD NO. : As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 18/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 16:00:00

SAMPLE COLLECTED BY : Mr Datta Konde (SkyLab)

ANALYSIS START DATE : 18/01/2026

AMBIENT TEMPERATURE : 24°C To 38°C

ANALYSIS COMPLETE DATE : 21/01/2026

HUMIDITY : 55% To 67%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	76.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	41.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	16.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-1033)

REPORT DATE : 23/01/2026

CUSTOMER REF : 0700053885

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-1033)

LOCATION : Nr. JV Admin Office

SAMPLING PLAN & METHOD NO: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 16/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 16:15:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 19/01/2026

AMBIENT TEMPERATURE : 24°C To 36°C

ANALYSIS COMPLETE DATE : 21/01/2026

HUMIDITY : 55% To 67%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	86.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	48.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	29.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	38.1	80	IS 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	20.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.65	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

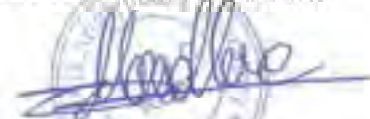
Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:-

M/s. TPL-HCC BHIVPURI P5P Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SALMSP19/FM01/01/AM(25-26-1024)

REPORT DATE : 23/01/2025

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-1034)

SAMPLING PLAN & METHOD NO: As Per Reference Method

LOCATION : Nr. Batching Plant

COORDINATES : NA

SAMPLING DATE : 16/01/2026

SAMPLING TIME : 16:30:00

ANALYSIS START DATE : 19/01/2026

ANALYSIS COMPLETE DATE : 21/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

AMBIENT TEMPERATURE : 24°C To 36°C

HUMIDITY : 55% To 67%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	82.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	42.5	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.6	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	0	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.60	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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ULR:TC515026000001482F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP19/FM05/01/ANC(25-26-1035)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1035)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr. SRM Site Office

SAMPLING DATE : 16/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	49.5	73.4	67.9
07.00 to 08.00	46.5	93.9	67.1
08.00 to 09.00	57.9	74.9	65.6
09.00 to 10.00	54.9	80.2	72.8
10.00 to 11.00	45.5	73.7	74.1
11.00 to 12.00	56.5	70.1	67.5
12.00 to 13.00	45.8	73.2	72.8
13.00 to 14.00	55.2	100.9	71.7
14.00 to 15.00	57.2	69.5	69.3
15.00 to 16.00	55.4	97.2	74.7
16.00 to 17.00	44.5	77.7	65.6
17.00 to 18.00	49.5	72.9	69.6
18.00 to 19.00	56.9	79.8	65.6
19.00 to 20.00	54.5	77.9	61.3
20.00 to 21.00	45.2	72.8	63.3
21.00 to 22.00	50.5	76.2	67.5

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	38.4	69.2	59.9
23.00 to 00.00	53.4	76.3	57.6
00.00 to 01.00	43	70.2	59.9
01.00 to 02.00	58	71.3	60.1
02.00 to 03.00	53.4	73.7	58.5
03.00 to 04.00	43.4	69.2	60.1
04.00 to 05.00	41.8	70.2	63.9
05.00 to 06.00	43.4	72.4	60.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{eq}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	44.5	100.9	68.7	51.4	41.5	69.5	68.5
Night Time (22.00 Hrs to 06.00 Hrs)	38.4	76.3	62.5	50.2	40.3		60.1

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY

Nikita
F. Nikita
Technical Executive



Dr. Datta Mandhare
Dr. Datta Mandhare
(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TRL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP19/PM0501/ANC(25-26-1036)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5700050863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1036)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr. Batching Plant

SAMPLING DATE : 16/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	56.2	93.9	65.6
07.00 to 08.00	47.4	74.4	66.3
08.00 to 09.00	47.5	70.2	67.8
09.00 to 10.00	55.1	80	68.6
10.00 to 11.00	43.2	81.9	69.6
11.00 to 12.00	55.2	90.2	73.6
12.00 to 13.00	58.8	81.3	69.2
13.00 to 14.00	49.8	83.4	74.5
14.00 to 15.00	57.9	96.1	68.8
15.00 to 16.00	49.5	72.8	69.8
16.00 to 17.00	54.9	73.7	64.9
17.00 to 18.00	48.2	93.9	62.9
18.00 to 19.00	50.5	77.9	64.1
19.00 to 20.00	50.6	74.3	58.9
20.00 to 21.00	55.4	77.7	65.5
21.00 to 22.00	45.6	76.8	67.9

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	53.4	72.4	58.5
23.00 to 00.00	40.4	70.2	59.9
00.00 to 01.00	43.4	72.9	58.7
01.00 to 02.00	48.4	72.8	64.3
02.00 to 03.00	43.4	64.5	61.6
03.00 to 04.00	53.9	68.5	62.9
04.00 to 05.00	43.8	72.4	61.2
05.00 to 06.00	58.3	66.6	60.2

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40


 (Seal of Sky Lab Analytical Laboratory)



Sky Lab

ANALYTICAL LABORATORY

Accredited by NABL as per ISO/IEC 17025:2017

Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{eq}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	43.2	96.1	66.5	56.4	45.6	68.7	67.4
Night Time (22.00 Hrs to 06.00 Hrs)	40.4	72.9	63.5	52.4	41.5		60.9

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY

Nikita
Nikita

Technical Executive



Dr. Datta Mandhare

Dr. Datta Mandhare
(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : /SALM5P19/FM09/01/ANC(25-26-1037)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1037)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr. JV Admin Office

SAMPLING DATE : 16/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	56.5	95.9	68.6
07.00 to 08.00	54.7	88.7	65.3
08.00 to 09.00	49.9	71.5	65.4
09.00 to 10.00	56.2	77.2	64.9
10.00 to 11.00	54.5	74.2	65.2
11.00 to 12.00	47.5	88.8	66.4
12.00 to 13.00	55.8	80.4	68.3
13.00 to 14.00	54.1	88.3	70.5
14.00 to 15.00	47.7	92.3	65.8
15.00 to 16.00	56.6	77.4	68.3
16.00 to 17.00	47.1	81.3	67.9
17.00 to 18.00	57.9	80.6	65.2
18.00 to 19.00	57.8	74.5	66.2
19.00 to 20.00	53.4	74.5	68.8
20.00 to 21.00	46.5	93.9	65.8
21.00 to 22.00	46.4	92.2	69.1

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	41.2	71.5	55.4
23.00 to 00.00	51.4	73.1	60.1
00.00 to 01.00	53.3	72.8	58.5
01.00 to 02.00	38.6	72.4	59.8
02.00 to 03.00	41.6	70.9	57.8
03.00 to 04.00	38.4	72.8	62.4
04.00 to 05.00	38.7	76.5	61.9
05.00 to 06.00	40.4	73.3	62.4

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{01N}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	48.4	55.9	61.5	51.2	47.5	67.5	56.5
Night Time (22.00 Hrs to 06.00 Hrs)	36.4	76.5	59.8	49.8	39.8		59.8

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



 Nikita

 Technical Executive





 Dr. Datta Mandhare

 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरI P&S Joint Venture
 Bhiwपुरi Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SALMSP19/FM0102/AM(25-26-2017)

REPORT DATE : 04/02/2020

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2377)

LOCATION : Office Area

SAMPLING PLAN & METHOD NO.: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 27/01/2020

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 13:15:00

SAMPLE COLLECTED BY : Mr. Dalta Korda (SkyLab)

ANALYSIS START DATE : 28/01/2020

AMBIENT TEMPERATURE : 27°C To 39°C

ANALYSIS COMPLETE DATE : 31/01/2020

HUMIDITY : 56% To 87%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	88.1	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	47.3	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	31.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	40.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	22.5	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<0.1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.72	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Dalta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s. TPL-HCC BHIVPURI P&P Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (UPPER),
 Maharashtra

REPORT NO : SAL/MSP18/FM01/02/AM(25-26-2376)
REPORT DATE : 04/02/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2376) **LOCATION :** Batching Plant
SAMPLING PLAN & METHOD NO: As Per Reference Method **COORDINATES :** NA
SAMPLING DATE : 27/01/2026 **SAMPLING DURATION :** 24 Hrs
SAMPLING TIME : 13:42:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 29/01/2026 **AMBIENT TEMPERATURE :** 27°C To 39°C
ANALYSIS COMPLETE DATE : 31/01/2026 **HUMIDITY :** 56% To 67%


Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.3	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	47.2	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	28.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	26.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	8	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.61	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

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LILR:TC515026000002643F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Ms. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpur Camp, Karjal, Survey No-1, Taluka Karjal
 (UPPER), Maharashtra

REPORT NO : SAL/MS/19/FM05/02/ANG(25-26-2370)

REPORT DATE : 04/02/2020

CUSTOMER REF: 5700053083

REF DATE : 17/11/2020

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 02/ANG(25-26-2370)

SAMPLE COLLECTED BY : Mr. Datta Konde (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9999

SAMPLE LOCATION : Batching Plant

SAMPLING DATE : 27/01/2020

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	52.9	76.3	68.3
07.00 to 08.00	46.5	71.4	72
08.00 to 09.00	54.7	70.1	74.4
09.00 to 10.00	42.5	71.4	68.2
10.00 to 11.00	46.2	76.2	70.8
11.00 to 12.00	53.5	102.6	65.3
12.00 to 13.00	48.4	71.8	72.9
13.00 to 14.00	48.3	80.9	64.7
14.00 to 15.00	47.5	80.2	72.3
15.00 to 16.00	54.7	73.5	68.5
16.00 to 17.00	49.3	71.2	72.8
17.00 to 18.00	45.3	87.5	72.7
18.00 to 19.00	49.7	73.8	65.3
19.00 to 20.00	41.3	69.2	63.6
20.00 to 21.00	47.6	82.6	70.1
21.00 to 22.00	46.8	73.8	69.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	42.4	73.7	62.9
23.00 to 00.00	48.4	66.5	58.3
00.00 to 01.00	38.8	73.7	59.5
01.00 to 02.00	41.8	72.4	58.7
02.00 to 03.00	58.2	69.3	60.2
03.00 to 04.00	58.2	73.7	64.3
04.00 to 05.00	42.2	70.2	62.1
05.00 to 06.00	38.8	71.3	61.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40





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Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{90N}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	41.3	102.6	61.4	51.4	41.2	70.1	69.5
Night Time (22.00 Hrs to 06.00 Hrs)	38.8	73.7	59.8	48.7	38.7		61.0

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By

Nikita
Nikita
Technical Executive



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare
Dr. Datta Mandhare
(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Ms. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/02/ANC(25-26-2379)

REPORT DATE : 04/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 02/ANC(25-26-2379)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Office Area

SAMPLING DATE : 27/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	55.8	73.8	67.1
07.00 to 08.00	55.4	73.7	72.4
08.00 to 09.00	47.2	80.3	65.9
09.00 to 10.00	47.2	97.9	68.2
10.00 to 11.00	46.5	102.5	69.2
11.00 to 12.00	55.8	89.1	65.6
12.00 to 13.00	42.5	95.9	67.8
13.00 to 14.00	54.7	87.5	64.4
14.00 to 15.00	43.5	70.2	64.7
15.00 to 16.00	41.2	78.3	63.9
16.00 to 17.00	53.4	77.2	64.7
17.00 to 18.00	45.5	87.6	65.2
18.00 to 19.00	53.8	76.3	71.3
19.00 to 20.00	53.1	91.3	70.5
20.00 to 21.00	45.7	91.2	64.7
21.00 to 22.00	51.5	81.9	69.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	57.4	72.4	60.9
23.00 to 00.00	59.7	71.5	61.9
00.00 to 01.00	45.4	73.3	61.2
01.00 to 02.00	42.2	89.2	58.9
02.00 to 03.00	43.4	71.6	60.6
03.00 to 04.00	42.4	78.8	62.8
04.00 to 05.00	38.6	68.1	59.5
05.00 to 06.00	38.7	68.2	58.8

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary


Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	41.2	102.5	63.5	52.4	41.8	69.2	67.0
Night Time (22.00 Hrs to 06.00 Hrs)	38.6	89.2	56.7	49.8	40.2		60.1

ND: Not Detected NS: Not Specified

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area

Note:

Analyzed By



 Nikita

 Technical Executive



For SKYLAB ANALYTICAL LABORATORY



 Dr. Datta Mandhare

 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FMD1/01/AM(25-26-211)

REPORT DATE : 31/01/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-2115)

SAMPLING PLAN & METHOD NO: As Per Reference Method

SAMPLING DATE : 27/01/2026

SAMPLING TIME : 12:25:00

ANALYSIS START DATE : 29/01/2026

ANALYSIS COMPLETE DATE : 31/01/2026

LOCATION : Nr. JV Admin Office

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

AMBIENT TEMPERATURE : 27°C To 36°C

HUMIDITY : 52% To 64%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	83.6	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	40.7	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.8	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	38.1	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	21.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	0	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.55	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare
Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरी P&P Joint Venture
Bhiwपुरी Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
Maharashtra

REPORT NO : SALMSP19/FM01/01/AM/25-26-2179

REPORT DATE : 31/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM/25-26-2114

SAMPLING PLAN & METHOD NO. : As Per Reference Method

SAMPLING DATE : 27/01/2026

SAMPLING TIME : 12:15:00

ANALYSIS START DATE : 29/01/2026

ANALYSIS COMPLETE DATE : 31/01/2026

LOCATION : Nr. SRM Site Office

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

AMBIENT TEMPERATURE : 27°C To 38°C

HUMIDITY : 52% To 64%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	76.2	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	41.3	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	25.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	37.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	16.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.63	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Neha
Analyst



For SKYLAB ANALYTICAL LABORATORY

Datta Mandhare
Dr. Datta Mandhare
(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:-

Ms. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP16/FM01/01/AM(25-26-2116)

REPORT DATE : 31/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-2116)

SAMPLING PLAN & METHOD NO: As Per Reference Method

LOCATION : Nr. Batching Plant

COORDINATES : NA

SAMPLING DATE : 27/01/2026

SAMPLING TIME : 12:35:00

SAMPLING DURATION : 24 Hrs

ANALYSIS START DATE : 29/01/2026

ANALYSIS COMPLETE DATE : 31/01/2026

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

AMBIENT TEMPERATURE : 27°C To 38°C

HUMIDITY : 52% To 64%

Sr.No.	Test Parameters	Unit	Result	Norms *	Reference Method
1	Particulate Matter PM10	µg/m ³	84.6	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	41.7	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	25.4	60	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.4	60	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.61	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO. : SAL/MSP19/FM05/01/ANC(25-26-2117)

REPORT DATE : 29/01/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-2117)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr. SRM Site Office

SAMPLING DATE : 27/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	51.5	82.9	65.7
07.00 to 08.00	46.5	74.4	69.2
08.00 to 09.00	54.4	82.1	66.3
09.00 to 10.00	57.2	73.2	70.9
10.00 to 11.00	54.5	71.2	68.7
11.00 to 12.00	50.3	83.9	68.7
12.00 to 13.00	47.8	83.1	59.2
13.00 to 14.00	55.8	84.8	65.3
14.00 to 15.00	57.2	84.3	65.3
15.00 to 16.00	46.5	82.9	68.4
16.00 to 17.00	56.9	73.1	58.1
17.00 to 18.00	50.3	74.4	65.5
18.00 to 19.00	50.5	88.6	58.8
19.00 to 20.00	52.8	84.9	65.7
20.00 to 21.00	48.5	74.4	69
21.00 to 22.00	55.5	74.1	74.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	42.2	75.2	61.9
23.00 to 00.00	39.5	71.9	59.5
00.00 to 01.00	46.8	74.1	62.2
01.00 to 02.00	42.4	71.9	59.3
02.00 to 03.00	48.3	68.9	56.7
03.00 to 04.00	49.9	69.4	61.9
04.00 to 05.00	42.2	73.4	58.2
05.00 to 06.00	47.8	69.7	59.2

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40




Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Low	LEQ dB(A)
Day Time (08.00 Hrs to 22.00 Hrs)	45.5	68.5	67.8	57.8	46.5	57.8	60.2
Night Time (22.00 Hrs to 06.00 Hrs)	35.5	75.2	66.5	54.5	44.7		58.8

ND: Not Detected, NS: Not Specified.


Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Nikita
 Technical Executive




 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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ULR:TC515026000002227F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Ms. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : 5AL/MSP19/FM05/01/ANC(25-26-2118)

REPORT DATE : 29/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-2118)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9889

SAMPLE LOCATION : Nr. JV Admin Office

SAMPLING DATE : 27/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	47.5	80.7	66.6
07.00 to 08.00	50.8	84.1	71.2
08.00 to 09.00	56.5	74.4	63.2
09.00 to 10.00	57.8	85.8	58.8
10.00 to 11.00	48.8	80.5	67.9
11.00 to 12.00	54.7	82.2	59.2
12.00 to 13.00	54.5	78.9	58.3
13.00 to 14.00	46.8	78.9	56.9
14.00 to 15.00	48.6	78.7	67.9
15.00 to 16.00	54.5	73	66.3
16.00 to 17.00	51.5	91.7	68.4
17.00 to 18.00	57.9	80.4	62.4
18.00 to 19.00	57.8	91.5	62.7
19.00 to 20.00	57.7	96.3	59.2
20.00 to 21.00	56.7	85.4	62.4
21.00 to 22.00	46.6	81.4	74.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	46.5	71.9	64.9
23.00 to 00.00	39.8	73.7	59.2
00.00 to 01.00	46.8	72.7	62.5
01.00 to 02.00	40.9	70.4	64.4
02.00 to 03.00	42.8	71.9	64.7
03.00 to 04.00	43.7	65.9	62.2
04.00 to 05.00	45.7	74.4	63.3
05.00 to 06.00	46.6	80.4	58.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (08.00 Hrs to 22.00 Hrs)	44.8	96.3	54.8	58.7	54.2	68.1	64.2
Night Time (22.00 Hrs to 06.00 Hrs)	39.8	80.4	52.4	52.1	41.5		62.4

ND: Not Detected, NS: Not Specified

Opinion/Observation: Noise level (Leq_{dB} (A)) is within the limits specified as per CPCB guidelines for industrial Area

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Nikita
 Technical Executive




 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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ULR:TC51502600002228F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI P&P Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : 15AL/MSP19/FM05/01/ANC(25-26-2119)

REPORT DATE : 29/01/2025

CUSTOMER REF : 57DX053883

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-2119)

SAMPLE COLLECTED BY : Mr.Datta Konde (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9985

SAMPLE LOCATION : Nr. Batching Plant

SAMPLING DATE : 27/01/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	48.5	70.4	61.0
07.00 to 08.00	50.4	81.5	59.2
08.00 to 09.00	51.4	98.1	67.4
09.00 to 10.00	54.8	73.5	63.8
10.00 to 11.00	54.1	80.8	67.5
11.00 to 12.00	47.6	73.2	59.2
12.00 to 13.00	47.3	78.8	59.5
13.00 to 14.00	55.6	80.1	69.4
14.00 to 15.00	57.5	73.2	63.7
15.00 to 16.00	54.1	78.8	68.1
16.00 to 17.00	52.9	85.6	58.1
17.00 to 18.00	56.6	83.6	59.2
18.00 to 19.00	47.2	77.4	59.2
19.00 to 20.00	46.7	75.9	62.5
20.00 to 21.00	47.7	77.6	58.5
21.00 to 22.00	52.6	70.1	58.1

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.1	68.2	60.2
23.00 to 00.00	46.5	72.9	62.5
00.00 to 01.00	41.5	77.7	61.3
01.00 to 02.00	45.5	65.5	62.5
02.00 to 03.00	42.7	77.5	58.7
03.00 to 04.00	47.4	71.9	62.3
04.00 to 05.00	48.5	71.9	58.8
05.00 to 06.00	49.6	73.4	64.4

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40


 Datta Konde
 ANALYTICAL LABORATORY
 421311


Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	45.7	68.1	58.9	59.7	59.4	67.5	62.2
Night Time (22.00 Hrs to 06.00 Hrs)	41.5	77.7	65.9	55.4	45.5		61.3

ND: Not Detected. NS: Not Specified.

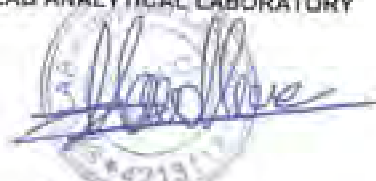
Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By


 Nikita
 Technical Executive



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरI P&P Joint Venture
 Bhiwपुरi Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SALJMSF19/FM01/02/AM/25-26-2487

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM/25-26-2487/1

LOCATION : Nr. Batching Plant

SAMPLING PLAN & METHOD NO.: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 30/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 13:30:00

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

ANALYSIS START DATE : 02/02/2026

AMBIENT TEMPERATURE : 24°C To 38°C

ANALYSIS COMPLETE DATE : 04/02/2026

HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.9	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.2	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	24.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	23.6	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.63	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY

Neha
 Analyst



(Signature)
 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HOC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2498)

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2498)

SAMPLING PLAN & METHOD NO.: As Per Reference Method

SAMPLING DATE : 30/01/2026

SAMPLING TIME : 14:30:00

ANALYSIS START DATE : 02/02/2026

ANALYSIS COMPLETE DATE : 04/02/2026

LOCATION : No. 6/MA Site Office

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

AMBIENT TEMPERATURE : 24°C To 38°C

HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	89.3	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.3	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	20.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	40.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	31.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<0.1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.54	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Manghate
 (Authorized Signatory)

END OF REPORT

- This report reflects finding only for the above sample tested/monitored and only for time and place of monitoring/testing.
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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIHPURI PSP Joint Venture
 Bhihpuri Camp, Karjat, Survey No 1, Taluka Karjat (L.C.W.E.B),
 Maharashtra

REPORT NO : SAL/MSP10/FM01/02/AM(25-26-3489)

REPORT DATE : 01/03/2025

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2495)

LOCATION : Nr. JV Admin Office

SAMPLING PLAN & METHOD NO: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 30/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 16:30:00

SAMPLE COLLECTED BY : Mr. Datta Korde (Skylab)

ANALYSIS START DATE : 02/02/2026

AMBIENT TEMPERATURE : 24°C To 38°C

ANALYSIS COMPLETE DATE : 04/02/2026

HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	86.9	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	47.2	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	24.9	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	22.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<0.1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 622, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.57	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By

Neha
Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mendhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2497)
REPORT DATE : 05/02/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2497)
SAMPLING PLAN & METHOD NO.: As Per Reference Method
SAMPLING DATE : 30/01/2026
SAMPLING TIME : 13:30:00
ANALYSIS START DATE : 03/02/2026
ANALYSIS COMPLETE DATE : 05/02/2026

LOCATION : Nr. Batching Plant
COORDINATES : NA
SAMPLING DURATION : 24 Hrs
SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
AMBIENT TEMPERATURE : 24°C To 38°C
HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.9	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.2	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	24.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.8	60	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Arsenonia	µg/m ³	23.8	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.63	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP1W/FM01/02/AM(25-26-2498T)

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053683

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2498)

LOCATION : Nr. SRM Site Office

SAMPLING PLAN & METHOD NO: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 30/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 14:30:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 31/01/2026

AMBIENT TEMPERATURE : 24°C To 38°C

ANALYSIS COMPLETE DATE : 03/02/2026

HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m3	89.3	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m3	46.3	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m3	20.1	60	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m3	40.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m3	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m3	31.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m3	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m3	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m3	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m3	BDL(<0.1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m3	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m3	0.54	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


Dr.Datta.Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Mrs. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM/25-26-2499

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2499)

SAMPLING PLAN & METHOD NO: As Per Reference Method

SAMPLING DATE : 30/01/2026

SAMPLING TIME : 16:30:00

ANALYSIS START DATE : 31/01/2026

ANALYSIS COMPLETE DATE : 03/02/2026

LOCATION : Nr. JV Admin Office

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

AMBIENT TEMPERATURE : 24°C To 38°C

HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	86.9	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	47.2	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	24.9	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	22.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<0.1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.57	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Majidhiare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:	REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2380)
M/s. TPL-HCC BHIVPURI PSP Joint Venture	REPORT DATE : 04/02/2026
Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER), Maharashtra	CUSTOMER REF : 5700053883
	REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2380)	LOCATION : Batching Plant
SAMPLING PLAN & METHOD NO.: As Per Reference Method	COORDINATES : NA
SAMPLING DATE : 30/01/2026	SAMPLING DURATION : 24 Hrs
SAMPLING TIME : 09:55:00	SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 02/02/2026	AMBIENT TEMPERATURE : 24°C To 36°C
ANALYSIS COMPLETE DATE : 04/02/2026	HUMIDITY : 56% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	85.6	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.7	80	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.8	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.5	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.60	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Nota :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Datta Mandhare

Dr.Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2381)

REPORT DATE : 04/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2381)

LOCATION : Office Area

SAMPLING PLAN & METHOD NO.: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 30/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 09:38:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 02/02/2026

AMBIENT TEMPERATURE : 24°C To 38°C

ANALYSIS COMPLETE DATE : 04/02/2026

HUMIDITY : 56% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	45.3	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	30.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	21.5	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.70	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

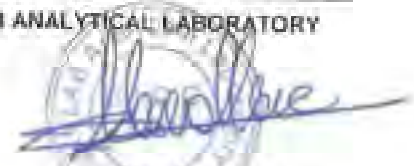
Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/02/ANC(25-26-2387)

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 02/ANC(25-26-2387)

SAMPLE COLLECTED BY : Mr.Datta Kerde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Office Area

SAMPLING DATE : 30/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	46.2	95.4	65.8
07.00 to 08.00	50.8	102.9	68.6
08.00 to 09.00	46.5	71.4	65.7
09.00 to 10.00	54.4	85.5	68.3
10.00 to 11.00	50.8	95.5	68.7
11.00 to 12.00	43.5	71.4	65.2
12.00 to 13.00	51.5	103.3	69.5
13.00 to 14.00	48.1	79.9	68.9
14.00 to 15.00	55.0	72.2	68.2
15.00 to 16.00	46.8	81.1	71.4
16.00 to 17.00	41.5	78.2	68.2
17.00 to 18.00	50.4	76.3	68.9
18.00 to 19.00	59.2	79.9	69.2
19.00 to 20.00	49.3	72.3	71.4
20.00 to 21.00	49.3	94.9	74.9
21.00 to 22.00	46.5	71.7	70.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.2	69.5	64.1
23.00 to 00.00	58.8	69.3	60.9
00.00 to 01.00	41.8	70.9	60.6
01.00 to 02.00	41.6	72.6	62.4
02.00 to 03.00	43.2	69.3	58.8
03.00 to 04.00	51.2	67.9	58.8
04.00 to 05.00	38.4	71.5	64.1
05.00 to 06.00	41.8	71.1	58.6

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40




Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	41.5	103.3	67.8	59.8	47.5	69.5	68.9
Night Time (22.00 Hrs to 06.00 Hrs)	38.4	71.5	60.4	50.1	40.2		61.0

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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ULR:TC51502600002753F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI P&P Joint Venture
Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
(UPPER), Maharashtra

REPORT NO : SAL/MSPT/WM05/02/ANC(25-26-2386)

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 02/ANC(25-26-2386)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Batching Plant

SAMPLING DATE : 30/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	48.4	81.2	69.3
07.00 to 08.00	46.8	78.7	68.9
08.00 to 09.00	42.5	79.9	64.7
09.00 to 10.00	42.5	79.9	64.7
10.00 to 11.00	50.5	78.9	70.7
11.00 to 12.00	46.8	69.7	68.6
12.00 to 13.00	51.6	71.8	68.7
13.00 to 14.00	46.7	71.8	72.9
14.00 to 15.00	47.2	73.4	70.8
15.00 to 16.00	59.2	81.5	72.3
16.00 to 17.00	46.6	72.4	68.2
17.00 to 18.00	41.7	77.7	65.6
18.00 to 19.00	53.7	69.1	65.8
19.00 to 20.00	45.2	71.4	65.6
20.00 to 21.00	47.1	76.8	68.9
21.00 to 22.00	45.5	76.9	60.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	42.4	69.2	60.3
23.00 to 00.00	38.74	66.4	58.5
00.00 to 01.00	59.3	68.2	64.8
01.00 to 02.00	57.4	67.7	63.6
02.00 to 03.00	41.8	67.4	58.5
03.00 to 04.00	43.2	76.3	58.5
04.00 to 05.00	57.4	67.9	60.3
05.00 to 06.00	42.4	70.1	64.6

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40





Sky Lab

ANALYTICAL LABORATORY

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Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	41.7	81.5	65.8	56.4	45.2	70.3	67.9
Night Time (22.00 Hrs to 06.00 Hrs)	38.7	76.3	63.8	52.4	50.1		61.1

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial

Notes :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Rajgad | Maharashtra - 410201 | India,
 Maharashtra

REPORT NO : SAL/MSP19/FM03/12/DW(25-26-0635)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 12/DW(25-26-0635)

LOCATION : Near Tata Power Gate

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 02/12/2025

SAMPLING TIME : 13:18:00

SAMPLE COLLECTED BY : Mr. Delta Korde (Skyway)

ANALYSIS START DATE : 03/12/2025

SAMPLE QUANTITY : 1 Ltr

ANALYSIS COMPLETE DATE : 06/12/2025

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	7.55	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	52	500	IS 3025 (Part 16)
6	Ammonium (as total ammonia-N)	mg/L	BDL(<0.01)	0.5	IS 3025 (Part 34)
7	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
8	Barium, as Ba	mg/L	BDL(<0.1)	0.7	IS 3025 (Part 2)
9	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
10	Calcium, as Ca	mg/L	11	75	IS 3025 (Part 40)
11	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2): 2019
12	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60): 2008



Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
13	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
14	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
15	Magnesium, as Mg	mg/L	3	30	IS 3025 (Part 40)
16	Manganese, as Mn	mg/L	BDL(<0.025)	0.1	IS 3025 (Part 2)
17	Nitrite, as NO ₂	mg/L	BDL(<0.001)	45	IS 3025 (Part 34)
18	Phenolic Compounds, as C ₆ H ₅ OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
19	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
20	Silver, as Ag	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
21	Sulphate, as SO ₄	mg/L	2.7	200	IS 3025 (Part 24)
22	Sulphide, as H ₂ S	mg/L	BDL(<0.01)	0.05	IS 3025 (Part 29)
23	Hardness (total)	mg/L	41	200	IS 3025 (Part 21)
24	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
25	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27): 1986
26	Metal-Molybdenum	mg/L	BDL(<0.07)	0.07	IS 3025 (Part 2)
27	Chloramines, as Cl ₂	mg/L	BDL(<1)	4	IS 3025 (Part 26)
28	Chloride, as Cl	mg/L	8	250	IS 3025 (Part 32)
29	Total Alkalinity, as CaCO ₃	mg/L	28	200	IS 3025 (Part 23)
30	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
31	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
32	Cadmium, as Cd	mg/L	BDL(<0.003)	0.003	IS 3025 (Part 2)
33	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
34	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 48)
35	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
36	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIHPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka-Karjat I Dist-Raigad I Maharashtra - 410201 I India,
 Maharashtra

REPORT NO : SAL/MSP19/FM03/12/DW(25-26-0635)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 12/DW(25-26-0635)

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLING DATE : 02/12/2025

SAMPLING TIME : 13:18:00

ANALYSIS START DATE : 03/12/2025

ANALYSIS COMPLETE DATE : 06/12/2025

LOCATION : Near Tata Power Gate

SAMPLE SPECIFICATION : Drinking Water

SAMPLE COLLECTED BY : Mr. Datta Korde (Skyway)

SAMPLE QUANTITY : 1 Ltr

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Polychlorinated Biphenyls (PCBs)	mg/L	BDL(ND)	0.0005	APHA 24th Ed. 6431 B
2	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
3	Mineral Oil	mg/L	BD(L<0.5)	0.5	IS 3025 (Part 39)
4	Bromoform	mg/L	BDL(ND)	0.1	APHA 24th Ed. 6232 B
5	Dibromochloromethane	mg/L	BDL(ND)	0.1	APHA 24th Ed. 6232 B
6	Bromodichloromethane	mg/L	BDL(ND)	0.06	APHA 24th Ed. 6232 B
7	Chloroform	mg/L	BDL(ND)	0.2	APHA 24th Ed. 6232 B
8	Poly nuclear Aromatic Hydrocarbons (PAH)	mg/L	BDL(ND)	0.0001	APHA 24th Ed. 6440 B

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

Neha

Neha

Analyst

For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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- Any attempt of forgery or misloading use of this report by any person/organization etc will attract suitable legal action against them by SKYLAB Analytical Laboratory.



TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 | India,
 Maharashtra

REPORT NO : SAL/MSP19/FM03/12/DW(25-26-0633)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700063863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 12/DW(25-26-0633)

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLING DATE : 02/12/2025

SAMPLING TIME : 23:30:00

ANALYSIS START DATE : 03/12/2025

ANALYSIS COMPLETE DATE : 06/12/2025

LOCATION : Office Area

SAMPLE SPECIFICATION : Drinking Water

SAMPLE COLLECTED BY : Mr. Dalta Korde (Skylab)

SAMPLE QUANTITY : 1 Ltr

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	7.51	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	70	500	IS 3025 (Part 16)
6	Ammonium (as total ammonia-N)	mg/L	BDL(<0.01)	0.5	IS 3025 (Part 34)
7	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
8	Barium, as Ba	mg/L	BDL(<0.1)	0.7	IS 3025 (Part 2)
9	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
10	Calcium, as Ca	mg/L	9	75	IS 3025 (Part 40)
11	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2): 2019
12	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60): 2008



 Analytical Lab
 No. 421311

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
13	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
14	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
15	Magnesium, as Mg	mg/L	3	30	IS 3025 (Part 46)
16	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
17	Nitrate, as NO ₃	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
18	Phenolic Compounds, as C ₆ H ₅ OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
19	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
20	Silver, as Ag	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
21	Sulphate, as SO ₄	mg/L	1.3	200	IS 3025 (Part 24)
22	Sulphide, as H ₂ S	mg/L	BDL(<0.01)	0.05	IS 3025 (Part 29)
23	Hardness (total)	mg/L	34	200	IS 3025 (Part 21)
24	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
25	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27): 1986
26	Metal-Molybdenum	mg/L	BDL(<0.07)	0.07	IS 3025 (Part 2)
27	Chloramines, as Cl ₂	mg/L	BDL(<1)	4	IS 3025 (Part 26)
28	Chloride, as Cl	mg/L	20	250	IS 3025 (Part 32)
29	Total Alkalinity, as CaCO ₃	mg/L	33	200	IS 3025 (Part 23)
30	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
31	Arsenic, as As	mg/l	BDL(<0.01)	0.01	IS 3025 (Part 2)
32	Cadmium, as Cd	mg/L	BDL(<0.0013)	0.003	IS 3025 (Part 2)
33	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
34	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 48)
35	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
36	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

ND: Not Detected, NS: Not Specified, As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

Neha
Neha
Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhara
Dr. Datta Mandhara
(Authorized Signatory)

END OF REPORT



Sky Lab

ANALYTICAL LABORATORY

Accredited by NABL as per ISO/IEC 17025:2017

Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCG BHIWARI P5P Joint Venture
P O Bhiwari Camp, Karjat, Surany No-1, PO-Bhiwari Camp 1
Taluka- Karjat | Dist-Rajgad | Maharashtra -410201 | India,
Maharashtra

REPORT NO : SAL/MS/19/FM00/12/DW(25-26-033)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700053663

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 12/DW(25-26-0633)

LOCATION : Office Area

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 02/12/2025

SAMPLING TIME : 23:30:00

SAMPLE COLLECTED BY : Mr. Delta Korde (Skylab)

ANALYSIS START DATE : 03/12/2025

SAMPLE QUANTITY : 1 Ltr

ANALYSIS COMPLETE DATE : 06/12/2025

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Polychlorinated Biphenyls (PCBs)	mg/L	BDL(ND)	0.0005	APHA 24th Ed. 6431 B
2	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
3	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)
4	Bromoform	mg/L	BDL(ND)	0.1	APHA 24th Ed. 6232 B
5	Dibromochloromethane	mg/L	BDL(ND)	0.1	APHA 24th Ed. 6232 B
6	Bromodichloromethane	mg/L	BDL(ND)	0.06	APHA 24th Ed. 6232 B
7	Chloroform	mg/L	BDL(ND)	0.2	APHA 24th Ed. 6232 B
8	Poly nuclear Aromatic Hydrocarbons (PAH)	mg/L	BDL(<0.001)	0.0001	APHA 24th Ed. 6440 B

ND: Not Detected, NS: Not Specified, As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY

Delta
Delta
Analyst

Delta
Delta Mandhara
(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
Maharashtra

REPORT NO : SAL/MSP19/FM03/01/DW(25-26-0374)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-0374)

LOCATION : JV Office

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 16:00:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

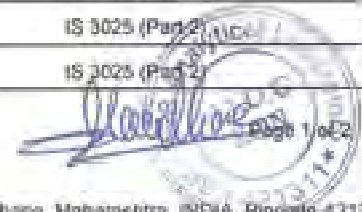
ANALYSIS START DATE : 10/01/2026

SAMPLE QUANTITY : 1Ltr.

ANALYSIS COMPLETE DATE : 13/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	6.83	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	16	500	IS 3025 (Part 16)
6	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
7	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
8	Calcium, as Ca	mg/L	1	75	IS 3025 (Part 40)
9	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2): 2019
10	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60): 2006
11	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
12	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
13	Magnesium, as Mg	mg/L	2	30	IS 3025 (Part 46)
14	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
15	Nitrate, as NO ₃	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
16	Phenolic Compounds, as C ₆ H ₅ OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
17	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
18	Sulphate, as SO ₄	mg/L	1.0	200	IS 3025 (Part 24)
19	Hardness (total)	mg/L	10	200	IS 3025 (Part 21)
20	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
21	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27): 1986
22	Chloride, as Cl	mg/L	11	260	IS 3025 (Part 32)
23	Total Alkalinity, as CaCO ₃	mg/L	3	200	IS 3025 (Part 23)
24	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
25	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)



Datta Korde
17/01/2026

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
26	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
27	Mercury, as Hg	mg/L	BDL(<0.01)	0.001	IS 3025 (Part 48)
28	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
29	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

ND: Not Detected, NS: Not Specified. As per IS 10500:2012.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

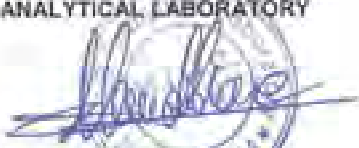
Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : GAL/MSF19/FM03/01/DW(25-26-0374)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-0374)

LOCATION : JV Office

SAMPLING PLAN & METHOD NO.: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 16:00:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 10/01/2026

SAMPLE QUANTITY : 1Ltr.

ANALYSIS COMPLETE DATE : 13/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms [#]	Reference Method
1	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
2	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


 Neha

Analyst

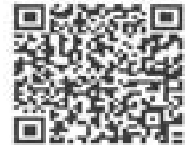
For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER), Maharashtra

REPORT NO : SAL/MSP19/FM12/01/MSA(25-26-0376)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

SAMPLE TYPE: Water Analysis

SAMPLE REGISTRATION NO. : 01/MSA(25-26-0376) **LOCATION :** JV Office

SAMPLING PLAN & METHOD NO: As Per Reference Method **SAMPLE SPECIFICATION :** Drinking Water (01/DW 0374)

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 18:00:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 10/01/2026 **SAMPLE QUANTITY :** 1Ltr

ANALYSIS COMPLETE DATE : 13/01/2026 **SAMPLE PACKING :** Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	E. Coli	/100 ml	ABSENT	Absent	IS 15185
2	Total Coliform	/100 ml	PRESENT	Absent	IS 15185

ND: Not Detected. NS: Not Specified.As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit EXCEPT Total Coliform as per specified standard.

Note :

Analyzed By



Ashrah Ansari
 Microbiologist

For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

1. This report reflects finding only for the above sample tested/monitored and only for time and place of monitoring/testing.
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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWPURI PSP Joint Venture
 Bhiwpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM03/01/DW(25-26-0375)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-0375)

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 16:36:00

ANALYSIS START DATE : 10/01/2026

ANALYSIS COMPLETE DATE : 13/01/2026

LOCATION : Tata Power PSP Office

SAMPLE SPECIFICATION : Drinking Water

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLE QUANTITY : 1Ltr.

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	7.47	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	72	500	IS 3025 (Part 16)
6	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
7	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
8	Calcium, as Ca	mg/L	6	75	IS 3025 (Part 40)
9	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2): 2019
10	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60): 2008
11	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
12	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
13	Magnesium, as Mg	mg/L	2	30	IS 3025 (Part 46)
14	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
15	Nitrate, as NO3	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
16	Phenolic Compounds, as C6H5OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
17	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
18	Sulphate, as SO4	mg/L	3.6	200	IS 3025 (Part 24)
19	Hardness (total)	mg/L	24	200	IS 3025 (Part 21)
20	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
21	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27): 1986
22	Chloride, as Cl	mg/L	7	250	IS 3025 (Part 32)
23	Total Alkalinity, as CaCO3	mg/L	22	200	IS 3025 (Part 23)
24	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
25	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)

(Signature)
 Page 1 of 2

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
26	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
27	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 48)
28	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
29	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

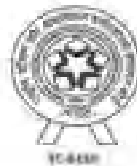
ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhihpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM03/01/DW(25-26-0375)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-0375)

LOCATION : Tata Power PSP Office

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 18:38:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 10/01/2026

SAMPLE QUANTITY : 1Ltr.

ANALYSIS COMPLETE DATE : 13/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
2	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Neha

Analyst


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: M/s. TPL-HCC BHIWPURI PSP Joint Venture
 Bhiwpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER), Maharashtra

REPORT NO : SAL/M5PT19/FM12/01/MSA(25-26-0377)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

SAMPLE TYPE: Water Analysis

SAMPLE REGISTRATION NO. : 01/MSA(25-26-0377) **LOCATION :** Tata Power PSP Office

SAMPLING PLAN & METHOD NO: As Per Reference Method **SAMPLE SPECIFICATION :** Drinking Water (01/DW 0375)

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 16:36:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 10/01/2026 **SAMPLE QUANTITY :** 1Ltr

ANALYSIS COMPLETE DATE : 13/01/2026 **SAMPLE PACKING :** Sealed

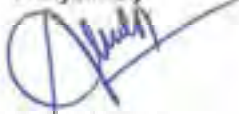
Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	E. Coli	/100 ml	ABSENT	Absent	IS 15185
2	Total Coliform	/100 ml	PRESENT	Absent	IS 15185

ND: Not Detected. NS: Not Specified.As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit EXCEPT Total Coliform as per specified standard.

Note :

Analyzed By



Ashrah Ansari

Microbiologist

For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरI PSP Joint Venture
 Bhiwपुरi Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP18/FM03/01/DW(25-26-1040)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-1040)
SAMPLING PLAN & METHOD NO.: IS 17614 Part 1
SAMPLING DATE : 16/01/2026
SAMPLING TIME : 17:35:00
ANALYSIS START DATE : 17/01/2026
ANALYSIS COMPLETE DATE : 20/01/2026

LOCATION : Karjat Guest House
SAMPLE SPECIFICATION : Drinking Water
SAMPLE COLLECTED BY : Mr.Datta Korde (SkyLab)
SAMPLE QUANTITY : 1Ltr.
SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	6.58	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	32	500	IS 3025 (Part 16)
6	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
7	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
8	Calcium, as Ca	mg/L	2	75	IS 3025 (Part 40)
9	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60)
10	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
11	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
12	Magnesium, as Mg	mg/L	1	30	IS 3025 (Part 46)
13	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
14	Nitrate, as NO ₃	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
15	Phenolic Compounds, as C ₆ H ₅ OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
16	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
17	Sulphate, as SO ₄	mg/L	2.1	200	IS 3025 (Part 24)
18	Hardness (total)	mg/L	10	200	IS 3025 (Part 21)
19	Zinc, as Zn	mg/l	BDL(<0.05)	5	IS 3025 (Part 2)
20	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27)
21	Chloride, as Cl	mg/L	9	250	IS 3025 (Part 32)
22	Total Alkalinity, as CaCO ₃	mg/L	11	200	IS 3025 (Part 23)
23	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
24	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
25	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)

(Signature)
 Page 1 of 2

Sr.No.	Test Parameters	Unit	Result	Norms [#]	Reference Method
26	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 48)
27	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
28	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

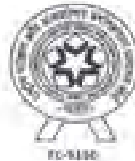
ND: Not Detected, NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


Neha
Analyst



For SKYLAB ANALYTICAL LABORATORY


Dr. Datta Madhure
(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : -SAL/MSP19/FM03/01/DW(25-26-1040)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-1040)

LOCATION : Karjat Guest House

SAMPLING PLAN & METHOD NO.: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 16/01/2026

SAMPLING TIME : 17:35:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 17/01/2026

SAMPLE QUANTITY : 1Ltr.

ANALYSIS COMPLETE DATE : 20/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
2	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 PART 2
3	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

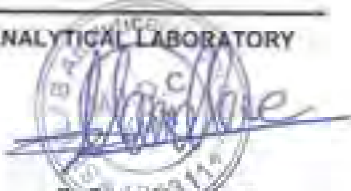
Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Ncha
 Analyst


 Dr. Datta Mandhara
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWPURI PSP Joint Venture
Bhiwpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
Maharashtra

REPORT NO : GAL/MSP10/FM12/01/MSA(25-26-1041)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700053863

SAMPLE TYPE: Water Analysis

SAMPLE REGISTRATION NO. : 01/MSA(25-26-1041)

LOCATION : Karjat Guest House

SAMPLING PLAN & METHOD NO: As per Reference Method

SAMPLE SPECIFICATION : Drinking Water (01/DW 1040)

SAMPLING DATE : 16/01/2026

SAMPLING TIME : 17:35:00

SAMPLE COLLECTED BY : Mr.Datta Korda (Skylab)

ANALYSIS START DATE : 19/01/2026

SAMPLE QUANTITY : 1 Ltr

ANALYSIS COMPLETE DATE : 21/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Total Coliform	/100 ml	ABSENT	Absent	IS 15185
2	E. Coli	/100 ml	ABSENT	Absent	IS 15185

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By



Ashrah Ansari

Microbiologist

For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhara

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP15/FM03/01/DW(25-26-1042)
REPORT DATE : 24/01/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-1042) **LOCATION :** Karjat Guest House
SAMPLING PLAN & METHOD NO.: IS 17614 Part 1 **SAMPLE SPECIFICATION :** Tap Water
SAMPLING DATE : 16/01/2026
SAMPLING TIME : 18:05:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 17/01/2026 **SAMPLE QUANTITY :** 1Ltr.
ANALYSIS COMPLETE DATE : 20/01/2026 **SAMPLE PACKING :** Sealed

Sr.No.	Test Parameters	Unit	Result	Norms [#]	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
4	Total Dissolved Solids	mg/L	444	500	IS 3025 (Part 16)
5	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
6	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
7	Calcium, as Ca	mg/L	53	75	IS 3025 (Part 40)
8	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60)
9	Free residual chlorine	mg/L	0.2	>=0.2	IS 3025 (Part 26)
10	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
11	Magnesium, as Mg	mg/L	14	30	IS 3025 (Part 46)
12	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
13	Nitrate, as NO3	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
14	Phenolic Compounds, as C6H5OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
15	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
16	Sulphate, as SO4	mg/L	3.8	200	IS 3025 (Part 24)
17	Hardness (total)	mg/L	190	200	IS 3025 (Part 21)
18	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
19	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27)
20	Chloride, as Cl	mg/L	30	250	IS 3025 (Part 32)
21	Total Alkalinity, as CaCO3	mg/L	172	200	IS 3025 (Part 23)
22	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
23	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
24	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
25	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 14)

(Signature)
 Page 1 of 2

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
26	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
27	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP18/FM03/01/DW(25-26-1042)

REPORT DATE : 24/01/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-1042)

LOCATION : Karjat Guest House

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLE SPECIFICATION : Tap Water

SAMPLING DATE : 16/01/2026

SAMPLING TIME : 18:05:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 17/01/2026

SAMPLE QUANTITY : 1Ltr.

ANALYSIS COMPLETE DATE : 20/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
2	pH	Units	8.06	6.5-8.5	IS 3025 (Part 11)
3	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 PART 2
4	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

Neha

Neha

Analyst

For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Manjharo

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : -SALM5P16/FM12/01/MSA(25-26-1043)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700053883

SAMPLE TYPE: Water Analysis

SAMPLE REGISTRATION NO. : 01/MSA(25-26-1043) **LOCATION :** Karjal Guest House
SAMPLING PLAN & METHOD NO: As Per Reference Method **SAMPLE SPECIFICATION :** Tap Water (01/DW 1042)
SAMPLING DATE : 16/01/2026
SAMPLING TIME : 18:05:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 17/01/2026 **SAMPLE QUANTITY :** 1 Ltr
ANALYSIS COMPLETE DATE : 20/01/2026 **SAMPLE PACKING :** Sealed


Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Total Coliform	/100 ml	ABSENT	Absent	IS 15185
2	E. Coli	/100 ml	ABSENT	Absent	IS 15185

ND: Not Detected, NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By



Ashrah Ansari

Microbiologist

For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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Feeding Hopper Covered



Stock Hopper Covered



Silo covered with Green Net



Water Sprinkling On road



Water sprinkling system provided in Rock Drilling Machine (ROC) to suppress Dust Emission



Water Sprinkling On road



Water sprinkling system provided in Rock Drilling Machine (ROC) to suppress Dust Emission

MONTHLY REPORT OF ENVIRONMENTAL MONITORING

NOV 2025, DEC 2025, JANUARY, 2026

M/s. TPL-HCC BHIVPURI PSP Joint Venture

*Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
Maharashtra*

Prepared by:

M/s. SKY LAB ANALYTICAL LABORATORY

202, CFC-3, Asmeeta Texpa, Addl. Kalyan-Bhiwandi Industrial Area, MIDC,
Village Kon, Tal. Bhiwandi, Dist. Thane, Maharashtra, INDIA, Pincode-421311.

MOB - 9820386785, 9867577309, 9867577310

Web: www.skylabenviro.com, E-mail: mails@skylabenviro.com

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Rajgad | Maharashtra -410201 | India,
 Maharashtra

REPORT NO : SAL/MSP/10VFM01/11/AM(25-26-1014)

REPORT DATE : 28/11/2025

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 11/AA(25-26-1014)

LOCATION : Near Blatching Plant

SAMPLING PLAN & METHOD NO.: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 24/11/2025

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 14:45:00

SAMPLE COLLECTED BY : Mr. Gulshan Yadav (SkyLab)

ANALYSIS START DATE : 26/11/2025

AMBIENT TEMPERATURE : 20°C To 36°C

ANALYSIS COMPLETE DATE : 28/11/2025

HUMIDITY : 58% To 69%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	78.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	38.8	60	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	24.8	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	38.4	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	22.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	0	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.5)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	0	Method 802, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	0.51	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.84	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above listed sample are within limit as per NAAQ Standards.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


F Tejaswri Chavan
 Sr Analyst




Dr. Datta Mandhara
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:	REPORT NO : SAL/MSP/96/M01/11/AM/25-26-1915
M/s. TPL-HCC BHIVPURI PSP Joint Venture	REPORT DATE : 28/11/2025
P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1	CUSTOMER REF : 5700053863
Taluka- Karjat Dist-Raigad Maharashtra - 410201 India,	REF DATE : 17/11/2025
Maharashtra	

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 11/AM(25-26-1915)	LOCATION : Near SRM Site Office
SAMPLING PLAN & METHOD NO: As per Reference Method	COORDINATES : NA
SAMPLING DATE : 24/11/2025	SAMPLING DURATION : 24 Hrs
SAMPLING TIME : 15:15:00	SAMPLE COLLECTED BY : Mr. Gulshan Yadav (SkyLab)
ANALYSIS START DATE : 28/11/2025	AMBIENT TEMPERATURE : 20°C To 36°C
ANALYSIS COMPLETE DATE : 28/11/2025	HUMIDITY : 55% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	74.6	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	35.6	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	25.8	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	36.4	90	IS 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	150	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	14.8	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.5)	1	Method 472, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.58	3	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


Tejashri Chavan
 Sr Analyst



For SKYLAB ANALYTICAL LABORATORY


Dr. Datta Mahadare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIHPURI PSP Joint Venture
 P. O. Bhihpuri Camp, Karjat, Survey No-1, PO-Bhihpuri Camp I
 Taluka-Karjat | Dist-Raigad | Maharashtra - 410201 | India
 Maharashtra

REPORT NO : SAL/MSP19/FM01/11/AM(25-26-1916)

REPORT DATE : 28/11/2025

CUSTOMER REF : 5700055863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 11/AM(25-26-1916)

LOCATION : Near JV Admin Office

SAMPLING PLAN & METHOD NO: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 24/11/2025

SAMPLING DURATION : 24 hrs

SAMPLING TIME : 15:50:00

SAMPLE COLLECTED BY : Mr. Gushan Yadav (SkyLab)

ANALYSIS START DATE : 26/11/2025

AMBIENT TEMPERATURE : 20°C To 36°C

ANALYSIS COMPLETE DATE : 28/11/2025

HUMIDITY : 58% To 69%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter: PM10	µg/m ³	80.2	100	IS 5182 (Part 20)
2	Particulate Matter PM 2.5	µg/m ³	30.4	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	35.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	18.6	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.5)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.58	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

F. Tejasvi Chavan
 Sr Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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MLM/TC5150230000247677

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 |
India, Maharashtra

REPORT NO : SAL/MSP19/FM05/11/ANC(25-26-1917)

REPORT DATE : 29/11/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 11/ANC(25-26-1917)

SAMPLE COLLECTED BY : Mr. Gajanan Yadav
(Skylab)

SAMPLING PLAN & METHOD NO. : IS 9889

SAMPLE LOCATION : Near Batching Plant

SAMPLING DATE : 24/11/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	48.5	82.9	72.6
07.00 to 08.00	45.5	79.7	61.1
08.00 to 09.00	45.5	96.7	69.3
09.00 to 10.00	50.8	95.2	68.6
10.00 to 11.00	45.1	95.2	60.2
11.00 to 12.00	45.2	83.5	69.3
12.00 to 13.00	49.7	81.9	69.4
13.00 to 14.00	56.6	98.4	86.3
14.00 to 15.00	50.4	74.9	63.9
15.00 to 16.00	43.4	94.7	68.6
16.00 to 17.00	50.5	95.2	63.8
17.00 to 18.00	52.7	71.1	68.6
18.00 to 19.00	48.5	74.8	62.6
19.00 to 20.00	50.5	75.8	69.2
20.00 to 21.00	49.4	98.3	68.3
21.00 to 22.00	52.7	101.9	59.2

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.4	71.7	59.4
23.00 to 00.00	43.4	78.3	59.7
00.00 to 01.00	43.4	74.4	62.4
01.00 to 02.00	40.8	70.1	58.8
02.00 to 03.00	47.4	75.4	57.8
03.00 to 04.00	39.4	69.6	61.5
04.00 to 05.00	43.9	78.6	59.9
05.00 to 06.00	43.4	72.5	59.7

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Page 1 of 2

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	43.4	101.9	64.5	55.6	46.5	67.9	66.4
Night Time (22.00 Hrs to 06.00 Hrs)	39.4	78.6	59.8	52.4	42.5		59.9 *

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Nikita

Technical Executive





Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

1. This report reflects finding only for the above sample(s) as mentioned and only for time and place of monitoring/testing.
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ULR:TCN1802SD00024758F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/S. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp |
 Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 |
 India, Maharashtra

REPORT NO : SAL/MSP10/FM05/11/VANC(25-26-1910)

REPORT DATE : 29/11/2025

CUSTOMER REF : 5700053803

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 11/VANC(25-26-1910)

SAMPLE COLLECTED BY : Mr. Gulshan Yadav
 (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Near SRM Site Office

SAMPLING DATE : 24/11/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	54.6	96.3	70.4
07.00 to 08.00	42.4	71.1	68.8
08.00 to 09.00	45.5	94.7	63.3
09.00 to 10.00	56.6	92.4	65.9
10.00 to 11.00	43.8	83.3	61.9
11.00 to 12.00	52.5	83.1	65.6
12.00 to 13.00	48.8	84.95	66.8
13.00 to 14.00	50.5	90.7	65.4
14.00 to 15.00	49.7	75.5	71.7
15.00 to 16.00	43.14	79.3	71.7
16.00 to 17.00	54.6	75.7	70.4
17.00 to 18.00	56.6	79.3	64.7
18.00 to 19.00	43.4	73.5	59.3
19.00 to 20.00	50.5	74.9	60.5
20.00 to 21.00	52.7	90.9	68.8
21.00 to 22.00	49.5	74.5	60.5

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.8	72.5	61.6
23.00 to 00.00	43.8	74.4	59.4
00.00 to 01.00	45.2	70.5	62.6
01.00 to 02.00	39	76.2	58.4
02.00 to 03.00	43.4	72.3	59.1
03.00 to 04.00	41.3	74.7	59.7
04.00 to 05.00	43.4	73.5	60
05.00 to 06.00	59.7	72.4	59.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (08.00 Hrs to 22.00 Hrs)	42.4	95.3	65.4	54.6	43.5	67.8	66.1
Night Time (22.00 Hrs to 06.00 Hrs)	39.0	75.2	56.5	32.4	41.2		50.0

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:-

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Nikita

Technical Executive




 Dr. Dalta Mandhare
 (Authorized Signatory)

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ULR:TC515025000024759F

TEST REPORT

NAME & ADDRESS OF CUSTOMER

M/s. TPL-HCC BHIVPURI PSP Joint Venture
P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp-1
Taluka - Karjat Dist-Raigad | Maharashtra - 410201 |
India, Maharashtra

REPORT NO : SAL/MSP19/FM05/11/ANC(25-26-19) (1)

REPORT DATE : 28/11/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 11/ANC(25-26-19) (9)

SAMPLE COLLECTED BY : Mr. Gulshan Yadav
(SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Near JV Admin Office

SAMPLING DATE : 24/11/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	49.1	71.6	71.1
07.00 to 08.00	52.6	83.8	80.9
08.00 to 09.00	49.7	99.4	86.6
09.00 to 10.00	48	74.4	68.7
10.00 to 11.00	49.6	77.9	69.8
11.00 to 12.00	50.6	79.5	72.2
12.00 to 13.00	62.5	79.4	73.6
13.00 to 14.00	42.4	76.5	73.9
14.00 to 15.00	50.1	74.4	63.9
15.00 to 16.00	54.9	90.7	69.4
16.00 to 17.00	56.4	80.4	72.2
17.00 to 18.00	52.3	96.5	67.7
18.00 to 19.00	45.7	82.2	71.7
19.00 to 20.00	56.4	79	67.9
20.00 to 21.00	48.5	82.4	65.8
21.00 to 22.00	50.1	78.2	60.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	39.0667	72.3	58.7
23.00 to 00.00	43.4	75.2	66.6
00.00 to 01.00	43.8	78.7	58.6
01.00 to 02.00	41.4	71.4	57.8
02.00 to 03.00	46.4	75.2	60.9
03.00 to 04.00	43.7	72.6	62.7
04.00 to 05.00	43.7	72.2	61.6
05.00 to 06.00	40.8	67.2	57.5

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Page 2 of 2

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.4	99.4	62.5	56.5	47.8	69.1	68.8
Night Time (22.00 Hrs to 06.00 Hrs)	39.1	76.7	57.8	51.2	41.2		59.6

ND: Not Detected; NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guideline for Industrial Area.

Date:

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



NIRTA

Technical Executive




Dr. Datta Mandhara

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIYPURI PSP Joint Venture

 Bhiypuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),

 Maharashtra

REPORT NO : SAL/MSP19/FM01/12/AM(25-26-2246)

 REPORT DATE : 03/01/2020

 CUSTOMER REF : 0700053853

 REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-2246)

 SAMPLING PLAN & METHOD NO.: As per reference method

 SAMPLING DATE : 20/12/2025

 SAMPLING TIME : 15:25:00

 ANALYSIS START DATE : 20/12/2025

 ANALYSIS COMPLETE DATE : 01/01/2026

LOCATION : Near Batching Plant

 COORDINATES : NA

 SAMPLING DURATION : 24 HRS

 SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

 AMBIENT TEMPERATURE : 25°C To 36°C

 HUMIDITY : 54% To 84%

Sr.No.	Test Parameters	Unit	Result	Norms	Reference Method
1	Particulate Matter PM10	µg/m ³	80.2	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	44.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	25.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.7	80	IS 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	33.8	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.59	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

(Signature)

Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: **REPORT NO :** GAL/MSP19/FM01/12/AM/25-26-2247

M/s. TPL-HCC BHIVPURI PSP Joint Venture **REPORT DATE :** 03/01/2025

Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER), **CUSTOMER REF :** 5700053183

Maharashtra **REF DATE :** 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-2247) **LOCATION :** Near SRM Site Office

SAMPLING PLAN & METHOD NO.: As per reference method **COORDINATES :** NA

SAMPLING DATE : 26/12/2025 **SAMPLING DURATION :** 24 HRS

SAMPLING TIME : 15:55:00 **SAMPLE COLLECTED BY :** Mr. Datta Kulkarni (SkyLab)

ANALYSIS START DATE : 26/12/2025 **AMBIENT TEMPERATURE :** 25°C To 36°C

ANALYSIS COMPLETE DATE : 01/01/2025 **HUMIDITY :** 54% To 64%

Sr.No.	Test Parameters	Unit	Result	Norms ^{NS}	Reference Method
1	Particulate Matter PM10	µg/m3	75.8	100	IS 5182 (Part-03)
2	Particulate Matter PM 2.5	µg/m3	30.4	60	IS 5182, (Part- 24)
3	Sulphur Dioxide	µg/m3	28.5	60	IS 5182 (Part-2)
4	Nitrogen Oxides	µg/m3	99.4	60	IS 5182, (Part-6)
5	Ozone	µg/m3	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m3	16.7	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m3	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m3	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m3	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m3	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m3	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m3	0.00	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha

Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: Ms. TPL-HCC BHIVPURI P&P Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Tanaka Karjal (LOWER),
 Maharashtra

REPORT NO : BSL/MSP16/FMD1/12/AM/25-26-22(01)

REPORT DATE : 03/01/2025

CUSTOMER REF : 5700059863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-2248)

SAMPLING PLAN & METHOD NO.: As per reference method

SAMPLING DATE : 28/12/2024

SAMPLING TIME : 15:00:00

ANALYSIS START DATE : 29/12/2024

ANALYSIS COMPLETE DATE : 01/01/2025

LOCATION : Near JV Admin Office

COORDINATES : NA

SAMPLING DURATION : 24 HRS

SAMPLE COLLECTED BY : Mr. Datta Konde (SkyLab)

AMBIENT TEMPERATURE : 25°C To 30°C

HUMIDITY : 54% To 64%


Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	64.2	100	IS 5182 (Part-2)
2	Particulate Matter PM 2.5	µg/m ³	41.8	80	IS 5182, (Part - 24)
3	Sulphur Dioxide	µg/m ³	28.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	37.6	80	IS: 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	19.5	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By



 Neha

 Analyst



For SKYLAB ANALYTICAL LABORATORY



 Datta Konde

 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP19/FM05/12/ANC(25-26-2252)

REPORT DATE : 03/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-2252)

SAMPLE COLLECTED BY : Mr. Datta Korte (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9909

SAMPLE LOCATION : Near Baiding Plant

SAMPLING DATE : 26/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	54.5	79.2	72.3
07.00 to 08.00	57.5	82.2	59.8
08.00 to 09.00	54.5	72.7	60.2
09.00 to 10.00	46.1	69.6	74.5
10.00 to 11.00	58.7	72.4	73.7
11.00 to 12.00	42.4	72.5	72.3
12.00 to 13.00	49.5	72.9	72.5
13.00 to 14.00	51.7	90.9	68.8
14.00 to 15.00	48.5	72.5	72.5
15.00 to 16.00	48.1	70.6	58.1
16.00 to 17.00	51.6	77.8	69.9
17.00 to 18.00	48.7	99.4	64.6
18.00 to 19.00	47	72.4	68.7
19.00 to 20.00	48.6	75.9	64.6
20.00 to 21.00	55.6	79.5	71.2
21.00 to 22.00	51.5	79.4	73.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	46.7	80.2	61.6
23.00 to 00.00	54.4	78.2	56.9
00.00 to 01.00	48.5	66.4	55.8
01.00 to 02.00	46.5	64.4	58.8
02.00 to 03.00	46.8	73.9	58.8
03.00 to 04.00	51.5	78.9	55.8
04.00 to 05.00	46.5	73.4	62.2
05.00 to 06.00	39.9	64.9	59.1

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Page 1 of 2

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L_{eq}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.4	99.4	67.8	60.4	50.1	68.6	68.6
Night Time (22.00 Hrs to 06.00 Hrs)	39.9	80.2	60.1	51.6	42.3		58.5

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (L_{eqdB} (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

Nikita

Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandharkare

(Authorized Signatory)

END OF REPORT

1. This report reports finding only for the above sample identification and only for the work done at the time of monitoring.
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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP111/PM05/12/ANC(25-26-2253)

REPORT DATE : 03/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-2253)

SAMPLE COLLECTED BY : Mr. Datta Konde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9889

SAMPLE LOCATION : Near SRM Site Office

SAMPLING DATE : 26/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	49.6	79.4	72.3
07.00 to 08.00	48.4	82.8	70.3
08.00 to 09.00	49.1	75.1	67.1
09.00 to 10.00	55.1	82.9	62.9
10.00 to 11.00	55.2	92.2	70.3
11.00 to 12.00	43.9	82.5	67.5
12.00 to 13.00	51.7	79.3	70.3
13.00 to 14.00	48.8	82.1	69.3
14.00 to 15.00	42.1	99.1	72.9
15.00 to 16.00	44.5	75.3	62.6
16.00 to 17.00	44.4	90.2	68.3
17.00 to 18.00	55.4	79	65.2
18.00 to 19.00	47.5	95.4	69.4
19.00 to 20.00	44.5	73.3	67.9
20.00 to 21.00	44.2	80.9	69.8
21.00 to 22.00	48.7	90.7	70.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	55.6	85.2	63.5
23.00 to 00.00	47.5	82.6	64.6
00.00 to 01.00	49.1	81.7	63.4
01.00 to 02.00	40.8	72.6	58.8
02.00 to 03.00	49.3	72.6	50.5
03.00 to 04.00	59.5	73.9	58.6
04.00 to 05.00	44.6	68.2	60.3
05.00 to 06.00	42.4	73.2	59.5

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.1	99.1	68.6	60.1	51.4	70.9	68.6
Night Time (22.00 Hrs to 06.00 Hrs)	40.8	85.2	63.5	56.8	45.2		63.5

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By



Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-NCC BHIVPURI PSP Joint Venture

 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat

 (LOWER), Maharashtra

REPORT NO : SAL/MSP18/FMD512/ANG(25-26-2254)

REPORT DATE : 08/12/2025

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANG(25-26-2254)

SAMPLE COLLECTED BY : Mr. Datta Konde (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9389

SAMPLE LOCATION : Near JV Admin Office

SAMPLING DATE : 20/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	49.1	62.2	59.9
07.00 to 08.00	51.2	71.6	59.1
08.00 to 09.00	54.4	73.9	66.6
09.00 to 10.00	49.5	72.2	72.2
10.00 to 11.00	44.1	72.8	69.2
11.00 to 12.00	54.5	72.8	68.7
12.00 to 13.00	44.2	95.5	69.3
13.00 to 14.00	51.3	73.3	70.6
14.00 to 15.00	48.5	77.8	72.8
15.00 to 16.00	55.6	82.9	68.5
16.00 to 17.00	49.5	82.2	60.6
17.00 to 18.00	49.4	82.2	70.3
18.00 to 19.00	47.8	79.7	69.9
19.00 to 20.00	43.5	80.9	74.5
20.00 to 21.00	43.5	80.9	65.7
21.00 to 22.00	51.5	79.9	71.7

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	47.8	70.7	69.6
23.00 to 00.00	39.5	76.3	60.4
00.00 to 01.00	46.4	75.3	59.5
01.00 to 02.00	51.5	74.9	60.8
02.00 to 03.00	40.8	85.3	59.9
03.00 to 04.00	48.2	68.9	57.2
04.00 to 05.00	51.5	61.1	55.5
05.00 to 06.00	48.8	74.9	58.8

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dBi(A)
Day Time (06.00 Hrs to 22.00 Hrs)	43.5	55.5	52.5	51.4	41.5	69.7	67.3
Night Time (22.00 Hrs to 06.00 Hrs)	39.5	55.5	50.4	50.2	38.2		60.3

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By


 Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरI PSP Joint Venture
 P O Bhiwपुरi Camp, Karjat, Survey No-1, PO-Bhiwपुरi Camp 1
 Taluka- Karjat | Dist-Rajgad | Maharashtra - 410201 | India,
 Maharashtra

REPORT NO : BAC/MSP1WFMD1/12/AM(25-26-0080)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700053083

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-0809)

LOCATION : Office Area

SAMPLING PLAN & METHOD NO.: As per reference method

COORDINATES : NA

SAMPLING DATE : 11/12/2025

SAMPLING DURATION : 24 HRS

SAMPLING TIME : 11:00:00

SAMPLE COLLECTED BY : Mr. Gauram Mhagankar (SkyLab)

ANALYSIS START DATE : 13/12/2025

AMBIENT TEMPERATURE : 26°C To 36°C

ANALYSIS COMPLETE DATE : 15/12/2025

HUMIDITY : 54% To 64%


Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	79.5	100	IS 5182 (Part-20)
2	Particulate Matter PM 2.5	µg/m ³	42.5	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	28.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	37.5	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	15.9	800	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL (<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL (<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhate
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 | India,
 Maharashtra

REPORT NO : SAL/MSP19/FM01/12/AM(25-26-0810)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM(25-26-0810)

LOCATION : Batching Plant

SAMPLING PLAN & METHOD NO: As per reference method

COORDINATES : NA

SAMPLING DATE : 11/12/2025

SAMPLING DURATION : 24 HRS

SAMPLING TIME : 12:00:00

SAMPLE COLLECTED BY : Mr. Gautam Mhapankar (Skylab)

ANALYSIS START DATE : 13/12/2025

AMBIENT TEMPERATURE : 26°C To 36°C

ANALYSIS COMPLETE DATE : 15/12/2025

HUMIDITY : 54% To 64%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	80.5	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	40.1	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.2	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	BDL(<0.1)	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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ULH/TC5150250000261E3F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Ms. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 |
 India, Maharashtra

REPORT NO : SAL/MSP19/FM05/12/ANC(25-26-0811)

REPORT DATE : 16/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-0811)

SAMPLE COLLECTED BY : Mr. Gautam Mhapankar
(Skylab)

SAMPLING PLAN & METHOD NO. : IS 9909

SAMPLE LOCATION : Office Area

SAMPLING DATE : 11/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	56.0	75.7	67.7
07.00 to 08.00	48.5	95.9	60.1
08.00 to 09.00	44.4	76.9	67.6
09.00 to 10.00	56.9	82.2	73.8
10.00 to 11.00	47.5	74.7	60.1
11.00 to 12.00	43.5	72.1	60.5
12.00 to 13.00	47.8	74.2	73.8
13.00 to 14.00	42.3	97.8	72.7
14.00 to 15.00	44.9	71.5	59.3
15.00 to 16.00	42.4	98.2	66.7
16.00 to 17.00	47.5	79.7	67.6
17.00 to 18.00	51.5	74.9	70.6
18.00 to 19.00	43.4	81.8	67.6
19.00 to 20.00	56.5	79.9	83.3
20.00 to 21.00	47.7	74.8	65.3
21.00 to 22.00	52.5	78.2	59.5

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	42.4	70.2	60.9
23.00 to 00.00	40.4	77.3	58.8
00.00 to 01.00	47.7	72.2	60.9
01.00 to 02.00	42.3	72.3	61.1
02.00 to 03.00	40.4	74.7	59.5
03.00 to 04.00	47.4	70.2	61.1
04.00 to 05.00	43.8	71.2	58.8
05.00 to 06.00	47.4	73.4	61.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40




Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.0	98.2	63.5	51.4	43.5	67.7	65.9
Night Time (22.00 Hrs to 06.00 Hrs)	40.4	75.3	57.4	48.7	40.2		60.0

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



 Nikita

 Technical Executive





 Dr. Datta Mandhare

 (Authorized Signatory)

END OF REPORT

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ULR:TC515025000026164F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 |
India, Maharashtra

REPORT NO : SAL/MSP19/FM05/12/ANC(25-26-0812)

REPORT DATE : 16/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-0812)

SAMPLE COLLECTED BY : Mr. Gautam Mhapankar (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Batching Plant

SAMPLING DATE : 11/12/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	43.2	95.9	67.6
07.00 to 08.00	49.5	76.4	68.3
08.00 to 09.00	49.5	72.2	60.8
09.00 to 10.00	42.2	82.4	69.6
10.00 to 11.00	47.6	83.9	70.6
11.00 to 12.00	42.7	92.2	65.6
12.00 to 13.00	43.8	83.3	61.8
13.00 to 14.00	51.8	85.4	66.2
14.00 to 15.00	44.4	97.1	69.8
15.00 to 16.00	51.5	74.8	70.8
16.00 to 17.00	56.9	74.7	66.9
17.00 to 18.00	48.2	102.9	64.9
18.00 to 19.00	52.5	79.9	66.1
19.00 to 20.00	52.6	76.3	61.9
20.00 to 21.00	42.4	79.7	67.5
21.00 to 22.00	47.6	78.8	69.9

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	40.4	73.4	59.5
23.00 to 00.00	44.4	71.2	60.9
00.00 to 01.00	47.4	73.9	59.7
01.00 to 02.00	42.4	73.8	56.3
02.00 to 03.00	47.4	65.5	62.6
03.00 to 04.00	40.9	69.5	63.9
04.00 to 05.00	47.8	73.4	62.2
05.00 to 06.00	42.3	68.6	61.2

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Low	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.0	102.9	59.8	51.2	44.5	68.6	66.1
Night Time (22.00 Hrs to 06.00 Hrs)	40.4	73.9	56.2	43.5	39.8		61.3

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



 F Nikita

 Technical Executive





 Dr. Datta Mundhare

 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIYPURI PSP Joint Venture
 Bhiypuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/12/AM/25-26-2283

REPORT DATE : 03/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM/25-26-2283

LOCATION : Office Area

SAMPLING PLAN & METHOD NO.: SAL/MSP07/SOP/VIB
 M/07

COORDINATES : NA

SAMPLING DATE : 26/12/2025

SAMPLING DURATION : 24 Hrs.

SAMPLING TIME : 11:00:00

SAMPLE COLLECTED BY : Mr. Datta Konde (SkyLab)

ANALYSIS START DATE : 29/12/2025

AMBIENT TEMPERATURE : 28°C To 35°C

ANALYSIS COMPLETE DATE : 01/01/2026

HUMIDITY : 44% To 58%

Sr.No.	Test Parameters	Unit	Result	Norms	Reference Method
1	Particulate Matter PM10	µg/m ³	80.3	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	42.8	60	IS 5182 (Part-24)
3	Sulphur Dioxide	µg/m ³	29.1	80	IS 5182 (Part-2)
4	Nitrogen Oxides	µg/m ³	37.5	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	100	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	19.4	800	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	8	IS 5182 (Part-11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part-12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	5	Method 302, Methods of Air Sampling and Analysis 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	25	Method 827, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.67	2	IS 5182 (Part-10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Manchare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO. : SALMSP19/FM01/TZ/AM/25-26-2284

REPORT DATE : 03/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 12/AM/25-26-2284

LOCATION : Ducting Plant

SAMPLING PLAN & METHOD NO.: SALMSP07/SOPVIB
 M01

COORDINATES : NA

SAMPLING DATE : 20/12/2025

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 11:15:00

SAMPLE COLLECTED BY : Mr. Datta Konde (SkyLab)

ANALYSIS START DATE : 20/12/2025

AMBIENT TEMPERATURE : 28°C To 35°C

ANALYSIS COMPLETE DATE : 01/01/2026

HUMIDITY : 44% To 56%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	82.5	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	42.8	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.3	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	40.4	80	IS 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.95	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per N/AQ Standards.

Note :

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta M. Dhare
 (Authorized Signatory)

END OF REPORT

- This report relates fixing only for the above sample listed/described and only for time and place of monitoring/testing.
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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal
 (UPPER) Maharashtra

REPORT NO : SAL/MSP10/FM05/12/ANC(25-26-2280)

REPORT DATE : 03/01/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANC(25-26-2280)

SAMPLE COLLECTED BY: Mr Datta Forde (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9969

SAMPLE LOCATION : Building Plant

SAMPLING DATE : 26/12/2025

COORDINATES : N/A

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	50.25	92.4	73.2
07.00 to 08.00	44.8	79.6	73.8
08.00 to 09.00	53.6	91.1	70.2
09.00 to 10.00	58.9	77.8	72.4
10.00 to 11.00	47.1	82.2	72.6
11.00 to 12.00	48.2	77.9	62.8
12.00 to 13.00	47.2	92.2	64.6
13.00 to 14.00	42.8	72.3	60.2
14.00 to 15.00	47.4	86.2	65.8
15.00 to 16.00	42.5	72.8	59.7
16.00 to 17.00	55.5	90.2	72.8
17.00 to 18.00	54.5	79.2	74.2
18.00 to 19.00	46.4	91.1	72.2
19.00 to 20.00	44.5	74.4	60.8
20.00 to 21.00	44.2	79.9	71.4
21.00 to 22.00	48.7	86.5	60.2

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	53.6	75.3	62.9
23.00 to 00.00	47	74.8	60.8
00.00 to 01.00	40.5	81.3	68.6
01.00 to 02.00	47.4	78.2	59.6
02.00 to 03.00	47.4	83.4	59.2
03.00 to 04.00	48.6	79.1	67.2
04.00 to 05.00	47.5	88.4	60.6
05.00 to 06.00	49.4	75.9	62.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.5	92.4	83.5	52.4	41.7	69.2	67.5
Night Time (22.00 Hrs to 06.00 Hrs)	40.5	83.4	59.8	48.7	40.2		61.4

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By


 Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Dalta Mandhare

(Authorized Signatory)

END OF REPORT

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ULR:TC515026000000091F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP/19/FM05/12/ANG(25-26-2285)

REPORT DATE : 03/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 12/ANG(25-26-2285)

SAMPLE COLLECTED BY : Mr Datta Korda (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Office Area

SAMPLING DATE : 26/12/2025

COORDINATES : (A)

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	57.8	72.4	59.1
07.00 to 08.00	44.3	71.3	65.6
08.00 to 09.00	48.6	72.3	72.3
09.00 to 10.00	51.8	98.5	59.9
10.00 to 11.00	44.5	79.7	62.4
11.00 to 12.00	48.5	78.8	59.8
12.00 to 13.00	53.4	73.4	68.5
13.00 to 14.00	54.5	99.8	59.8
14.00 to 15.00	55.7	86.9	65.7
15.00 to 16.00	50.5	73.4	71.4
16.00 to 17.00	43.7	82.5	58.9
17.00 to 18.00	42.4	74.3	71.4
18.00 to 19.00	46.2	77.2	64.9
19.00 to 20.00	48.8	93.6	71.6
20.00 to 21.00	46.5	70.6	70.5
21.00 to 22.00	51.6	82.2	58.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	54.9	68.4	53.3
23.00 to 00.00	50.5	74.4	62.4
00.00 to 01.00	44.7	73.1	53.5
01.00 to 02.00	40.5	74.4	48.3
02.00 to 03.00	50.2	69.2	61.6
03.00 to 04.00	53.4	68.4	62.4
04.00 to 05.00	46	78.8	62.2
05.00 to 06.00	46.5	71.9	48.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{0N}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.4	99.8	64.5	54.7	44.5	65.2	64.4
Night Time (22.00 Hrs to 06.00 Hrs)	40.5	78.8	62.5	52.1	42.5		66.5

ND: (Not Detected), NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



 Nikita

Technical Executive



END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2481)
 REPORT DATE : 15/01/2026
 CUSTOMER REF : 5700053863
 REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2481) LOCATION : Mr. Batching Plant
 SAMPLING PLAN & METHOD NO: As per Reference Method COORDINATES : NA
 SAMPLING DATE : 05/01/2026 SAMPLING DURATION : 24 Hrs
 SAMPLING TIME : 12:10:00 SAMPLE COLLECTED BY : Mr Datta Korde (Skylab)
 ANALYSIS START DATE : 07/01/2026 AMBIENT TEMPERATURE : 25°C To 37°C
 ANALYSIS COMPLETE DATE : 09/01/2026 HUMIDITY : 49% To 80%

Sr. No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	89.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.7	80	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	29.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	44.3	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	23.6	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 672, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	8	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(0.5)	20	Method 622, Methods of Air Sampling and Analysis, 3rd Edition
12	Cadmium Monoxide	ng/m ³	0.57	3	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note:

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: M/s. TPL-HGG BHIWARI PSP Joint Venture
 Bhuvan Ganj, Karjat, Gurvey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM/01/02/AM/25-26-24921
REPORT DATE : 15/01/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2492)
SAMPLING PLAN & METHOD NO. : As per Reference Method
SAMPLING DATE : 05/01/2026
SAMPLING TIME : 13.05.00
ANALYSIS START DATE : 07/01/2026
ANALYSIS COMPLETE DATE : 09/01/2026

LOCATION : Nr. SRM Site Office
COORDINATES : NA
SAMPLING DURATION : 24 Hrs
SAMPLE COLLECTED BY : Mr Datta Korde (Skylab)
AMBIENT TEMPERATURE : 25°C To 37°C
HUMIDITY : 40% To 60%

Sl.No	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	88.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	48.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	31.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	43.6	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Arsenic	µg/m ³	22.1	600	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.53	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note:

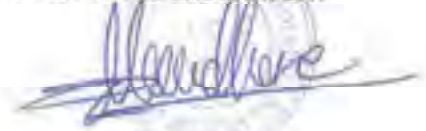
Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture

 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),

 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2493)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2493)

LOCATION : Nr. JV Admin Office

SAMPLING PLAN & METHOD NO.: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 05/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 14:30:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 07/01/2026

AMBIENT TEMPERATURE : 25°C To 37°C

ANALYSIS COMPLETE DATE : 09/01/2026

HUMIDITY : 49% To 60%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	43.1	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	30.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.1	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.55	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By



 Neha

 Analyst



For SKYLAB ANALYTICAL LABORATORY



 Dr.Datta Mandhare

 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:-

M/s. TPL-HCC BHIVPURI PSP Joint Venture
Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
Maharashtra

REPORT NO - : SAL/MSP10/FMD1/02/AM/25-26-0491

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-0491)

LOCATION : Nr. Balching Puri

SAMPLING PLAN & METHOD NO: As per Referencal
Method

COORDINATES : NA

SAMPLING DATE : 05/01/2026

SAMPLING DURATION : 24 hrs

SAMPLING TIME : 12:10:00

SAMPLE COLLECTED BY : Mr. Jatta Korde (SkyLab)

ANALYSIS START DATE : 07/01/2026

AMBIENT TEMPERATURE : 25°C To 37°C

ANALYSIS COMPLETE DATE : 09/01/2026

HUMIDITY : 49% To 60%

Sr.No	Test Parameters	Unit	Resul	Norms *	Reference Method
1	Particulate Matter PM10	µg/m ³	88.4	100	IS 5182 (Part-2)
2	Particulate Matter PM 2.5	µg/m ³	46.7	60	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	29.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	44.3	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL (<20)	100	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	23.8	400	Method 405, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL (<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL (<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL (<0.1)	1	Method 802, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL (<1)	8	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL (<0.1)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.57	3	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By



Neha
Analyst



20-04-2019

For SKYLAB ANALYTICAL LABORATORY



Dr. Jatta Mandhare
(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: **REPORT NO :** SAL/MSP19/FM01R02/AM/25-26-04821
Ms. TPL-HCC BHIVPURI PSP Joint Venture
Bhivpur Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
Maharashtra
REPORT DATE : 15/01/2026
CUSTOMER REF : 5700053883
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO : 02/AM(25-26-0482)
SAMPLING PLAN & METHOD NO: As per Reference Method
LOCATION: Nr. SRM Site Office
COORDINATES: WA
SAMPLING DATE : 05/01/2026
SAMPLING DURATION : 24 Hrs
SAMPLING TIME : 13:05:00
SAMPLE COLLECTED BY : Mr Datta Korde (SkyLab)
ANALYSIS START DATE : 07/01/2026
AMBIENT TEMPERATURE : 25°C To 37°C
ANALYSIS COMPLETE DATE : 08/01/2026
HUMIDITY : 49% To 60%

Sr.No.	Test Parameters	Unit	Result	Norms *	Reference Method
1	Particulate Matter TSP10	µg/m ³	98.5	300	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	31.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	43.6	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Aeromonas	µg/m ³	32.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	µg/m ³	BDL(<1)	5	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.53	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By



Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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 SKYLAB Analytical Laboratory



TEST REPORT

NAME & ADDRESS OF CUSTOMER:	REPORT NO : SAL/MSP19/FM01/02/AM(25-26-0493)
M/s. TPL-HCC BHIVPURI PSP Joint Venture	REPORT DATE : 15/01/2026
Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER), Maharashtra	CUSTOMER REF : 5700053863
	REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-0493)	LOCATION : Nr. JV Admin Office
SAMPLING PLAN & METHOD NO. : As per Reference Method	COORDINATES : NA
SAMPLING DATE : 05/01/2026	SAMPLING DURATION : 24 Hrs
SAMPLING TIME : 14:30:00	SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 07/01/2026	AMBIENT TEMPERATURE : 25°C To 37°C
ANALYSIS COMPLETE DATE : 09/01/2026	HUMIDITY : 49% To 60%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	43.1	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	30.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.1	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.55	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-0452)

REPORT DATE : 16/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-0452)

LOCATION : Batching Plant

SAMPLING PLAN & METHOD NO: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 09/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 11:21:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 12/01/2026

AMBIENT TEMPERATURE : 27°C To 36°C

ANALYSIS COMPLETE DATE : 14/01/2026

HUMIDITY : 59% To 62%

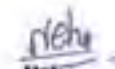
Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	81.2	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	41.7	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.3	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.60	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: M/s. TPL-HCC BHIHPURI PSP Joint Venture
 Bhihpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-0453)
REPORT DATE : 16/01/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-0453) **LOCATION :** Office Area
SAMPLING PLAN & METHOD NO: As per Reference Method **COORDINATES :** NA
SAMPLING DATE : 09/01/2026 **SAMPLING DURATION :** 24 Hrs
SAMPLING TIME : 11:49:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 12/01/2026 **AMBIENT TEMPERATURE :** 27°C To 36°C
ANALYSIS COMPLETE DATE : 14/01/2026 **HUMIDITY :** 59% To 62%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m3	78.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m3	38.3	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m3	25.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m3	40.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m3	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m3	44.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m3	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m3	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m3	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m3	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m3	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m3	0.54	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIYPURI PSP Joint Venture
 Bhiypuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/01/ANC(25-26-0454)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-0454)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Batching Plant

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	53.6	77.9	72.8
07.00 to 08.00	49.2	83.5	69.8
08.00 to 09.00	51.1	86.5	62.1
09.00 to 10.00	51.7	72.8	68.6
10.00 to 11.00	48.4	70.1	69.6
11.00 to 12.00	48.4	71.2	68.1
12.00 to 13.00	54.5	72.4	69.3
13.00 to 14.00	55.5	72.9	72.8
14.00 to 15.00	47.6	69.3	70.9
15.00 to 16.00	45.5	71.2	70.8
16.00 to 17.00	47.4	72.9	69.2
17.00 to 18.00	49.5	72.8	72.6
18.00 to 19.00	48.4	79.5	70.4
19.00 to 20.00	46.9	85.3	70.3
20.00 to 21.00	48.8	72.4	72.8
21.00 to 22.00	53.3	86.6	84.9

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	49.2	68.5	56.5
23.00 to 00.00	50.2	73.7	58.2
00.00 to 01.00	51.2	71.2	62.8
01.00 to 02.00	56.7	81.3	61.8
02.00 to 03.00	49.6	69.6	54.8
03.00 to 04.00	51.6	79.8	53.5
04.00 to 05.00	50.8	73.7	55.4
05.00 to 06.00	39.2	73.4	61.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40


 Page 1 of 2

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	Leq dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	45.5	86.6	65.4	56.4	44.5	69.2	69.7
Night Time (22.00 Hrs to 06.00 Hrs)	39.2	81.3	60.2	51.2	41.2		58.1

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise Level (Leq db (A)) is exceeding the limits specified as per CPCB guidelines for Residential Area.

Note :

Analyzed By



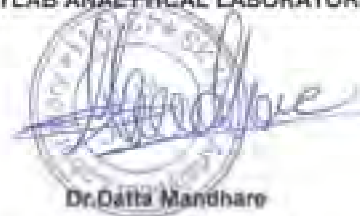
Nikita

Technical Executive



2019-180

For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

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ULR:TC51502600000940F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/01/ANC(25-26-0455)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-0455)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9089

SAMPLE LOCATION : Office Area

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	55.5	72.4	63.2
07.00 to 08.00	47.4	73.8	70.2
08.00 to 09.00	53.5	70.1	68.6
09.00 to 10.00	49.5	72.9	68.5
10.00 to 11.00	48.4	79.7	64.5
11.00 to 12.00	47.4	79.9	70.9
12.00 to 13.00	56.5	72.4	72.5
13.00 to 14.00	45.5	71.2	72.9
14.00 to 15.00	47.4	72.9	72.7
15.00 to 16.00	49.5	72.8	65.3
16.00 to 17.00	48.4	79.5	71.7
17.00 to 18.00	46.9	90.5	61.9
18.00 to 19.00	48.8	72.4	67.2
19.00 to 20.00	53.3	86.6	71.2
20.00 to 21.00	47	97.2	71.2
21.00 to 22.00	51.2	71.2	67.7

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	56.7	81.3	61.9
23.00 to 00.00	49.6	69.6	57.2
00.00 to 01.00	50.4	79.8	53.8
01.00 to 02.00	50.8	73.7	55.8
02.00 to 03.00	48.4	73.4	57.9
03.00 to 04.00	56.7	84.8	61.7
04.00 to 05.00	49.8	68.5	59.7
05.00 to 06.00	43.8	81.2	58.1

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Page 1 of 2

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	45.5	97.2	64.7	55.4	43.5	68.5	68.8
Night Time (22.00 Hrs to 06.00 Hrs)	43.8	84.8	57.8	50.1	41.2		58.2

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise Level (Leq db (A)) is exceeding the limits specified as per CPCB guidelines for Residential Area.

Note :

Analyzed By



Nikita

Technical Executive



PL-5100

For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-0444)

REPORT DATE : 16/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-0444)

LOCATION : Near Batching Plant

SAMPLING PLAN & METHOD NO: As per Reference Method

COORDINATES : NA

SAMPLING DATE : 09/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 16:18:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 12/01/2026

AMBIENT TEMPERATURE : 24°C To 35°C

ANALYSIS COMPLETE DATE : 14/01/2026

HUMIDITY : 55% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	80.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	40.1	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.6	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	40.1	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.7	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	5	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.58	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-0445)
 REPORT DATE : 16/01/2026
 CUSTOMER REF : 5700053653
 REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-0445) LOCATION : Nr. SRM Site Office
 SAMPLING PLAN & METHOD NO.: As per Reference Method COORDINATES : NA
 SAMPLING DATE : 09/01/2026 SAMPLING DURATION : 24 Hrs
 SAMPLING TIME : 16:25:00 SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)
 ANALYSIS START DATE : 12/01/2026 AMBIENT TEMPERATURE : 24°C To 35°C
 ANALYSIS COMPLETE DATE : 14/01/2026 HUMIDITY : 55% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	75.8	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	36.6	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	37.4	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	15.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.00	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI P9P Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra.

REPORT NO : SAL/MSPT/9/FM01/01/AM(25-26-0446)
 REPORT DATE : 18/01/2025
 CUSTOMER REF : 5700053063
 REF DATE : 17/11/2025

SAMPLE REGISTRATION NO. : 01/AM(25-26-0446)
 SAMPLING PLAN & METHOD NO. : As per Reference Method
 SAMPLING DATE : 08/01/2025
 SAMPLING TIME : 10:35:00
 ANALYSIS START DATE : 12/01/2025
 ANALYSIS COMPLETE DATE : 14/01/2025

SAMPLE TYPE: Ambient Air

LOCATION : Nn JV Admin Office
 COORDINATES : NA

SAMPLING DURATION : 24 Hrs
 SAMPLE COLLECTED BY : Mr Datta Mandhare (SkyLab)
 AMBIENT TEMPERATURE : 24°C To 36°C
 HUMIDITY : 55% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	84.0	100	IS 5182 (Part 23)
2	Particulate Matter PM 2.5	µg/m ³	40.7	90	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	27.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	26.8	80	IS 5182 (Part-8)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	18.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.60	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SÁLMSP19/FM05/01/ANC(25-26-0447)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053603

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-0447)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9889

SAMPLE LOCATION : Near Batching Plant

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	47.4	81.4	66.2
07.00 to 08.00	54.2	71.6	65.6
08.00 to 09.00	56.5	90.2	72.3
09.00 to 10.00	47.4	77	65.9
10.00 to 11.00	48.5	95.4	68.9
11.00 to 12.00	58.9	75.2	71
12.00 to 13.00	46.9	81.9	68.9
13.00 to 14.00	50.7	89.7	69.3
14.00 to 15.00	47.7	75.1	71.3
15.00 to 16.00	46.4	86.4	58.9
16.00 to 17.00	54.7	75.1	72.5
17.00 to 18.00	47.5	72.4	72.8
18.00 to 19.00	47.2	75.7	65.6
19.00 to 20.00	42.6	86.4	70.3
20.00 to 21.00	47.5	79.3	70.3
21.00 to 22.00	47.4	101.7	69.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	53.9	75.1	59.4
23.00 to 00.00	41.3	73.1	62.2
00.00 to 01.00	44.3	75.2	60.3
01.00 to 02.00	41.8	70.9	63.6
02.00 to 03.00	43.7	67.9	63.6
03.00 to 04.00	59.4	69.1	62.6
04.00 to 05.00	59.2	67.5	59.9
05.00 to 06.00	41.4	72.4	63.6

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40


 13/1/2026

Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.5	101.7	56.0	51.4	42.1	70.1	58.0
Night Time (22.00 Hrs to 06.00 Hrs)	41.5	75.2	50.4	46.5	39.8		61.0

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By

Nikita
F Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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ULR:TC51502600000937F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Ms. TRL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP/9/FM05/01/ANG(25-26-0446)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053003

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANG(25-26-0446)

SAMPLE COLLECTED BY : Mr. Dajila Korda (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Mr. SRM Site Office

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	47.2	87.7	68.4
07.00 to 08.00	43.2	89.2	70.6
08.00 to 09.00	50.5	89.8	72.9
09.00 to 10.00	48.5	95.9	68.6
10.00 to 11.00	48.7	72.4	65.7
11.00 to 12.00	43.1	88.4	72.3
12.00 to 13.00	46.3	83.9	70.2
13.00 to 14.00	46.8	75.9	68.6
14.00 to 15.00	47.8	75.2	70.7
15.00 to 16.00	46.8	79.7	65.6
16.00 to 17.00	47.2	81.4	72.3
17.00 to 18.00	51.5	77.3	65.8
18.00 to 19.00	47.4	81.9	72.2
19.00 to 20.00	43.8	77.4	64.9
20.00 to 21.00	47.1	90.6	65.8
21.00 to 22.00	42.6	72.1	69.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	46.8	70.2	59.2
23.00 to 00.00	43.3	70.9	63.6
00.00 to 01.00	42.6	73.1	60.5
01.00 to 02.00	41.4	72.7	59.5
02.00 to 03.00	41.4	69.7	58.7
03.00 to 04.00	41.4	73.4	63.8
04.00 to 05.00	46.8	75.1	56.6
05.00 to 06.00	41.4	69.3	63.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary


Time	Min	Max	L10	L50	L90	L ₉₀	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	42.0	95.9	63.5	52.4	42.5	89.8	89.8
Night Time (22.00 Hrs to 06.00 Hrs)	47.4	75.1	52.4	43.5	37.8		80.6

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

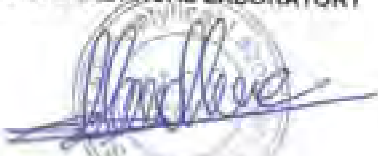


 Nikita

 Technical Executive



For SKYLAB ANALYTICAL LABORATORY



 Dr. Datta Mandhare

 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal
 (LOWER), Maharashtra

REPORT NO : GAL/MBP19/FM05/01VANC(25-26-0440)

REPORT DATE : 15/01/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/VANC(25-26-0440)

SAMPLE COLLECTED BY : Mr.Datta Konde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr JV Admin Office

SAMPLING DATE : 09/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	51.2	82.2	59.2
07.00 to 08.00	46.7	77.1	72.5
08.00 to 09.00	54.5	77.3	69.3
09.00 to 10.00	48.8	81.9	58.9
10.00 to 11.00	47.6	83.8	71.3
11.00 to 12.00	54.4	76.7	64.3
12.00 to 13.00	54.4	71.6	65.6
13.00 to 14.00	48.2	72.3	64.5
14.00 to 15.00	48.4	75	64.3
15.00 to 16.00	47.6	77.3	67.7
16.00 to 17.00	51.4	81.6	68.2
17.00 to 18.00	52.2	83.8	68.9
18.00 to 19.00	49.3	86.1	68.9
19.00 to 20.00	47.6	79.2	71.3
20.00 to 21.00	56.5	78.8	72.5
21.00 to 22.00	52.2	101.1	69.4

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	46.8	73.1	62.2
23.00 to 00.00	44.3	75.2	60.3
00.00 to 01.00	41.2	76.8	62.6
01.00 to 02.00	43.7	67.9	63.6
02.00 to 03.00	46.4	67.4	61.6
03.00 to 04.00	58.4	75.4	59.3
04.00 to 05.00	41.7	76.7	62.9
05.00 to 06.00	43.9	68.3	60.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40





Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Low	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	48.0	101.1	65.7	56.4	45.8	68.5	67.3
Night Time (22.00 Hrs to 06.00 Hrs)	41.2	76.0	60.4	51.4	40.2		61.6

ND: Not Detected, NS: Not Specified

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By


 Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIYPURI PSP Joint Venture
 Bhiypuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : SALMSPT16T/M01/02/AM(25-26-2494)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5706050863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM/25-26-2494

SAMPLING PLAN & METHOD NO.: A6 Per Reference Method

LOCATION : No. Bidding Plant

COORDINATES : NA

SAMPLING DATE : 12/01/2026

SAMPLING TIME : 11:40:00

SAMPLING DURATION : 24 Hrs

ANALYSIS START DATE : 14/01/2026

ANALYSIS COMPLETE DATE : 16/01/2026

SAMPLE COLLECTED BY : Mr Datta Konde (SkyLab)

AMBIENT TEMPERATURE : 27°C To 38°C

HUMIDITY : 54% To 66%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	86.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	48.1	60	IS 5182 (Part-24)
3	Sulphur Dioxide	µg/m ³	26.3	80	IS 5182 (Part-2)
4	Nitrogen Oxides	µg/m ³	46.2	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	23.7	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	5	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.61	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : SAL/MSP18/FMGT/02/AM(25-26-2495)
 REPORT DATE : 20/01/2026
 CUSTOMER REF : 5700053963
 REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2495)

SAMPLING PLAN & METHOD NO. : As Per Reference Method

SAMPLING DATE : 12/01/2026

SAMPLING TIME : 12:00:00

ANALYSIS START DATE : 14/01/2026

ANALYSIS COMPLETE DATE : 16/01/2026

LOCATION : Nr. SRM Site Office
 COORDINATES : NA

SAMPLING DURATION : 24 Hrs
 SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)
 AMBIENT TEMPERATURE : 27°C To 38°C
 HUMIDITY : 54% To 66%

Sr.No.	Test Parameters	Unit	Result	Norms	Reference Method
1	Particulate Matter PM10	µg/m ³	88.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	43.9	60	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	31.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	26.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	8	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरI PSP Joint Venture
 Bhiwपुरi Camp, Karjal, Survey No-1, Taluka-Karjal (LOWER)
 Maharashtra

REPORT NO : SAL/MSP19/FMD1/02/AM(25-26-2496)

REPORT DATE : 01/01/2026

CUSTOMER REF : 570003883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2496)

LOCATION : N. JY Admin Office

SAMPLING PLAN & METHOD NO. : As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 12/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 14:00:00

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

ANALYSIS-START DATE : 14/01/2026

AMBIENT TEMPERATURE : 27°C To 28°C

ANALYSIS COMPLETE DATE : 16/01/2026

HUMIDITY : 54% To 66%


Sr.No.	Test Parameters	Unit	Result	Norms ^a	Reference Method
1	Particulate Matter PM10	µg/m ³	89.5	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.7	60	IS 5182 (Part 24)
3	Sulphur Dioxide	µg/m ³	33.5	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	43.6	80	IS 5182 (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	24.6	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.58	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

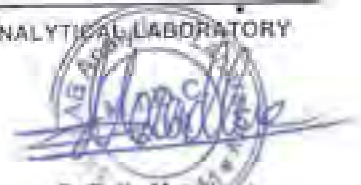
Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Menbhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER: **REPORT NO :** SAL/MSP19/FM01/01/AM(25-28-1028)
 M/s. TPL-HCC BHIWपुरI PSP Joint Venture
 Bhiwपुरi Camp, Karjal, Survey No-1, Taluka Karjal (UPPEB),
 Maharashtra. **REPORT DATE :** 22/01/2025
CUSTOMER REF : 5700053803
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-28-1028) **LOCATION :** Office Area
SAMPLING PLAN & METHOD NO.: As Per Reference Method **COORDINATES :** NA
SAMPLING DATE : 16/01/2025 **SAMPLING DURATION :** 24 Hrs
SAMPLING TIME : 11:45:00 **SAMPLE COLLECTED BY :** Mr. Delta Karde (SkyLab)
ANALYSIS START DATE : 18/01/2025 **AMBIENT TEMPERATURE :** 27°C To 35°C
ANALYSIS COMPLETE DATE : 21/01/2025 **HUMIDITY :** 55% To 87%


Sr.No.	Test Parameters	Unit	Result	Norms *	Reference Method
1	Particulate Matter PM10	µg/m ³	85.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	44.1	60	IS 5182, (Part -24)
3	Sulphur Dioxide	µg/m ³	29.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	38.5	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	20.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.69	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI P&P Joint Venture
 Bhivpur Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM/25-26-1026

REPORT DATE : 22/01/2026

CUSTOMER REF : 5700053663

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 011/AM(25-26-1026)

LOCATION : Batching Plant

SAMPLING PLAN & METHOD NO. : As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 16/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 15:40:00

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

ANALYSIS START DATE : 19/01/2026

AMBIENT TEMPERATURE : 27°C To 35°C

ANALYSIS COMPLETE DATE : 21/01/2026

HUMIDITY : 55% To 67%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	84.5	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	44.7	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.5	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 902, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 922, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpur Camp, Karjal, Survey No-1, Taluka Karjal
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/01/ANC(25-26-1031)

REPORT DATE : 20/01/2026

CUSTOMER REF: 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1031)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Baiching Plant

SAMPLING DATE : 16/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	56.6	81.2	65.8
07.00 to 08.00	47.6	69.1	64.5
08.00 to 09.00	47.1	69.1	61.4
09.00 to 10.00	56.5	81.3	66.6
10.00 to 11.00	57.9	74.3	71.3
11.00 to 12.00	46.5	79.8	65.6
12.00 to 13.00	54.5	77.9	72.9
13.00 to 14.00	47.2	72.8	65.3
14.00 to 15.00	50.5	77.2	64.7
15.00 to 16.00	57.5	73.4	67.8
16.00 to 17.00	49.5	69.1	67.4
17.00 to 18.00	57.5	74.9	65.5
18.00 to 19.00	55.4	82.3	59.8
19.00 to 20.00	46.7	81.3	72.7
20.00 to 21.00	56.7	81.2	65.8
21.00 to 22.00	45.6	92.7	59.9

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.4	72.4	62.8
23.00 to 00.00	40.8	69.1	60.2
00.00 to 01.00	51.4	72.4	61.9
01.00 to 02.00	41.2	73.7	62.7
02.00 to 03.00	51.2	71.3	57.3
03.00 to 04.00	40.4	70.2	60.8
04.00 to 05.00	41.6	72.9	55.7
05.00 to 06.00	48.4	75.1	58.6

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{eq}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	45.8	62.7	57.8	58.8	51.2	67.9	66.3
Night Time (22.00 Hrs to 06.00 Hrs)	40.4	75.7	64.5	54.2	44.4		60.0

ND: Not Detected, NS: Not Specified

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By



Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/o. TPL-HCC BHIVPURI (PSP Joint Venture)
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal
 (UPPER), Maharashtra

REPORT NO : SALMSP19/FM06/01/ANC(25-26-1030)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5700058865

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1030)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Office Area

SAMPLING DATE : 16/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	57.2	96.2	71.2
07.00 to 08.00	46.2	81.3	65.6
08.00 to 09.00	53.5	77.9	67.7
09.00 to 10.00	57.2	69.5	69.3
10.00 to 11.00	45.5	80	59.9
11.00 to 12.00	43.5	70.7	69.7
12.00 to 13.00	48.8	90.5	64.5
13.00 to 14.00	49.9	82.1	71.7
14.00 to 15.00	50.4	90.7	65.4
15.00 to 16.00	50.7	69.1	69.5
16.00 to 17.00	55.4	79.2	71.3
17.00 to 18.00	49.8	72.8	72.7
18.00 to 19.00	55.2	80.2	65.7
19.00 to 20.00	47.7	70.1	73.3
20.00 to 21.00	55.6	77.9	70.7
21.00 to 22.00	45.5	92.6	67.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	40.2	76.8	63.9
23.00 to 00.00	53.2	64.9	60.3
00.00 to 01.00	38.4	64.6	62.6
01.00 to 02.00	43.9	78.8	57.4
02.00 to 03.00	39.4	72.9	60.7
03.00 to 04.00	38.4	71.2	64.3
04.00 to 05.00	39.4	70.1	60.6
05.00 to 06.00	38.7	76.8	58.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Low	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	43.5	86.2	70.5	61.5	53.4	69.5	66.5
Night Time (22.00 Hrs to 06.00 Hrs)	38.4	78.0	65.4	56.4	48.9		61.0

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for industrial Area.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



Nikita

Technical Executive



TC-6158



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpur Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SALMSP19/FM01/01/AM(25-26-1032)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700050883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-1032)

LOCATION : Nr. SRM Site Office

SAMPLING PLAN & METHOD NO. : As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 18/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 16:00:00

SAMPLE COLLECTED BY : Mr Datta Konde (SkyLab)

ANALYSIS START DATE : 18/01/2026

AMBIENT TEMPERATURE : 24°C To 38°C

ANALYSIS COMPLETE DATE : 21/01/2026

HUMIDITY : 55% To 67%


Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	76.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	41.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	16.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.62	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/001/AM(25-26-1033)

REPORT DATE : 23/01/2026

CUSTOMER REF : 0700053885

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-1033)

LOCATION : Nr. JV Admin Office

SAMPLING PLAN & METHOD NO: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 16/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 16:15:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 19/01/2026

AMBIENT TEMPERATURE : 24°C To 36°C

ANALYSIS COMPLETE DATE : 21/01/2026

HUMIDITY : 55% To 67%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	86.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	48.5	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	29.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	38.1	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	20.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.65	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

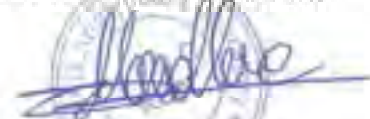

 Neha

Analyst



TC-0130

For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:-

M/s. TPL-HCC BHIVPURI P5P Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SALMSP19/FM01/01/AM/25-26-10/M

REPORT DATE : 23/01/2025

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM/25-26-1034)

SAMPLING PLAN & METHOD NO: As Per Reference Method

SAMPLING DATE : 16/01/2026

SAMPLING TIME : 16:30:00

ANALYSIS START DATE : 19/01/2026

ANALYSIS COMPLETE DATE : 21/01/2026

LOCATION : Nr. Batching Plant

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

AMBIENT TEMPERATURE : 24°C To 36°C

HUMIDITY : 55% To 67%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	82.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	42.5	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.6	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.1	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	0	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.60	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP19/FM05/01/ANC(25-26-1035)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1035)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr. SRM Site Office

SAMPLING DATE : 16/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	49.5	73.4	67.9
07.00 to 08.00	46.5	93.9	67.1
08.00 to 09.00	57.9	74.9	65.6
09.00 to 10.00	54.9	80.2	72.8
10.00 to 11.00	45.5	73.7	74.1
11.00 to 12.00	56.5	70.1	67.5
12.00 to 13.00	45.8	73.2	72.8
13.00 to 14.00	55.2	100.9	71.7
14.00 to 15.00	57.2	69.5	69.3
15.00 to 16.00	55.4	97.2	74.7
16.00 to 17.00	44.5	77.7	65.6
17.00 to 18.00	49.5	72.9	69.6
18.00 to 19.00	56.9	79.8	65.6
19.00 to 20.00	54.5	77.9	61.3
20.00 to 21.00	45.2	72.8	63.3
21.00 to 22.00	50.5	76.2	67.5

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	38.4	69.2	59.9
23.00 to 00.00	53.4	76.3	57.6
00.00 to 01.00	43	70.2	59.9
01.00 to 02.00	58	71.3	60.1
02.00 to 03.00	53.4	73.7	58.5
03.00 to 04.00	43.4	69.2	60.1
04.00 to 05.00	41.8	70.2	63.9
05.00 to 06.00	43.4	72.4	60.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{eq}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	44.5	100.9	68.7	51.4	41.5	69.5	68.5
Night Time (22.00 Hrs to 06.00 Hrs)	38.4	76.3	62.5	50.2	40.3		60.1

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

Nikita
F. Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

1. This report reflects finding only for the above sample tested/monitored and only for time and place of monitoring/testing.
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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TRL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : SAL/MSP19/PM05/01/ANC(25-26-1036)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1036)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr. Batching Plant

SAMPLING DATE : 16/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	56.2	93.9	65.6
07.00 to 08.00	47.4	74.4	66.3
08.00 to 09.00	47.5	70.2	67.8
09.00 to 10.00	55.1	80	68.6
10.00 to 11.00	43.2	81.9	69.6
11.00 to 12.00	55.2	90.2	73.6
12.00 to 13.00	58.8	81.3	69.2
13.00 to 14.00	49.8	83.4	74.5
14.00 to 15.00	57.9	96.1	68.8
15.00 to 16.00	49.5	72.8	69.8
16.00 to 17.00	54.9	73.7	64.9
17.00 to 18.00	48.2	93.9	62.9
18.00 to 19.00	50.5	77.9	64.1
19.00 to 20.00	50.6	74.3	58.9
20.00 to 21.00	55.4	77.7	65.5
21.00 to 22.00	45.6	76.8	67.9

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	53.4	72.4	58.5
23.00 to 00.00	40.4	70.2	59.9
00.00 to 01.00	43.4	72.9	58.7
01.00 to 02.00	48.4	72.8	64.3
02.00 to 03.00	43.4	64.5	61.6
03.00 to 04.00	53.9	68.5	62.9
04.00 to 05.00	43.8	72.4	61.2
05.00 to 06.00	58.3	66.6	60.2

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40


 (Seal of Sky Lab)



Sky Lab

ANALYTICAL LABORATORY

Accredited by NABL as per ISO/IEC 17025:2017

Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{eq}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	43.2	96.1	66.5	56.4	45.6	68.7	67.4
Night Time (22.00 Hrs to 06.00 Hrs)	40.4	72.9	63.5	52.4	41.5		60.9

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY

Nikita
Nikita

Technical Executive



Dr. Datta Mandhare
Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : /SALM5P19/FM09/01/ANC(25-26-1037)

REPORT DATE : 20/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-1037)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr. JV Admin Office

SAMPLING DATE : 16/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	56.5	95.9	68.6
07.00 to 08.00	54.7	88.7	65.3
08.00 to 09.00	49.9	71.5	65.4
09.00 to 10.00	56.2	77.2	64.9
10.00 to 11.00	54.5	74.2	65.2
11.00 to 12.00	47.5	88.8	66.4
12.00 to 13.00	55.8	80.4	68.3
13.00 to 14.00	54.1	88.3	70.5
14.00 to 15.00	47.7	92.3	65.8
15.00 to 16.00	56.6	77.4	68.3
16.00 to 17.00	47.1	81.3	67.9
17.00 to 18.00	57.9	80.6	65.2
18.00 to 19.00	57.8	74.5	66.2
19.00 to 20.00	53.4	74.5	68.8
20.00 to 21.00	46.5	93.9	65.8
21.00 to 22.00	46.4	92.2	69.1

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	41.2	71.5	55.4
23.00 to 00.00	51.4	73.1	60.1
00.00 to 01.00	53.3	72.8	58.5
01.00 to 02.00	38.6	72.4	59.8
02.00 to 03.00	41.6	70.9	57.8
03.00 to 04.00	38.4	72.8	62.4
04.00 to 05.00	38.7	76.5	61.9
05.00 to 06.00	40.4	73.3	62.4

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{01N}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	48.4	55.9	61.5	51.2	47.5	67.5	56.5
Night Time (22.00 Hrs to 06.00 Hrs)	36.4	76.5	59.8	49.8	39.8		59.8

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note:

Analyzed By

For SKYLAB ANALYTICAL LABORATORY



 Nikita

 Technical Executive





 Dr. Datta Mandhare

 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरी PSP Joint Venture
 Bhiwपुरी Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SALMSP19/FM0102/AM(25-26-2017)

REPORT DATE : 04/02/2020

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2377)

LOCATION : Office Area

SAMPLING PLAN & METHOD NO. : As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 27/01/2020

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 13:15:00

SAMPLE COLLECTED BY : Mr. Dalta Korda (SkyLab)

ANALYSIS START DATE : 28/01/2020

AMBIENT TEMPERATURE : 27°C To 39°C

ANALYSIS COMPLETE DATE : 31/01/2020

HUMIDITY : 56% To 87%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	88.1	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	47.3	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	31.2	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	40.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	22.5	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<0.1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.72	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Dalta Mandhare
 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s. TPL-HCC BHIVPURI P&P Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (UPPER),
 Maharashtra

REPORT NO : SAL/MSP18/FM01/02/AM(25-26-2376)
REPORT DATE : 04/02/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2376) **LOCATION :** Batching Plant
SAMPLING PLAN & METHOD NO: As Per Reference Method **COORDINATES :** NA
SAMPLING DATE : 27/01/2026 **SAMPLING DURATION :** 24 Hrs
SAMPLING TIME : 13:42:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (SkyLab)
ANALYSIS START DATE : 29/01/2026 **AMBIENT TEMPERATURE :** 27°C To 39°C
ANALYSIS COMPLETE DATE : 31/01/2026 **HUMIDITY :** 56% To 67%


Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.3	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	47.2	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	28.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	26.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	8	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.61	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Ms. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpur Camp, Karjal, Survey No-1, Taluka Karjal
 (UPPER), Maharashtra

REPORT NO : SAL/MS/19/FM05/02/ANG(25-26-2370)

REPORT DATE : 04/02/2020

CUSTOMER REF: 5700053083

REF DATE : 17/11/2020

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 02/ANG(25-26-2370)

SAMPLE COLLECTED BY : Mr. Datta Konde (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9999

SAMPLE LOCATION : Batching Plant

SAMPLING DATE : 27/01/2020

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	52.9	76.3	68.3
07.00 to 08.00	46.5	71.4	72
08.00 to 09.00	54.7	70.1	74.4
09.00 to 10.00	42.5	71.4	68.2
10.00 to 11.00	46.2	76.2	70.8
11.00 to 12.00	53.5	102.6	65.3
12.00 to 13.00	48.4	71.8	72.9
13.00 to 14.00	48.3	80.9	64.7
14.00 to 15.00	47.5	80.2	72.3
15.00 to 16.00	54.7	73.5	68.5
16.00 to 17.00	49.3	71.2	72.8
17.00 to 18.00	45.3	87.5	72.7
18.00 to 19.00	49.7	73.8	65.3
19.00 to 20.00	41.3	69.2	63.6
20.00 to 21.00	47.6	82.6	70.1
21.00 to 22.00	46.8	73.8	69.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	42.4	73.7	62.9
23.00 to 00.00	48.4	66.5	58.3
00.00 to 01.00	38.8	73.7	59.5
01.00 to 02.00	41.8	72.4	58.7
02.00 to 03.00	58.2	69.3	60.2
03.00 to 04.00	58.2	73.7	64.3
04.00 to 05.00	42.2	70.2	62.1
05.00 to 06.00	38.8	71.3	61.9

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40





Sky Lab

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Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{90N}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	41.3	102.6	61.4	51.4	41.2	70.1	69.5
Night Time (22.00 Hrs to 06.00 Hrs)	38.8	73.7	59.8	48.7	38.7		61.0

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By

Nikita
Nikita

Technical Executive



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Ms. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/02/ANC(25-26-2379)

REPORT DATE : 04/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 02/ANC(25-26-2379)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Office Area

SAMPLING DATE : 27/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	55.8	73.8	67.1
07.00 to 08.00	55.4	73.7	72.4
08.00 to 09.00	47.2	80.3	65.9
09.00 to 10.00	47.2	97.9	68.2
10.00 to 11.00	46.5	102.5	69.2
11.00 to 12.00	55.8	89.1	65.6
12.00 to 13.00	42.5	95.9	67.8
13.00 to 14.00	54.7	87.5	64.4
14.00 to 15.00	43.5	70.2	64.7
15.00 to 16.00	41.2	78.3	63.9
16.00 to 17.00	53.4	77.2	64.7
17.00 to 18.00	45.5	87.6	65.2
18.00 to 19.00	53.8	76.3	71.3
19.00 to 20.00	53.1	91.3	70.5
20.00 to 21.00	45.7	91.2	64.7
21.00 to 22.00	51.5	81.9	69.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	57.4	72.4	60.9
23.00 to 00.00	59.7	71.5	61.9
00.00 to 01.00	45.4	73.3	61.2
01.00 to 02.00	42.2	89.2	58.9
02.00 to 03.00	43.4	71.6	60.6
03.00 to 04.00	42.4	78.8	62.8
04.00 to 05.00	38.6	68.1	59.5
05.00 to 06.00	38.7	68.2	58.8

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	41.2	102.5	63.5	52.4	41.8	69.2	67.0
Night Time (22.00 Hrs to 06.00 Hrs)	38.6	89.2	56.7	49.8	40.2		60.1

ND: Not Detected NS: Not Specified

Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area

Note:

Analyzed By


 Nikita

Technical Executive



TC-9180

For SKYLAB ANALYTICAL LABORATORY



Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FMD1/01/AM(25-26-211)

REPORT DATE : 31/01/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-2115)

SAMPLING PLAN & METHOD NO: As Per Reference Method

SAMPLING DATE : 27/01/2026

SAMPLING TIME : 12:25:00

ANALYSIS START DATE : 29/01/2026

ANALYSIS COMPLETE DATE : 31/01/2026

LOCATION : Nr. JV Admin Office
 COORDINATES : NA

SAMPLING DURATION : 24 Hrs
 SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
 AMBIENT TEMPERATURE : 27°C To 36°C
 HUMIDITY : 52% To 64%


Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	83.6	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	40.7	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	26.8	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	38.1	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	21.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.55	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.


Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरी P&P Joint Venture
Bhiwपुरी Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
Maharashtra

REPORT NO : SALMSP19/FM01/01/AM/25-26-2179

REPORT DATE : 31/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM/25-26-2114

SAMPLING PLAN & METHOD NO. : As Per Reference Method

SAMPLING DATE : 27/01/2026

SAMPLING TIME : 12:15:00

ANALYSIS START DATE : 29/01/2026

ANALYSIS COMPLETE DATE : 31/01/2026

LOCATION : Nr. SRM Site Office

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

AMBIENT TEMPERATURE : 27°C To 38°C

HUMIDITY : 52% To 64%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	76.2	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	41.3	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	25.4	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	37.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	16.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.63	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Neha
Analyst



For SKYLAB ANALYTICAL LABORATORY

Datta Mandhare
Dr. Datta Mandhare
(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:-

Ms. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/01/AM(25-26-2116)

REPORT DATE : 31/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 01/AM(25-26-2116)

SAMPLING PLAN & METHOD NO: As Per Reference Method

SAMPLING DATE : 27/01/2026

SAMPLING TIME : 12:35:00

ANALYSIS START DATE : 29/01/2026

ANALYSIS COMPLETE DATE : 31/01/2026

LOCATION : Nr. Batching Plant

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

AMBIENT TEMPERATURE : 27°C To 38°C

HUMIDITY : 52% To 64%

Sr.No.	Test Parameters	Unit	Result	Norms *	Reference Method
1	Particulate Matter PM10	µg/m ³	84.6	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	41.7	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	25.4	60	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.4	60	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.61	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

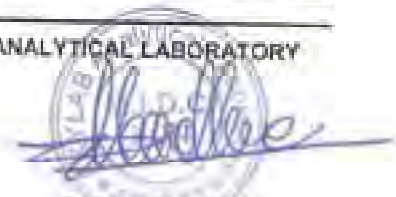
Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO. : SAL/MSP19/FM05/01/ANC(25-26-2117)

REPORT DATE : 29/01/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-2117)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Nr. SRM Site Office

SAMPLING DATE : 27/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	51.5	82.9	65.7
07.00 to 08.00	46.5	74.4	69.2
08.00 to 09.00	54.4	82.1	66.3
09.00 to 10.00	57.2	73.2	70.9
10.00 to 11.00	54.5	71.2	68.7
11.00 to 12.00	50.3	83.9	68.7
12.00 to 13.00	47.8	83.1	59.2
13.00 to 14.00	55.8	84.8	65.3
14.00 to 15.00	57.2	84.3	65.3
15.00 to 16.00	46.5	82.9	68.4
16.00 to 17.00	56.9	73.1	58.1
17.00 to 18.00	50.3	74.4	65.5
18.00 to 19.00	50.5	88.6	58.8
19.00 to 20.00	52.8	84.9	65.7
20.00 to 21.00	48.5	74.4	69
21.00 to 22.00	55.5	74.1	74.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	42.2	75.2	61.9
23.00 to 00.00	39.5	71.9	59.5
00.00 to 01.00	46.8	74.1	62.2
01.00 to 02.00	42.4	71.9	59.3
02.00 to 03.00	48.3	68.9	56.7
03.00 to 04.00	49.9	69.4	61.9
04.00 to 05.00	42.2	73.4	58.2
05.00 to 06.00	47.8	69.7	59.2

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40




Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Low	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	45.5	68.5	67.8	57.8	46.5	57.8	60.2
Night Time (22.00 Hrs to 06.00 Hrs)	35.5	75.2	66.5	54.5	44.7		58.8

ND: Not Detected, NS: Not Specified.


Opinion/Observation: Noise level (LeqdB (A)) is within the limits specified as per CPCB guidelines for Industrial Area

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Nikita
 Technical Executive




 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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ULR:TC515026000002227F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Ms. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : 5AL/MSP19/FM05/01/ANC(25-26-2118)

REPORT DATE : 29/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-2118)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9889

SAMPLE LOCATION : Nr. JV Admin Office

SAMPLING DATE : 27/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	47.5	80.7	66.6
07.00 to 08.00	50.8	84.1	71.2
08.00 to 09.00	56.5	74.4	63.2
09.00 to 10.00	57.8	85.8	58.8
10.00 to 11.00	48.8	80.5	67.9
11.00 to 12.00	54.7	82.2	59.2
12.00 to 13.00	54.5	78.9	58.3
13.00 to 14.00	46.8	78.9	56.9
14.00 to 15.00	48.6	78.7	67.9
15.00 to 16.00	54.5	73	66.3
16.00 to 17.00	51.5	91.7	68.4
17.00 to 18.00	57.9	80.4	62.4
18.00 to 19.00	57.8	91.5	62.7
19.00 to 20.00	57.7	96.3	59.2
20.00 to 21.00	56.7	85.4	62.4
21.00 to 22.00	46.6	81.4	74.3

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	46.5	71.9	64.9
23.00 to 00.00	39.8	73.7	59.2
00.00 to 01.00	46.8	72.7	62.5
01.00 to 02.00	40.9	70.4	64.4
02.00 to 03.00	42.8	71.9	64.7
03.00 to 04.00	43.7	65.9	62.2
04.00 to 05.00	45.7	74.4	63.3
05.00 to 06.00	46.6	80.4	58.3

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (08.00 Hrs to 22.00 Hrs)	44.8	96.3	54.8	58.7	54.2	68.1	64.2
Night Time (22.00 Hrs to 06.00 Hrs)	39.8	80.4	52.4	52.1	41.5		62.4

ND: Not Detected, NS: Not Specified

Opinion/Observation: Noise level (Leq_{dB} (A)) is within the limits specified as per CPCB guidelines for Industrial Area

Note:

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Nikita
 Technical Executive




 Dr. Datta Mandhare
 (Authorized Signatory)

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ULR:TC51502600002228F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI P&P Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (LOWER), Maharashtra

REPORT NO : 15AL/MSP19/FM05/01/ANC(25-26-2119)

REPORT DATE : 29/01/2025

CUSTOMER REF : 57DX053883

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 01/ANC(25-26-2119)

SAMPLE COLLECTED BY : Mr.Datta Konde (SkyLab)

SAMPLING PLAN & METHOD NO. : IS 9985

SAMPLE LOCATION : Nr. Batching Plant

SAMPLING DATE : 27/01/2025

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	48.5	70.4	61.0
07.00 to 08.00	50.4	81.5	59.2
08.00 to 09.00	51.4	98.1	67.4
09.00 to 10.00	54.8	73.5	63.8
10.00 to 11.00	54.1	80.8	67.5
11.00 to 12.00	47.6	73.2	59.2
12.00 to 13.00	47.3	78.8	59.5
13.00 to 14.00	55.6	80.1	69.4
14.00 to 15.00	57.5	73.2	63.7
15.00 to 16.00	54.1	78.8	68.1
16.00 to 17.00	52.9	85.6	58.1
17.00 to 18.00	56.6	83.6	59.2
18.00 to 19.00	47.2	77.4	59.2
19.00 to 20.00	46.7	75.9	62.5
20.00 to 21.00	47.7	77.6	58.5
21.00 to 22.00	52.6	70.1	58.1

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.1	68.2	60.2
23.00 to 00.00	46.5	72.9	62.5
00.00 to 01.00	41.5	77.7	61.3
01.00 to 02.00	45.5	65.5	62.5
02.00 to 03.00	42.7	77.5	58.7
03.00 to 04.00	47.4	71.9	62.3
04.00 to 05.00	48.5	71.9	58.8
05.00 to 06.00	49.6	73.4	64.4

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40


 Datta Konde
 ANALYTICAL LABORATORY
 421311


Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	45.7	68.1	58.9	59.7	59.4	67.5	62.2
Night Time (22.00 Hrs to 06.00 Hrs)	41.5	77.7	65.9	55.4	45.5		61.3

ND: Not Detected. NS: Not Specified.

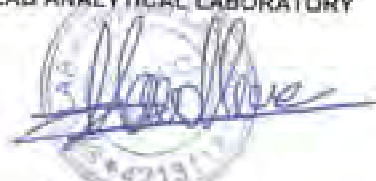
Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Analyzed By


Nikita
 Technical Executive



For SKYLAB ANALYTICAL LABORATORY


Dr. Datta Mandhare
 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWपुरI P&P Joint Venture
 Bhiwपुरi Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SALJMSF19/FM01/02/AM/25-26-2487

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM/25-26-2487/1

LOCATION : Nr. Batching Plant

SAMPLING PLAN & METHOD NO.: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 30/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 13:30:00

SAMPLE COLLECTED BY : Mr. Datta Korde (SkyLab)

ANALYSIS START DATE : 02/02/2026

AMBIENT TEMPERATURE : 24°C To 38°C

ANALYSIS COMPLETE DATE : 04/02/2026

HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.9	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.2	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	24.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.8	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	23.6	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.63	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare
 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HOC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2498)

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2498)

SAMPLING PLAN & METHOD NO.: As Per Reference Method

SAMPLING DATE : 30/01/2026

SAMPLING TIME : 14:30:00

ANALYSIS START DATE : 02/02/2026

ANALYSIS COMPLETE DATE : 04/02/2026

LOCATION : No. 6/MA Site Office

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

AMBIENT TEMPERATURE : 24°C To 38°C

HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	89.3	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.3	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	20.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	40.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	31.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<0.1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.54	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Manghate
 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIHPURI PSP Joint Venture
 Bhihpuri Camp, Karjat, Survey No 1, Taluka Karjat (L.C.W.E.R.),
 Maharashtra

REPORT NO : SAL/MSP10/FM01/02/AM(25-26-3489)

REPORT DATE : 01/03/2025

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. :	02/AM(25-26-2495)	LOCATION :	Nr. JV Admin Office
SAMPLING PLAN & METHOD NO.:	As Per Reference Method	COORDINATES :	NA
SAMPLING DATE :	30/01/2026	SAMPLING DURATION :	24 Hrs
SAMPLING TIME :	16:30:00	SAMPLE COLLECTED BY :	Mr. Datta Korde (Skylab)
ANALYSIS START DATE :	02/02/2026	AMBIENT TEMPERATURE :	24°C To 38°C
ANALYSIS COMPLETE DATE :	04/02/2026	HUMIDITY :	53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	86.9	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	47.2	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	24.9	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	22.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<0.1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 622, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.57	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

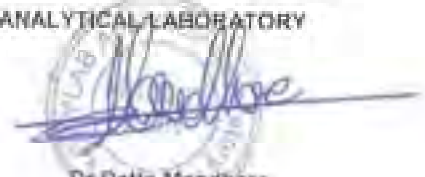
Note :

Analyzed By

Neha
Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mendhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2497)
REPORT DATE : 05/02/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2497)
SAMPLING PLAN & METHOD NO.: As Per Reference Method
SAMPLING DATE : 30/01/2026
SAMPLING TIME : 13:30:00
ANALYSIS START DATE : 03/02/2026
ANALYSIS COMPLETE DATE : 05/02/2026

LOCATION : Nr. Batching Plant
COORDINATES : NA
SAMPLING DURATION : 24 Hrs
SAMPLE COLLECTED BY : Mr. Datta Korde (Skylab)
AMBIENT TEMPERATURE : 24°C To 38°C
HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.9	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.2	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	24.7	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.8	60	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Arsenonia	µg/m ³	23.8	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.63	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP1W/FM01/02/AM(25-26-2498T)

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053683

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2498)

LOCATION : Nr. SRM Site Office

SAMPLING PLAN & METHOD NO: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 30/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 14:30:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 31/01/2026

AMBIENT TEMPERATURE : 24°C To 38°C

ANALYSIS COMPLETE DATE : 03/02/2026

HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	89.3	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.3	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	20.1	60	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	40.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	31.3	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<0.1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.54	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By


 Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta.Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

Mrs. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM/25-26-2499

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2499)

SAMPLING PLAN & METHOD NO: As Per Reference Method

SAMPLING DATE : 30/01/2026

SAMPLING TIME : 16:30:00

ANALYSIS START DATE : 31/01/2026

ANALYSIS COMPLETE DATE : 03/02/2026

LOCATION : Nr. JV Admin Office

COORDINATES : NA

SAMPLING DURATION : 24 Hrs

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

AMBIENT TEMPERATURE : 24°C To 38°C

HUMIDITY : 53% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	86.9	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	47.2	60	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	24.9	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	42.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	22.4	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo(a)Pyrene	ng/m ³	BDL(<0.1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.57	2	IS 5182 (Part 10)

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Note :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Majidhara

Dr.Datta Majidhara

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:	REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2380)
M/s. TPL-HCC BHIVPURI PSP Joint Venture	REPORT DATE : 04/02/2026
Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER), Maharashtra	CUSTOMER REF : 5700053883
	REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2380)	LOCATION : Batching Plant
SAMPLING PLAN & METHOD NO.: As Per Reference Method	COORDINATES : NA
SAMPLING DATE : 30/01/2026	SAMPLING DURATION : 24 Hrs
SAMPLING TIME : 09:55:00	SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 02/02/2026	AMBIENT TEMPERATURE : 24°C To 36°C
ANALYSIS COMPLETE DATE : 04/02/2026	HUMIDITY : 56% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	85.6	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	46.7	80	IS 5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	27.8	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	41.5	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	25.2	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.60	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

Nota :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Datta
Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (UPPER),
 Maharashtra

REPORT NO : SAL/MSP19/FM01/02/AM(25-26-2381)

REPORT DATE : 04/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Ambient Air

SAMPLE REGISTRATION NO. : 02/AM(25-26-2381)

LOCATION : Office Area

SAMPLING PLAN & METHOD NO.: As Per Reference Method

COORDINATES : NA

SAMPLING DATE : 30/01/2026

SAMPLING DURATION : 24 Hrs

SAMPLING TIME : 09:38:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 02/02/2026

AMBIENT TEMPERATURE : 24°C To 38°C

ANALYSIS COMPLETE DATE : 04/02/2026

HUMIDITY : 56% To 65%

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Particulate Matter PM10	µg/m ³	87.4	100	IS 5182 (Part-23)
2	Particulate Matter PM 2.5	µg/m ³	45.3	60	IS:5182, (Part 24)
3	Sulphur Dioxide	µg/m ³	30.1	80	IS 5182 (Part 2)
4	Nitrogen Oxides	µg/m ³	39.3	80	IS: 5182, (Part-6)
5	Ozone	µg/m ³	BDL(<20)	180	Method 411, Methods of Air Sampling and Analysis, 3rd Edition
6	Ammonia	µg/m ³	21.5	400	Method 401, Methods of Air Sampling and Analysis, 3rd Edition
7	Benzene	µg/m ³	BDL(<0.1)	5	IS 5182 (Part 11)
8	Benzo[a]Pyrene	ng/m ³	BDL(<1)	1	IS 5182 (Part 12)
9	Lead	µg/m ³	BDL(<0.1)	1	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
10	Arsenic	ng/m ³	BDL(<1)	6	Method 302, Methods of Air Sampling and Analysis, 3rd Edition
11	Nickel	ng/m ³	BDL(<0.5)	20	Method 822, Methods of Air Sampling and Analysis, 3rd Edition
12	Carbon Monoxide	mg/m ³	0.70	2	IS 5182 (Part 10)

ND: Not Detected, NS: Not Specified.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per NAAQ Standards.

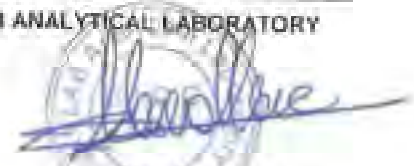
Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
 (UPPER), Maharashtra

REPORT NO : SAL/MSP19/FM05/02/ANC(25-26-2387)

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 02/ANC(25-26-2387)

SAMPLE COLLECTED BY : Mr.Datta Kerde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Office Area

SAMPLING DATE : 30/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	46.2	95.4	65.8
07.00 to 08.00	50.8	102.9	68.6
08.00 to 09.00	46.5	71.4	65.7
09.00 to 10.00	54.4	85.5	68.3
10.00 to 11.00	50.8	95.5	68.7
11.00 to 12.00	43.5	71.4	65.2
12.00 to 13.00	51.5	103.3	69.5
13.00 to 14.00	48.1	79.9	68.9
14.00 to 15.00	55.0	72.2	68.2
15.00 to 16.00	46.8	81.1	71.4
16.00 to 17.00	41.5	78.2	68.2
17.00 to 18.00	50.4	76.3	68.9
18.00 to 19.00	59.2	79.9	69.2
19.00 to 20.00	49.3	72.3	71.4
20.00 to 21.00	49.3	94.9	74.9
21.00 to 22.00	46.5	71.7	70.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	43.2	69.5	64.1
23.00 to 00.00	58.8	69.3	60.9
00.00 to 01.00	41.8	70.9	60.6
01.00 to 02.00	41.6	72.6	62.4
02.00 to 03.00	43.2	69.3	58.8
03.00 to 04.00	51.2	67.9	58.8
04.00 to 05.00	38.4	71.5	64.1
05.00 to 06.00	41.8	71.1	58.6

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40



Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	L _{DN}	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	41.5	103.3	67.8	59.8	47.5	69.5	68.9
Night Time (22.00 Hrs to 06.00 Hrs)	38.4	71.5	60.4	50.1	40.2		61.0

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial Area.

Note :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare
(Authorized Signatory)

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ULR:TC51502600002753F

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI P&P Joint Venture
Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat
(UPPER), Maharashtra

REPORT NO : SAL/MSPT/WM05/02/ANC(25-26-2386)

REPORT DATE : 05/02/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: 24hrs Ambient Noise

SAMPLE REGISTRATION NO. : 02/ANC(25-26-2386)

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLING PLAN & METHOD NO. : IS 9989

SAMPLE LOCATION : Batching Plant

SAMPLING DATE : 30/01/2026

COORDINATES : NA

Day Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
06.00 to 07.00	48.4	81.2	69.3
07.00 to 08.00	46.8	78.7	68.9
08.00 to 09.00	42.5	79.9	64.7
09.00 to 10.00	42.5	79.9	64.7
10.00 to 11.00	50.5	78.9	70.7
11.00 to 12.00	46.8	69.7	68.6
12.00 to 13.00	51.6	71.8	68.7
13.00 to 14.00	46.7	71.8	72.9
14.00 to 15.00	47.2	73.4	70.8
15.00 to 16.00	59.2	81.5	72.3
16.00 to 17.00	46.6	72.4	68.2
17.00 to 18.00	41.7	77.7	65.6
18.00 to 19.00	53.7	69.1	65.8
19.00 to 20.00	45.2	71.4	65.6
20.00 to 21.00	47.1	76.8	68.9
21.00 to 22.00	45.5	76.9	60.6

Night Time (Hrs.)	Noise Level dB(A)		Hourly Leq
	Min.	Max.	
22.00 to 23.00	42.4	69.2	60.3
23.00 to 00.00	38.74	66.4	58.5
00.00 to 01.00	59.3	68.2	64.8
01.00 to 02.00	57.4	67.7	63.6
02.00 to 03.00	41.8	67.4	58.5
03.00 to 04.00	43.2	76.3	58.5
04.00 to 05.00	57.4	67.9	60.3
05.00 to 06.00	42.4	70.1	64.6

Category Zone	Limits in dB(A) Leq	
	Day Time	Night Time
Industrial area	75	70
Commercial area	65	55
Residential area	55	45
Silence Zone	50	40





Sky Lab

ANALYTICAL LABORATORY

Accredited by NABL as per ISO/IEC 17025:2017

Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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Noise Level Monitoring Report Summary

Time	Min	Max	L10	L50	L90	Leq	LEQ dB(A)
Day Time (06.00 Hrs to 22.00 Hrs)	41.7	81.5	65.8	56.4	45.2	70.3	67.9
Night Time (22.00 Hrs to 06.00 Hrs)	38.7	78.3	63.8	52.4	50.1		61.1

ND: Not Detected. NS: Not Specified.

Opinion/Observation: Noise level (Leqdb (A)) is within the limits specified as per CPCB guidelines for Industrial

Notes :

Analyzed By

Neha
Neha

Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Mandhare

Dr. Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Rajgad | Maharashtra - 410201 | India,
 Maharashtra

REPORT NO : SAL/MSP19/FM03/12/DW(25-26-0635)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 12/DW(25-26-0635)

LOCATION : Near Tata Power Gate

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 02/12/2025

SAMPLING TIME : 13:18:00

SAMPLE COLLECTED BY : Mr. Delta Korde (Skyway)

ANALYSIS START DATE : 03/12/2025

SAMPLE QUANTITY : 1 Ltr

ANALYSIS COMPLETE DATE : 06/12/2025

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	7.55	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	52	500	IS 3025 (Part 16)
6	Ammonium (as total ammonia-N)	mg/L	BDL(<0.01)	0.5	IS 3025 (Part 34)
7	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
8	Barium, as Ba	mg/L	BDL(<0.1)	0.7	IS 3025 (Part 2)
9	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
10	Calcium, as Ca	mg/L	11	75	IS 3025 (Part 40)
11	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2): 2019
12	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60): 2008



Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
13	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
14	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
15	Magnesium, as Mg	mg/L	3	30	IS 3025 (Part 40)
16	Manganese, as Mn	mg/L	BDL(<0.025)	0.1	IS 3025 (Part 2)
17	Nitrite, as NO ₂	mg/L	BDL(<0.001)	45	IS 3025 (Part 34)
18	Phenolic Compounds, as C ₆ H ₅ OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
19	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
20	Silver, as Ag	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
21	Sulphate, as SO ₄	mg/L	2.7	200	IS 3025 (Part 24)
22	Sulphide, as H ₂ S	mg/L	BDL(<0.01)	0.05	IS 3025 (Part 29)
23	Hardness (total)	mg/L	41	200	IS 3025 (Part 21)
24	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
25	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27): 1986
26	Metal-Molybdenum	mg/L	BDL(<0.07)	0.07	IS 3025 (Part 2)
27	Chloramines, as Cl ₂	mg/L	BDL(<1)	4	IS 3025 (Part 26)
28	Chloride, as Cl	mg/L	8	250	IS 3025 (Part 32)
29	Total Alkalinity, as CaCO ₃	mg/L	28	200	IS 3025 (Part 23)
30	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
31	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
32	Cadmium, as Cd	mg/L	BDL(<0.003)	0.003	IS 3025 (Part 2)
33	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
34	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 48)
35	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
36	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIHPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka-Karjat I Dist-Raigad I Maharashtra - 410201 I India,
 Maharashtra

REPORT NO : SAL/MSP19/FM03/12/DW(25-26-0635)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 12/DW(25-26-0635)

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLING DATE : 02/12/2025

SAMPLING TIME : 13:18:00

ANALYSIS START DATE : 03/12/2025

ANALYSIS COMPLETE DATE : 06/12/2025

LOCATION : Near Tata Power Gate

SAMPLE SPECIFICATION : Drinking Water

SAMPLE COLLECTED BY : Mr. Datta Korde (Skyway)

SAMPLE QUANTITY : 1 Ltr

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Polychlorinated Biphenyls (PCBs)	mg/L	BDL(ND)	0.0005	APHA 24th Ed. 6431 B
2	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
3	Mineral Oil	mg/L	BD(L<0.5)	0.5	IS 3025 (Part 39)
4	Bromoform	mg/L	BDL(ND)	0.1	APHA 24th Ed. 6232 B
5	Dibromochloromethane	mg/L	BDL(ND)	0.1	APHA 24th Ed. 6232 B
6	Bromodichloromethane	mg/L	BDL(ND)	0.06	APHA 24th Ed. 6232 B
7	Chloroform	mg/L	BDL(ND)	0.2	APHA 24th Ed. 6232 B
8	Poly nuclear Aromatic Hydrocarbons (PAH)	mg/L	BDL(ND)	0.0001	APHA 24th Ed. 6440 B

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

Neha

Neha

Analyst

For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

- This report is valid only for the scope sample tested/monitored and only for time and place of monitoring/testing.
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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 P O Bhivpuri Camp, Karjat, Survey No-1, PO-Bhivpuri Camp 1
 Taluka- Karjat | Dist-Raigad | Maharashtra - 410201 | India,
 Maharashtra

REPORT NO : SAL/MSP19/FM03/12/DW(25-26-0633)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700063863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 12/DW(25-26-0633)

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLING DATE : 02/12/2025

SAMPLING TIME : 23:30:00

ANALYSIS START DATE : 03/12/2025

ANALYSIS COMPLETE DATE : 06/12/2025

LOCATION : Office Area

SAMPLE SPECIFICATION : Drinking Water

SAMPLE COLLECTED BY : Mr. Dalta Korde (Skylab)

SAMPLE QUANTITY : 1 Ltr

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	7.51	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	70	500	IS 3025 (Part 16)
6	Ammonium (as total ammonia-N)	mg/L	BDL(<0.01)	0.5	IS 3025 (Part 34)
7	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
8	Barium, as Ba	mg/L	BDL(<0.1)	0.7	IS 3025 (Part 2)
9	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
10	Calcium, as Ca	mg/L	9	75	IS 3025 (Part 40)
11	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2): 2019
12	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60): 2008



 Analytical Lab
 No. 421311

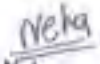
Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
13	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
14	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
15	Magnesium, as Mg	mg/L	3	30	IS 3025 (Part 46)
16	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
17	Nitrate, as NO ₃	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
18	Phenolic Compounds, as C ₆ H ₅ OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
19	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
20	Silver, as Ag	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
21	Sulphate, as SO ₄	mg/L	1.3	200	IS 3025 (Part 24)
22	Sulphide, as H ₂ S	mg/L	BDL(<0.01)	0.05	IS 3025 (Part 29)
23	Hardness (total)	mg/L	34	200	IS 3025 (Part 21)
24	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
25	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27): 1986
26	Metal-Molybdenum	mg/L	BDL(<0.07)	0.07	IS 3025 (Part 2)
27	Chloramines, as Cl ₂	mg/L	BDL(<1)	4	IS 3025 (Part 26)
28	Chloride, as Cl	mg/L	20	250	IS 3025 (Part 32)
29	Total Alkalinity, as CaCO ₃	mg/L	33	200	IS 3025 (Part 23)
30	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
31	Arsenic, as As	mg/l	BDL(<0.01)	0.01	IS 3025 (Part 2)
32	Cadmium, as Cd	mg/L	BDL(<0.0013)	0.003	IS 3025 (Part 2)
33	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
34	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 48)
35	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
36	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

ND: Not Detected, NS: Not Specified, As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhara
 (Authorized Signatory)

END OF REPORT



Sky Lab

ANALYTICAL LABORATORY

Accredited by NABL as per ISO/IEC 17025:2017

Certified by ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Recognized by Ministry of Environment, Forest & Climate Change (MoEFCC), Govt. of India, New Delhi

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWARI P5P Joint Venture
P O Bhiwari Camp, Karjat, Surany No-1, PO-Bhiwari Camp 1
Taluka- Karjat | Dist-Rajgad | Maharashtra - 410201 | India,
Maharashtra

REPORT NO : SAL/MS/19/FM00/12/DW(25-26-033)

REPORT DATE : 15/12/2025

CUSTOMER REF : 5700053663

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 12/DW(25-26-0633)

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLING DATE : 02/12/2025

SAMPLING TIME : 23:30:00

ANALYSIS START DATE : 03/12/2025

ANALYSIS COMPLETE DATE : 06/12/2025

LOCATION : Office Area

SAMPLE SPECIFICATION : Drinking Water

SAMPLE COLLECTED BY : Mr. Delta Korde (Skylab)

SAMPLE QUANTITY : 1 Ltr

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Polychlorinated Biphenyls (PCBs)	mg/L	BDL(ND)	0.0005	APHA 24th Ed. 6431 B
2	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
3	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)
4	Bromoform	mg/L	BDL(ND)	0.1	APHA 24th Ed. 6232 B
5	Dibromochloromethane	mg/L	BDL(ND)	0.1	APHA 24th Ed. 6232 B
6	Bromodichloromethane	mg/L	BDL(ND)	0.06	APHA 24th Ed. 6232 B
7	Chloroform	mg/L	BDL(ND)	0.2	APHA 24th Ed. 6232 B
8	Poly nuclear Aromatic Hydrocarbons (PAH)	mg/L	BDL(<0.001)	0.0001	APHA 24th Ed. 6440 B

ND: Not Detected, NS: Not Specified, As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY

Delta
Delta
Analyst

Delta
Delta Mandhara
(Authorized Signatory)

END OF REPORT

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3. Any attempt of forgery or misleading use of this report by any person/organization etc will attract suitable legal action against them by SKYLAB Analytical Laboratory.



TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM03/01/DW(25-26-0374)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

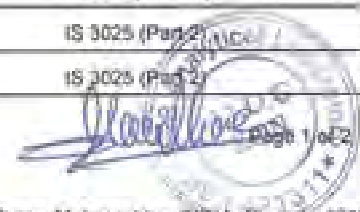
REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-0374)
SAMPLING PLAN & METHOD NO.: IS 17614 Part 1
SAMPLING DATE : 09/01/2026
SAMPLING TIME : 16:00:00
ANALYSIS START DATE : 10/01/2026
ANALYSIS COMPLETE DATE : 13/01/2026

LOCATION : JV Office
SAMPLE SPECIFICATION : Drinking Water
SAMPLE COLLECTED BY : Mr. Datia Korde (Skylab)
SAMPLE QUANTITY : 1Ltr.
SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	6.83	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	16	500	IS 3025 (Part 16)
6	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
7	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
8	Calcium, as Ca	mg/L	1	75	IS 3025 (Part 40)
9	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2): 2019
10	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60): 2008
11	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
12	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
13	Magnesium, as Mg	mg/L	2	30	IS 3025 (Part 46)
14	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
15	Nitrate, as NO3	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
16	Phenolic Compounds, as C6H5OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
17	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
18	Sulphate, as SO4	mg/L	1.0	200	IS 3025 (Part 24)
19	Hardness (total)	mg/L	10	200	IS 3025 (Part 21)
20	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
21	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27): 1986
22	Chloride, as Cl	mg/L	11	260	IS 3025 (Part 32)
23	Total Alkalinity, as CaCO3	mg/L	3	200	IS 3025 (Part 23)
24	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
25	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)



(Signature)
 17/01/2026

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
26	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
27	Mercury, as Hg	mg/L	BDL(<0.01)	0.001	IS 3025 (Part 48)
28	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
29	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

ND: Not Detected, NS: Not Specified. As per IS 10500:2012.

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

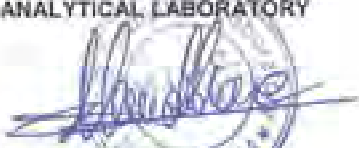
Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : GAL/MSF19/FM03/01/DW(25-26-0374)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-0374)

LOCATION : JV Office

SAMPLING PLAN & METHOD NO.: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 16:00:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 10/01/2026

SAMPLE QUANTITY : 1Ltr.

ANALYSIS COMPLETE DATE : 13/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms [#]	Reference Method
1	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
2	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


 Neha

Analyst

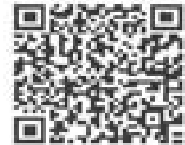
For SKYLAB ANALYTICAL LABORATORY


 Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSF19/FM12/01/MSA(25-26-0376)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

SAMPLE TYPE: Water Analysis

SAMPLE REGISTRATION NO. : 01/MSA(25-26-0376)

LOCATION : JV Office

SAMPLING PLAN & METHOD NO: As Per Reference Method

SAMPLE SPECIFICATION : Drinking Water (01/DW 0374)

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 18:00:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 10/01/2026

SAMPLE QUANTITY : 1Ltr

ANALYSIS COMPLETE DATE : 13/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	E. Coli	/100 ml	ABSENT	Absent	IS 15185
2	Total Coliform	/100 ml	PRESENT	Absent	IS 15185

ND: Not Detected. NS: Not Specified.As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit EXCEPT Total Coliform as per specified standard.

Note :

Analyzed By



Ashrah Ansari

Microbiologist

For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWPURI PSP Joint Venture
 Bhiwpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM03/01/DW(25-26-0375)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-0375)

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 16:36:00

ANALYSIS START DATE : 10/01/2026

ANALYSIS COMPLETE DATE : 13/01/2026

LOCATION : Tata Power PSP Office

SAMPLE SPECIFICATION : Drinking Water

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

SAMPLE QUANTITY : 1Ltr.

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	7.47	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	72	500	IS 3025 (Part 16)
6	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
7	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
8	Calcium, as Ca	mg/L	6	75	IS 3025 (Part 40)
9	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2): 2019
10	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60): 2008
11	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
12	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
13	Magnesium, as Mg	mg/L	2	30	IS 3025 (Part 46)
14	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
15	Nitrate, as NO3	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
16	Phenolic Compounds, as C6H5OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
17	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
18	Sulphate, as SO4	mg/L	3.6	200	IS 3025 (Part 24)
19	Hardness (total)	mg/L	24	200	IS 3025 (Part 21)
20	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
21	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27): 1986
22	Chloride, as Cl	mg/L	7	250	IS 3025 (Part 32)
23	Total Alkalinity, as CaCO3	mg/L	22	200	IS 3025 (Part 23)
24	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
25	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)

(Signature)
 Page 1 of 2

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
26	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
27	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 48)
28	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
29	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

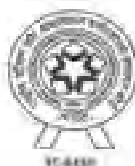
Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By



 Neha

Analyst



YC-4338

For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIHPURI PSP Joint Venture
 Bhihpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP19/FM03/01/DW(25-26-0375)

REPORT DATE : 17/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-0375)

LOCATION : Tata Power PSP Office

SAMPLING PLAN & METHOD NO: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 09/01/2026

SAMPLING TIME : 18:38:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 10/01/2026

SAMPLE QUANTITY : 1Ltr.

ANALYSIS COMPLETE DATE : 13/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms #	Reference Method
1	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
2	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Neha

Analyst


 Dr. Datta Mandhare

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:	REPORT NO : SAL/M5PT19/FM12/01/MSA(25-26-0377)
M/s. TPL-HCC BHIWPURI PSP Joint Venture	REPORT DATE : 17/01/2026
Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),	CUSTOMER REF : 5700053863
Maharashtra	

SAMPLE TYPE: Water Analysis

SAMPLE REGISTRATION NO. : 01/MSA(25-26-0377)	LOCATION : Tata Power PSP Office
SAMPLING PLAN & METHOD NO: As Per Reference Method	SAMPLE SPECIFICATION : Drinking Water (01/DW 0375)
SAMPLING DATE : 09/01/2026	SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
SAMPLING TIME : 16:36:00	SAMPLE QUANTITY : 1Ltr
ANALYSIS START DATE : 10/01/2026	SAMPLE PACKING : Sealed
ANALYSIS COMPLETE DATE : 13/01/2026	

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	E. Coli	/100 ml	ABSENT	Absent	IS 15185
2	Total Coliform	/100 ml	PRESENT	Absent	IS 15185

ND: Not Detected. NS: Not Specified.As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit EXCEPT Total Coliform as per specified standard.

Note :

Analyzed By

Ashrah Ansari

Microbiologist

For SKYLAB ANALYTICAL LABORATORY

Dr.Datta Mandhare

(Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIHPURI PSP Joint Venture
 Bhihpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP18/FM03/01/DW(25-26-1040)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700053863

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-1040)
 SAMPLING PLAN & METHOD NO: IS 17614 Part 1
 SAMPLING DATE : 16/01/2026
 SAMPLING TIME : 17:35:00
 ANALYSIS START DATE : 17/01/2026
 ANALYSIS COMPLETE DATE : 20/01/2026

LOCATION : Karjat Guest House
 SAMPLE SPECIFICATION : Drinking Water
 SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
 SAMPLE QUANTITY : 1Ltr.
 SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	pH	Units	6.58	6.5-8.5	IS 3025 (Part 11)
4	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
5	Total Dissolved Solids	mg/L	32	500	IS 3025 (Part 16)
6	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
7	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
8	Calcium, as Ca	mg/L	2	75	IS 3025 (Part 40)
9	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60)
10	Free residual chlorine	mg/L	0.2	>0.2	IS 3025 (Part 26)
11	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
12	Magnesium, as Mg	mg/L	1	30	IS 3025 (Part 46)
13	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
14	Nitrate, as NO ₃	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
15	Phenolic Compounds, as C ₆ H ₅ OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
16	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
17	Sulphate, as SO ₄	mg/L	2.1	200	IS 3025 (Part 24)
18	Hardness (total)	mg/L	10	200	IS 3025 (Part 21)
19	Zinc, as Zn	mg/l	BDL(<0.05)	5	IS 3025 (Part 2)
20	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27)
21	Chloride, as Cl	mg/L	9	250	IS 3025 (Part 32)
22	Total Alkalinity, as CaCO ₃	mg/L	11	200	IS 3025 (Part 23)
23	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
24	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
25	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)

Sr.No.	Test Parameters	Unit	Result	Norms [#]	Reference Method
26	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 48)
27	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
28	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

ND: Not Detected, NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

Neha

 Analyst



For SKYLAB ANALYTICAL LABORATORY

Dr. Datta Madhure

 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : -SAL/MSP19/FM03/01/DW(25-26-1040)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700053883

REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-1040)

LOCATION : Karjat Guest House

SAMPLING PLAN & METHOD NO.: IS 17614 Part 1

SAMPLE SPECIFICATION : Drinking Water

SAMPLING DATE : 16/01/2026

SAMPLING TIME : 17:35:00

SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)

ANALYSIS START DATE : 17/01/2026

SAMPLE QUANTITY : 1Ltr.

ANALYSIS COMPLETE DATE : 20/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
2	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 PART 2
3	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

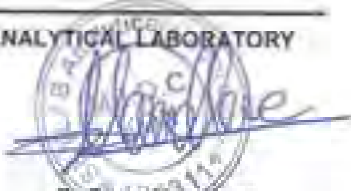
Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By

For SKYLAB ANALYTICAL LABORATORY


 Ncha
 Analyst


 Dr. Datta Mandhara
 (Authorized Signatory)

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIWPURI PSP Joint Venture
Bhiwpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
Maharashtra

REPORT NO : GAL/MSP10/FM12/01/MSA(25-26-1041)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700053863

SAMPLE TYPE: Water Analysis

SAMPLE REGISTRATION NO. : 01/MSA(25-26-1041)

LOCATION : Karjat Guest House

SAMPLING PLAN & METHOD NO: As per Reference Method

SAMPLE SPECIFICATION : Drinking Water (01/DW 1040)

SAMPLING DATE : 16/01/2026

SAMPLING TIME : 17:35:00

SAMPLE COLLECTED BY : Mr.Datta Korda (Skylab)

ANALYSIS START DATE : 19/01/2026

SAMPLE QUANTITY : 1 Ltr

ANALYSIS COMPLETE DATE : 21/01/2026

SAMPLE PACKING : Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Total Coliform	/100 ml	ABSENT	Absent	IS 15185
2	E. Coli	/100 ml	ABSENT	Absent	IS 15185

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By



Ashrah Ansari

Microbiologist

For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhara

(Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:
 M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP15/FM03/01/DW(25-26-1042)
REPORT DATE : 24/01/2026
CUSTOMER REF : 5700053863
REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-1042) **LOCATION :** Karjat Guest House
SAMPLING PLAN & METHOD NO.: IS 17614 Part 1 **SAMPLE SPECIFICATION :** Tap Water
SAMPLING DATE : 16/01/2026
SAMPLING TIME : 18:05:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 17/01/2026 **SAMPLE QUANTITY :** 1Ltr.
ANALYSIS COMPLETE DATE : 20/01/2026 **SAMPLE PACKING :** Sealed

Sr.No.	Test Parameters	Unit	Result	Norms [#]	Reference Method
1	Colour	Hazen	BDL(<5)	5	IS 3025 (Part 4)
2	Odour	mg/L	Agreeable	Agreeable	IS 3025 (Part 5)
3	Turbidity	NTU	BDL(<1)	1	IS 3025 (Part 10)
4	Total Dissolved Solids	mg/L	444	500	IS 3025 (Part 16)
5	Anionic detergents, as MBAS	mg/L	BDL(<0.02)	0.2	IS 13428 (Annex K)
6	Boron, as B	mg/L	BDL(<0.1)	0.5	IS 3025 (Part 2)
7	Calcium, as Ca	mg/L	53	75	IS 3025 (Part 40)
8	Fluoride, as F	mg/L	BDL(<0.1)	1	IS 3025 (Part 60)
9	Free residual chlorine	mg/L	0.2	>=0.2	IS 3025 (Part 26)
10	Iron, as Fe	mg/L	BDL(<0.1)	0.3	IS 3025 (Part 2)
11	Magnesium, as Mg	mg/L	14	30	IS 3025 (Part 46)
12	Manganese, as Mn	mg/L	BDL(<0.05)	0.1	IS 3025 (Part 2)
13	Nitrate, as NO3	mg/L	BDL(<0.1)	45	IS 3025 (Part 34)
14	Phenolic Compounds, as C6H5OH	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 43)
15	Selenium, as Se	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
16	Sulphate, as SO4	mg/L	3.8	200	IS 3025 (Part 24)
17	Hardness (total)	mg/L	190	200	IS 3025 (Part 21)
18	Zinc, as Zn	mg/L	BDL(<0.05)	5	IS 3025 (Part 2)
19	Cyanide, as CN	mg/L	BDL(<0.02)	0.05	IS 3025 (Part 27)
20	Chloride, as Cl	mg/L	30	250	IS 3025 (Part 32)
21	Total Alkalinity, as CaCO3	mg/L	172	200	IS 3025 (Part 23)
22	Aluminium, as Al	mg/L	BDL(<0.01)	0.03	IS 3025 (Part 2)
23	Arsenic, as As	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
24	Lead, as Pb	mg/L	BDL(<0.01)	0.01	IS 3025 (Part 2)
25	Mercury, as Hg	mg/L	BDL(<0.001)	0.001	IS 3025 (Part 14)

(Signature)
 Page 1 of 2

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
26	Nickel, as Ni	mg/L	BDL(<0.01)	0.02	IS 3025 (Part 2)
27	Total Chromium, as Cr	mg/L	BDL(<0.05)	0.05	IS 3025 (Part 2)

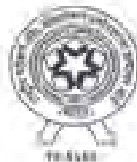
ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


 Neha
 Analyst



For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Mandhare
 (Authorized Signatory)

END OF REPORT

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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjat, Survey No-1, Taluka Karjat (LOWER),
 Maharashtra

REPORT NO : SAL/MSP18/FM03/01/DW(25-26-1042)
 REPORT DATE : 24/01/2026
 CUSTOMER REF : 5700053883
 REF DATE : 17/11/2025

SAMPLE TYPE: Drinking Water

SAMPLE REGISTRATION NO. : 01/DW(25-26-1042)	LOCATION : Karjat Guest House
SAMPLING PLAN & METHOD NO: IS 17614 Part 1	SAMPLE SPECIFICATION : Tap Water
SAMPLING DATE : 16/01/2026	SAMPLE COLLECTED BY : Mr.Datta Korde (Skylab)
SAMPLING TIME : 18:05:00	SAMPLE QUANTITY : 1Ltr.
ANALYSIS START DATE : 17/01/2026	SAMPLE PACKING : Sealed
ANALYSIS COMPLETE DATE : 20/01/2026	

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Taste	-	Agreeable	Agreeable	APHA 24th Ed. 2160A
2	pH	Units	8.06	6.5-8.5	IS 3025 (Part 11)
3	Copper, as Cu	mg/L	BDL(<0.05)	0.05	IS 3025 PART 2
4	Mineral Oil	mg/L	BDL(<0.5)	0.5	IS 3025 (Part 39)

ND: Not Detected. NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By


 Neha

Analyst

For SKYLAB ANALYTICAL LABORATORY


 Dr. Datta Manjhar
 (Authorized Signatory)

END OF REPORT

1. This report reflects finding only for the above sample tested/monitored and only for time and place of monitoring/testing.
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TEST REPORT

NAME & ADDRESS OF CUSTOMER:

M/s. TPL-HCC BHIVPURI PSP Joint Venture
 Bhivpuri Camp, Karjal, Survey No-1, Taluka Karjal (LOWER),
 Maharashtra

REPORT NO : -SALM5P16/FM12/01/MSA(25-26-1043)

REPORT DATE : 23/01/2026

CUSTOMER REF : 5700053883

SAMPLE TYPE: Water Analysis

SAMPLE REGISTRATION NO. : 01/MSA(25-26-1043) **LOCATION :** Karjal Guest House
SAMPLING PLAN & METHOD NO: As Per Reference Method **SAMPLE SPECIFICATION :** Tap Water (01/DW 1042)
SAMPLING DATE : 16/01/2026
SAMPLING TIME : 18:05:00 **SAMPLE COLLECTED BY :** Mr.Datta Korde (Skylab)
ANALYSIS START DATE : 17/01/2026 **SAMPLE QUANTITY :** 1 Ltr
ANALYSIS COMPLETE DATE : 20/01/2026 **SAMPLE PACKING :** Sealed

Sr.No.	Test Parameters	Unit	Result	Norms#	Reference Method
1	Total Coliform	/100 ml	ABSENT	Absent	IS 15185
2	E. Coli	/100 ml	ABSENT	Absent	IS 15185

ND: Not Detected, NS: Not Specified. As per IS 10500:2012

Opinion/Observation: Analyzed parameters in above tested sample are within limit as per specified standard.

Note :

Analyzed By



Ashrah Ansari

Microbiologist

For SKYLAB ANALYTICAL LABORATORY



Dr.Datta Mandhare

(Authorized Signatory)

END OF REPORT

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Section 10.2

CATCHMENT AREA TREATMENT PLAN

10.2 CATCHMENT AREA TREATMENT PLAN

It is a well-established fact that reservoirs formed by dams on rivers are subjected to sedimentation. The process of sedimentation embodies the sequential processes of erosion, entrainment, transportation, deposition and compaction of sediment. The steady erosion and sediment in reservoir reduce its capacity, and thus affecting the water availability for the designated use. The eroded sediment from catchment when deposited on streambeds and banks causes braiding of river reach. The removal of top fertile soil from catchment adversely affects the land productivity in the area. Thus, a well-designed Catchment Area Treatment (CAT) Plan is essential to ameliorate the above-mentioned adverse effects of soil erosion. Soil erosion can be defined as detachment, transportation and deposition of soil particles from one place to other by means of transporting agent like air, water or animals. Soil erosion is mainly affected by rainfall intensity and runoff, slope gradient and length, soil erodibility and vegetation cover (landuse pattern). Therefore, study of erosion and sediment yield from catchments are of great importance. Soil erosion leads to:

- loss in production potential
- reduction in infiltration rates
- reduction in water-holding capacity
- loss of nutrients
- increase in tillage operation costs
- reduction in water supply

To control the rate of soil erosion in the catchment, Catchment Area Treatment (CAT) is an ineluctable part. The CAT plan pertains to preparation of a management plan for treatment of erosion prone areas through adequate preventive measures. An effective CAT plan is a key factor to make the project eco-friendly and sustainable. Thus, a well-designed Catchment Area Treatment (CAT) Plan is essential to ameliorate the above-mentioned adverse process of soil erosion. CAT plan essentially consists of the following steps.

1. Calculation of soil erosion using Revised Universal Soil Loss Equation (RUSLE), combined with Remote Sensing (RS) and Geographic Information System (GIS) technologies.
2. Prioritizing the areas for treatment using Silt Yield Index (SYI).
3. Planning of suitable erosion control measures.
4. Cost estimation for CAT plan.

10.2.1 Methodology Adopted for the Study

The various steps, covered in the study, are as follows:

- Defining study area
- Defining data requirement
- Data acquisition and preparation
- Output presentation

The above-mentioned steps are briefly described in the following paragraphs:

10.2.1.1 Defining Study Area

Purpose of the study is preparation of CAT plan for the Catchment Area of Bhivpuri Off-Stream Open Loop Pumped Storage Project. Since the upper reservoir is existing Thokerwadi reservoir therefore catchment area of the stream on which lower reservoir is proposed is being considered as study area. The lower reservoir and its dam are proposed on Khadki nala, the total catchment area of the Khadki nala at the dam site for the proposed lower reservoir is only **1.43 sq km** (refer **Figure 10.1**). Further, the effective catchment area i.e. after excluding the area to be covered by the proposed project components such as lower reservoir and part of water conductor system is only **1.15 sq. km**. In view of this, an area of **1.15 sq km** is being considered as study area. Out of the total 1.15 sq km of study area, **0.79 sq. km** falls in Pune district and the rest **0.36 sq. km** falls in Raigad district.

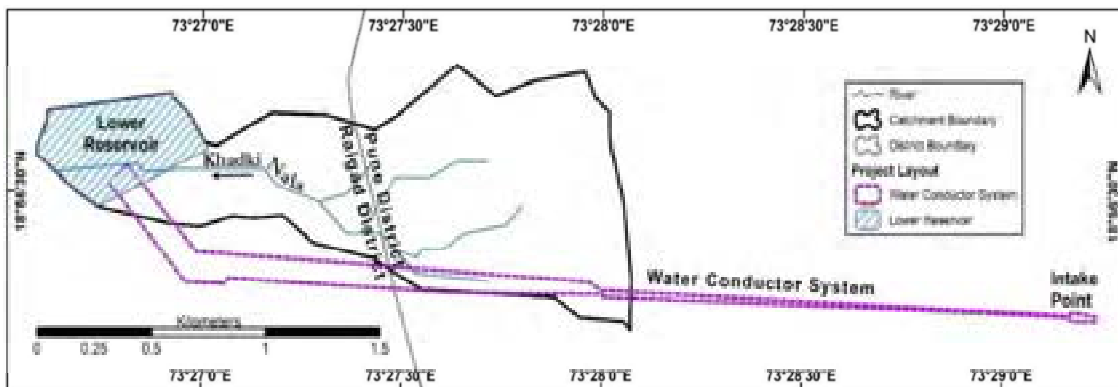


Figure 10.1: Map showing Catchment Area

In order to plan watershed management and to formulate action plans it requires micro-watershed delineation, therefore, catchment area was further delineated into micro-watershed. For the delineation of micro-watershed, Watershed Atlas of India prepared by Soil and Land Use Survey of India (SLUSI) has been referred. As per Watershed Atlas of India, the catchment area falls in a single Microwatershed. The nomenclature of Microwatershed has been assigned as follows: All drainage flowing into Arabian Sea except that at 1 Region (5); North Western Ghats Basin (5B); Savatri to Tapi Catchment (5B2); Ulhas Sub-Catchment (5B2B); Ulhas Watershed (5B2B7); Pej Subwatershed (5B2B7k); and Khadki Microwatershed (5B2B7k1).

10.2.2 Defining Data Requirement

Soil loss has been calculated through RUSLE (Revised Universal Soil Loss Equation) model which is computed by the following equation:

$$\text{Soil Loss (A)} = R * K * LS * C * P$$

Wherein; A = Soil loss (Tons/ha/year)

R is Rainfall & Runoff Erosivity Factor (MJ mm/ha-1/h-1/year-1), which depends upon the annual average rainfall in mm. Data required for R factor is rainfall intensity.

K is Soil Erodibility Factor (Tons/ha/h/ha-1/MJ-1/mm-1), which depends on the organic matter, texture permeability and profile structure of the soil. Also, it is a constant value for each soil type. Data required for K factor is soil type.

LS is Topographic Factor (dimensionless) which depends upon flow accumulation and steepness and length of slope in the area. Data required for LS factor is slope length and slope gradient.

C = Vegetation Cover and Crop Management Factor (dimensionless), which is the ratio of bare soil to vegetation and non- photosynthetic material. It is a constant value for each land use category. Data required for C factor is land use/ land cover.

P is Conservation Supporting Practice Factor (dimensionless), which takes into account specific erosion control practices like contour bunding, bench terracing etc.

10.2.3 Data Acquisition and Preparation

The data on various aspects was collected from different sources. Soil map of the catchment area was prepared from soil map of Maharashtra procured from Regional Centre of National Bureau of Soil Survey & Land Use Planning (NBSS&LUP), New Delhi. For the preparation of DEM and preparation of Slope map, Shuttle Radar Topography Mission (SRTM) 3 Arc-Second Global Digital Terrain Elevation Data (DTED) data has been used. For the preparation of land use/ land cover, map prepared by National Remote Sensing Centre (NRSC), Indian Space Research Organisation (ISRO) of Dept. of Space, Govt. of India with Partner Institution, Maharashtra Remote Sensing Application Centre, Govt. of Maharashtra has been used. The rainfall data in the catchment area has been sourced from Climatic Research Unit (CRU), a component of the University of East Anglia and one of the leading institutions concerned with the study of natural and anthropogenic climate change.

10.2.3.1 Soil

The catchment area is covered by a single Soil Mapping Unit i.e. 77, which is characterised by Very shallow, excessively drained, loamy soils on moderately steeply sloping highly dissected hill ranges with escarpments and narrow valleys with very severe erosion.

10.2.3.2 Land Use/ Land Cover

For the present study, land use/land cover maps prepared by National Remote Sensing Centre (NRSC), Indian Space Research Organisation (ISRO) of Dept. of Space with Maharashtra Remote Sensing Application Centre as partner institute has been used, in addition Google Earth was also referred.

The classified land use/ land cover map of the catchment area is shown as **Figure 10.2**. The land use/ land cover pattern of the catchment area has been given in **Table 10.2**. As can be seen from the map and table, the land use/ land cover pattern can be classified into five classes, out of these, deciduous forest covers the maximum area i.e. 85.43%, followed by scrub forest, covering 5.35%. Evergreen/ Semi Evergreen forest, agricultural land and fallow land covers 4.76%, 2.15% and 2.30% of the area respectively.

Table 10.2: Description of Soil Mapping Units in the Catchment Area

Land use/ Land cover Classes	Area (ha)	Area (%)
Evergreen/ Semi Evergreen Forest	6.80	4.76
Deciduous Forest	121.86	85.43
Scrub Forest	7.63	5.35
Agricultural Land	3.07	2.15

Land use/ Land cover Classes	Area (ha)	Area (%)
Fallow Land	3.28	2.30
Total	142.64	100

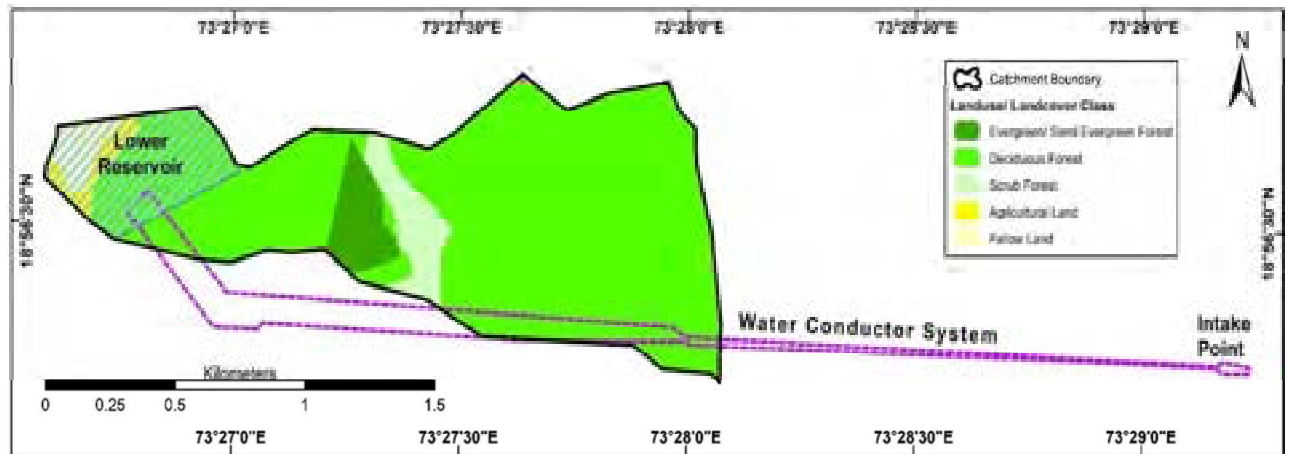


Figure 10.2: Land use/ Land cover Map of the Catchment Area

10.2.3.3 Slope

For the preparation of Slope map, Shuttle Radar Topography Mission (SRTM) 3 Arc-Second Global Digital Terrain Elevation Data (DTED) data has been used. The slope map in degrees prepared for the catchment area is given at **Figure 10.3**. In the Catchment Area, the slope ranges from 0 to around 47 degree.

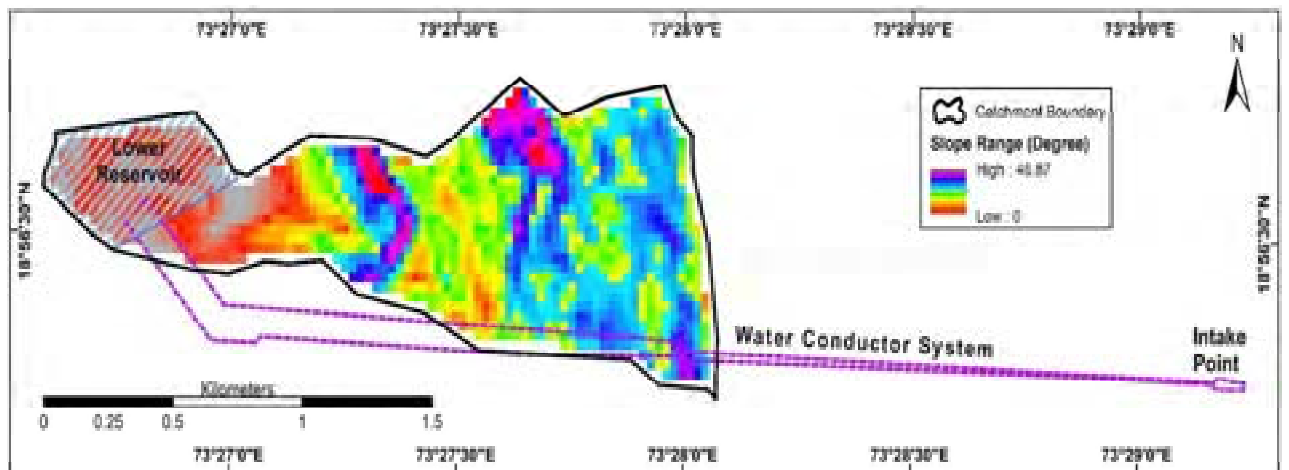


Figure 10.3: Slope Map of the Catchment Area

10.2.3.4 Rainfall

For the estimation of rainfall erosivity in the catchment area, average rainfall of 10 years has been taken from the High-resolution gridded CRU datasets. In the absence of site-specific periodic data, CRU data from the year 2011 to 2020 has been used for the calculation of R factor. In and around the Catchment Area, average rainfall of 10 years have been taken from the rain gauge station for the estimation of rainfall erosivity. The rainfall erosivity factor (R) has been calculated using equation $R = 81.5 + 0.38X$ for annual average rainfall of observed and simulated data. The value of R i.e. 1039.40 has been adopted in this study to calculate soil erosion using RUSLE.

10.2.3.5 Conservation Support Practice (P) Factor`

The P factor is an expression of the effects of supporting conservation practices, such as contouring, buffer strips of vegetation, and terracing, on soil loss at a particular site. It is the ratio of soil loss with specific support practice to the corresponding loss with up-or down-slope cultivation. In the present study, the P factor has been considered as 1.

10.2.4 Output Presentation

A thematic map for soil loss of the catchment area has been prepared using RUSLE model mentioned in the above section. The catchment area was then demarcated into different soil erosion intensity mapping units or classes based upon the extent of soil loss (see **Table 10.3 & Figure 10.4**). The catchment area under different Erosion Intensity categories is given in **Table 10.3**. As can be seen from the figure and table, around 24% of catchments are prone to less than 1 tons/ha/annum soil erosion, i.e. under negligible erosion intensity category. 46.02% of its area is prone to Severe and Very Severe soil erosion.

Table 10.3: Area falling under different Erosion Intensity Categories

S. No.	Soil loss in tons/hectare/annum	Erosion Intensity Category	Area (ha)	Area (%)
1	<1	Negligible	34.36	24.09
2	1-5	Slight	9.15	6.41
3	5-10	Very Low	6.28	4.40
4	10-20	Low	6.99	4.90
5	20-40	Moderate	20.23	14.18
6	40-80	Severe	37.62	26.37
7	>80	Very Severe	28.02	19.65
Total			142.64	100

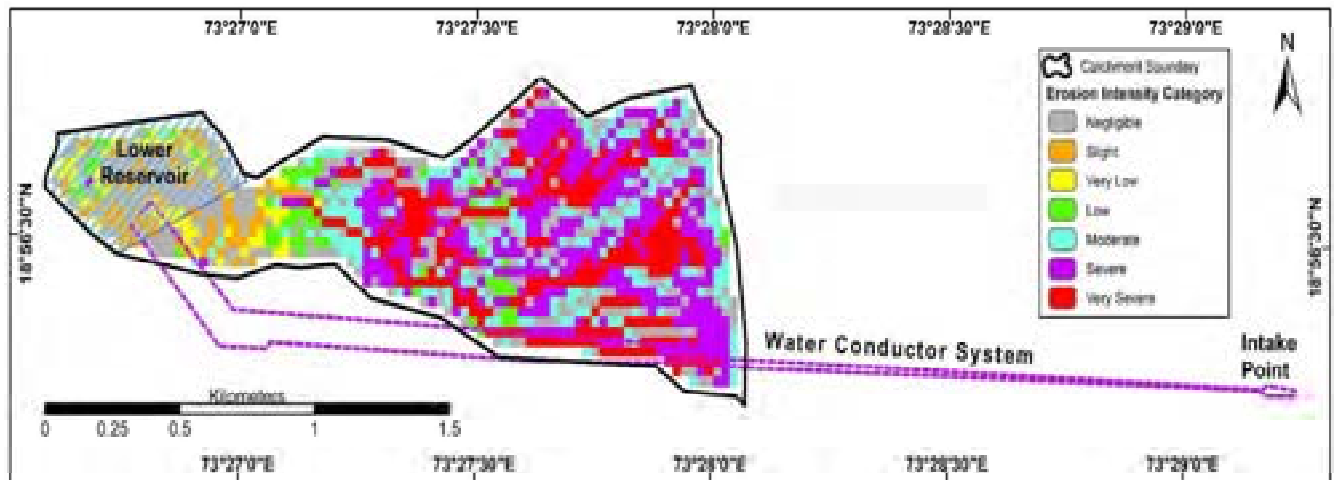


Figure 10.4: Erosion Intensity Map of the Catchment Area

10.2.5 Prioritization

'Silt Yield Index' (SYI), method conceptualized by Soil and Land Use Survey of India (SLUSI) is being used for prioritization of smaller hydrologic units within river valley project areas. Since the catchment area is only 1.43 sq km and could be delineated into only one micro watershed, therefore, prioritization is not applicable in the present study.

10.2.6 TREATMENT PLAN

10.2.6.1 Area to be taken up for Treatment

Area under severe and very severe erosion intensity category will be taken up for treatment. To arrive at such an area, first of all areas under severe and very severe erosion intensity category was extracted, which comes out to be **65.64 ha** (refer **Table 10.3**). Thereafter, areas under severe and very severe erosion intensity category falling within the proposed reservoir and water conductor system area were removed as once the project is constructed this area will not be available for treatment. The area thus arrived at and considered as treatable area comes out to be **60.38 ha** (or say **60 ha**). Out of the total 60 ha to be treated, it is proposed to treat **26 ha** by biological measures and the rest **34.0 ha** by engineering measures.

Out of the total 60.38 ha to be treated, 48.99 ha falls in Pune district and the rest 11.38 ha falls in Raigad district.

The period for implementing treatment measures including maintenance has been taken as 7 years. It is proposed to prepare micro plans for microwatershed, establish administrative setup and implement other entry point activities in the first year itself. The maintenance period (only for biological measures) will be for subsequent 5 years.

10.2.6.2 Treatment Measures

Watershed management is the optimal use of soil and water resources within a given geographical area so as to enable sustainable production. It implies changes in land use, vegetative cover, and other structural and non-structural action that are taken in a watershed to achieve specific watershed management objectives. The overall objectives of watershed management programme are to:

- increase infiltration into soil;
- control excessive runoff;
- manage & utilize runoff for useful purposes.

i. Biological Measures

The biological measures would comprise of:

- Normal Afforestation
- Aided Natural Regeneration

A. Normal Afforestation

A well stocked forest is the best insurance against soil loss as well as for ecological rehabilitation. It is therefore proposed to increase the vegetation cover in the tract. For this, patches of tree cover falling under severe and very severe erosion intensity category shall be brought under afforestation. The locality factors prevalent in the area such as fires, grazing etc. are fairly adverse to the establishment of plantations. Thus, special and intensive efforts are needed to ensure the success of afforestation work. Owing to the above enumeration factors, the plantation will require higher levels of maintenance also. This will include raising of multi-tier mixed vegetation of suitable local species. 2500 plants per hectare will be planted under this scheme. Planting will be done in pits. Earth work should be done well in advance. Plants should be healthy with strong stems. Planting should be done in June when

the water supply starts. Further, it is assessed that it is essential to make provision for soil and moisture conservation measures in the areas proposed for afforestation. Provision had been made for undertaking various necessary soil and moisture conservation measures in these areas. Provision is also made for five years maintenance of afforestation undertaken as part of the watershed management. The unit cost for afforestation including maintenance cost for five years is estimated to be Rs 6,28,030/- per ha. The detailed estimate is sourced from the Rate Structure for Compensatory Afforestation Model No. 1 prepared by the Sawantwadi Forest Division for the diversion of forest land for the project "Construction of Minor Irrigation Tank in Nirukhe Village Tal- Kudal Dist- Sindhudurg". The detailed cost norm thus prepared after making necessary changes and adopting current wage rate is furnished in **Annexure-VIII**. The area to be brought under afforestation **4 ha**.

B. Aided Natural Regeneration

In certain areas, conditions are conducive to natural regeneration provided some sort of assistance is provided. Such area shall be taken up under this component. The areas shall be closed to reduce biotic interference. Ground surface will be cleared of slash, debris and felling refuse to afford a clean seed bed to the falling seed. At certain places some soil raking may also have to be done to facilitate germination of seeds. Where natural regeneration is found deficient. It will be supplemented by artificial planting. Patch sowing in suitable areas may also be done. 625 plants per hectare will be planted under this scheme. The plantation will be maintained for subsequent five years. The unit cost for aided natural regeneration including maintenance cost for five years is estimated to be Rs. 3,66,840 per ha. The detailed estimate is furnished in **Annexure-VIII**. The area to be brought under aided natural regeneration is **22 ha**.

ii. Engineering Measures

Larger gullies must be treated to prevent further deepening and widening. The purpose of engineering measures is to reduce the gradient, reduce the flow velocity and protect the stream bank. The water is guided safely from a higher elevation to a lower elevation without causing erosion at the gully/nala bed and banks. The water pools behind the engineering promotes the percolation into the soils. Check dam/ check wall is one such engineering measure. The cost considered for the soil and moisture works is Rs. 13,748.50/- per ha. This cost includes collection of rubbles from areas upto 30m and considering the wage rate as Rs. 443.50 per man day. The cost is sourced from the Rate Structure for Compensatory Afforestation Model No. 1 prepared by the Sawantwadi Forest Division for the diversion of forest land for the project "Construction of Minor Irrigation Tank in Nirukhe Village Tal- Kudal Dist- Sindhudurg". Total area considered to be treated by the soil and moisture conservation measure is **32 ha**.

10.2.7 OTHER COMPONENTS OF CAT PLAN

Apart from the biological and engineering treatment measures in the catchment area there are other aspects of the CAT Plan to be addressed and their cost included in the overall cost estimate of the plan. The charges for operational support, forest protection, social mobilization, documentation and publication, monitoring and evaluation and providing environmental services are some of the integral ingredients which have to be considered and included while formulating the CAT plans.

10.2.7.1 Administrative Charges

For an efficient management of forest resources, it is essential that operational support to the Forest Department is adequately developed. Similarly, in remote localities there are no places for shelter for the staff, people and trekkers. Therefore, a budgetary provision of **Rs. 2.20 lakh** has been kept as administrative charges.

10.2.7.2 Provision for Micro Planning

The year-wise areas requiring treatment measures have been suggested but have not been marked. The spatial location of specific treatment to be carried out in the catchment area would require extensive detailing during the implementation of CAT and a provision for micro-planning has been made in the total CAT financial allocation. For this purpose, a provision of **Rs. 1.10 lakh** is being made.

10.2.7.3 Monitoring & Evaluation

Monitoring and evaluation will be undertaken as a part of project management. A process of self-evaluation at specified intervals of time will ensure the field level verification of suggested treatment measures and efficacy of the CAT plan.

The year-wise areas requiring treatment measures have been suggested but have not been marked. The spatial location of specific treatment to be carried out in the Catchment Area would require extensive detailing during the implementation of CAT and a provision for micro-planning has been made in the total CAT financial allocation. Thereafter, annual work plan would be prepared well in advance after undertaking initial ground surveys during micro-planning, specifying physical and financial targets, sites, locations and beneficiaries of each component of the project activity. Month-wise work schedule of various items of each component for the financial year would also be prepared in advance and its timely implementation would be ensured. Monthly progress report on all activities would be submitted by the Range Officers to Divisional Forest Officer. The monitoring committee shall be constituted at the project level for this purpose which too would monitor on a regular basis the quality and quantity of works being carried out under the CAT plan area. A provision of **Rs. 2.20 lakh** has been made for this component.

10.2.7.4 Contingencies

A provision of **Rs. 5.51 lakh** has been kept under this component for some leeway to adjust any unforeseen expenditure.

10.2.8 COST ESTIMATE

The estimated cost of implementation of Catchment Area Treatment Plan as defined above is **Rs. 121.25 lakh** and is given at **Table 10.4**. Year wise physical and financial targets for the entire catchment area, for catchment area falling under Pune district and for catchment area falling under Raigad district are given in **Table 10.5, 10.6** and **10.7** respectively.

Table 10.4: Estimated Cost of Catchment Area Treatment Plan Implementation

S. No.	Item	Rate (Rs)	Unit	Pune District		Raigad District		Catchment Area	
				Physical	Financial (Rs in lakh)	Physical	Financial (Rs in lakh)	Physical	Financial (Rs in lakh)
Biological Measures									
1	Normal Afforestation	6,28,030	ha	1.00	6.28	3.00	18.84	4.00	25.12
2	Aided Natural Regeneration	3,66,840	ha	15.00	55.03	7.00	25.68	22.00	80.70
	Sub Total A				61.31		44.52		105.83
Engineering Measures									
3	Soil & Moisture Works	13,748.50	ha	32.00	4.40	0.00	0.00	32.00	4.40
	Sub Total B				4.40		0.00		4.40
I	Total A and B				65.71		44.52		110.23
Other Components									
4	Administrative Expenditure				1.31		0.89		2.20
5	Micro Planning				0.66		0.45		1.10
6	Monitoring & Evaluation				1.31		0.89		2.20
7	Contingency				3.29		2.23		5.51
	Total II				6.57		4.45		11.02
	Grand Total				72.28		48.97		121.25

Table 10.5: Year Wise Phasing of Physical and Financial Targets for Pune District

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
A	Biological Measures																
1	Afforestation (ha)																
	Pre Monsoon Works		1		3.64											1	3.64
	First Year Operation			1	1.30											1	1.30
	Second Year Operation					1	0.58									1	0.58
	Third Year Operation							1	0.37							1	0.37
	Fourth Year Operation											1	0.19			1	0.19
	Fifth Year Operation													1	0.19	1	0.19
2	Aided Natural Regeneration (ha)																

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
	Pre-Monsoon Works		15	18.00										15	18.00		
	First Year Operation				15	19.92								15	19.92		
	Second Year Operation				15	5.81								15	5.81		
	Third Year Operation						15	5.81						15	5.81		
	Fourth Year Operation								15	2.74				15	2.74		
	Fifth Year Operation										15	2.74		15	2.74		
	Sub Total A		16	21.64	16	21.22	16	6.39	16	6.18	16	2.93	16	2.93	61.31		
B	Engineering measures																
3	Soil and Moisture Works		32	4.40										32	4.40		
	Sub Total B		32	4.40										32	4.40		
I	Total A and B			26.04		21.22		6.39		6.18		2.93		2.93	65.71		
II	Other Components																
4	Administrative Expenditure		0.66	0.66											1.31		
5	Micro Planning		0.66	0.66											0.66		
6	Monitoring & Evaluation			0.52		0.42		0.13		0.12		0.06			0.06		1.31
7	Contingency			1.30		1.06		0.32		0.31		0.15			0.15		3.29
	Total II		1.31	2.48		1.49		0.45		0.43		0.21		0.21	6.57		
	Grand Total (I and II)		0.00	28.52		22.71		6.84		6.61		3.14		3.14	72.28		

Table 10.6: Year Wise Phasing of Physical and Financial Targets for Raigad District

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
A	Biological Measures																
1	Afforestation (ha)																
	Pre Monsoon Works		3	10.93													
	First Year Operation				3	3.89										3	10.93
	Second Year Operation						3	1.75								3	3.89
	Third Year Operation								3	1.11						3	1.75
	Fourth Year Operation										3	0.58				3	1.11
	Fifth Year Operation												3	0.58		3	0.58
2	Aided Natural													3	0.58	3	0.58

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
	Regeneration (ha)																
	Pre Monsoon Works		8.40													7	8.40
	First Year Operation			7	9.30											7	9.30
	Second Year Operation					7	2.71									7	2.71
	Third Year Operation							7	2.71							7	2.71
	Fourth Year Operation											7	1.28			7	1.28
	Fifth Year Operation													7	1.28		1.28
	Sub Total A		10	19.33	13.19	10	4.46	10	3.82	10	1.86	10	1.86	10	1.86		44.52
B	Other Components																
3	Administrative Expenditure		0.45														0.89
4	Micro Planning		0.45														0.45
5	Monitoring & Evaluation				0.39		0.09		0.08		0.04		0.04				0.89
6	Contingency				0.97		0.22		0.19		0.09		0.09				2.23
	Sub Total B		0.89		1.80		0.31		0.27		0.13		0.13				4.45
	Grand Total (A and B)		0.89		21.13		4.77		4.09		1.99		1.99				48.97

Table 10.7: Year Wise Phasing of Physical and Financial Targets for the Catchment Area

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
A	Biological Measures																
1	Afforestation (ha)																
	Pre Monsoon Works			4	14.57											4	14.57
	First Year Operation					4	5.19									4	5.19
	Second Year Operation							4	2.33							4	2.33
	Third Year Operation									4	1.48					4	1.48
	Fourth Year Operation											4	0.77			4	0.77
	Fifth Year Operation													4	0.77		0.77
2	Aided Natural Regeneration (ha)																
	Pre Monsoon Works			22	26.40											22	26.40
	First Year Operation					22	29.22									22	29.22
	Second Year Operation							22	8.52							22	8.52

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
	Third Year Operation									22	8.52					22	8.52
	Fourth Year Operation											22	4.02			22	4.02
	Fifth Year Operation													22	4.02	22	4.02
	Sub Total A			26	40.98	26	34.41	26	10.86	26	10.00	26	4.79	26	4.79		105.83
B	Engineering measures																
3	Soil and Moisture Works			32	4.40											32	4.40
	Sub Total B			32	4.40											32	4.40
I	Total A and B				45.38		34.41		10.86		10.00		4.79		4.79		110.23
II	Other Components																
4	Administrative Expenditure		1.10		1.10												2.20
5	Micro Planning		1.10														1.10
6	Monitoring & Evaluation				0.91		0.69		0.22		0.20		0.10		0.10		2.20
7	Contingency				2.27		1.72		0.54		0.50		0.24		0.24		5.51
	Total II		2.20		4.28		2.41		0.76		0.70		0.34		0.34		11.02
	Grand Total (I and II)		2.20		49.65		36.82		11.62		10.70		5.12		5.12		121.25

Labor Colony Photo



OS

Canteen Facility



Pest Control at Colony



Medical facilities at Site

Well-equipped Ambulance



Heat Stress Awareness Program and Glucon- D Distribution to Workers



Health Care Camp

Eye Checkup Camp Organised for Employees & Workers



Blood

Donation Camp



Read-

1. Application of Authorized Signatory, Director Tata project, Bhivpuri Date 31/12/2024.
2. Agreement between Department of Water Resources, Government of Maharashtra and The Tata Power Company Ltd. Date 12/08/2024.
3. Report of Tahsildar, Maval under No. kavi/276/2025, dated. 30/05/2025
4. Report of Superintendent of Police Pune under No. 3707/2025 dated 06/06/2025
5. Explosive Rules 2008 rule 98 & 106

Office of the District Magistrate Pune
(Home Branch) No.PGS/SR/ 04 /2025
Date 11/06/2025

No Objection Certificate

No Objection certificate is hereby granted as a point of view is concerned i.e. safety law and order to, the Memorandum of Understanding (MoU) between Tata Power Company Limited (TPCL) and the Government of Maharashtra in connection with the 1000 MW Bhivpuri Off-Stream Open-Loop Pumped Storage Project, for the purpose of obtaining blasting permission through SALVO INDUSTRIES PVT. LTD. For Ta. Maval t Dist. Pune Maharashtra.

S.N O.	TALUKA NAME	VILLAGE NAME	TOTAL VILLAGE IN NO.
1	Maval	Khand	1
		Total	1

This No Objection Certificate is issued subjected to the following conditions.

1. The blasting operations should be carried out only between sunrise & Sunset.
2. The explosives to be transported through explosive vans from magazine to the blasting site. After the blasting operation is over, the balance explosives should be returned to the magazine before sunset.
3. The blasting operation should be carried out with the help of approved blaster holding valid Shot Firer Permit.
4. Before carrying out the blasting operation the nearest police station should be informed.
5. The applicant will be responsible for -damage of public lives and property any willful conduct or negligence occurs.
6. This No Objection Certificate issued on a condition to obtain a necessary permission from the Dy. Chief Controller of explosive west circle, New Mumbai & Maharashtra Polution Control Board if required.
7. Please ensure the required royalty of minor mineral as per Government Norm is deposited to the concern authority if required.
8. The above No Objection Certificate is issued on the basis of report received from the Tahsildar, Maval under No. kavi/276/2025, dated. 30/05/2025 and Superintendent of Police Pune under No. 3707/2025 dated 06/06/2025



9. **The work of blasting shall be done by SALVO INDUSTRIES PVT. LTD.**
Explosive Licence No. E/HQ/TG /22/954 (E 102852), Renewal Dated-31/03/2029
10. SALVO INDUSTRIES PVT. LTD. Dist. Pune (Short Firer- Shri. Edla Chandra Mohan
License No. E/SH/TG/30/714 (E 96165) Renewal Dated-11/11/2026
11. Consent of concerned farmer is mandatory for blasting.
12. If any farmer filed complaint regarding blasting, this office will not responsible for the same.
13. If there will be any loss to the crops, houses or property, the responsibility bears with SALVO INDUSTRIES PVT. LTD.
14. A water pipe line were going from Gat Nos from the villages of Khand Tah. Maval hence permission is granted for blasting where there are stones.
15. The No objection certificate is issued falls under Eco Sensitive Zone.
16. Whole responsibility of safe and secure blasting is lies with SALVO INDUSTRIES PVT. LTD.
17. The N.O.C. will be cancelled if any breach of conditions is noticed.
This N.O.C. is valid for the period upto **one year** from the date of issue




(Ayob Kadam)
Add. District Magistrate Pune

To

1. Authorized Signatory, SALVO INDUSTRIES PVT. LTD.

Copy to--

1. Chief Controller of explosive west circle, CBD Belapur, New Mumbai
2. Superintendent of Police Pune for information and necessary action
3. Tahsildar Maval for information and necessary action





GOVERNMENT OF MAHARASHTRA
REVENUE & FOREST DEPARTMENT
Office of the District Collector or District Magistrate, Raigad - Alibag
Near Hirakot Lake, Tahasil - Alibag, District - Raigad 402201
Phone No. 02141 - 222118/222322, Fax NO.02141 - 221451
Email Id : dcrraigad@gmail.com

(Home Branch) No.DC/MAG-2/NOC/Bhivpuri Camp/Exp/Sr.No.62/2025 Date : 13/06/2025

Part-2

NO OBJECTION CERTIFICATE

(See Rules 102 and 103)

With reference to the application in Form AE-12 dated 17/04/2025 submitted by M/s. Salvo Industries Private Ltd, At.Plot No.17, Sri Malani, Co-op Housing Society, Indian Airlines Colony, Tirumalghery, Secunderabad, Village-Tirumalghery, Dist.Hyderabad, State-Telangana (LE-3 Licence No.E/HQ/MH/22/954 (E102852), Valid till Dt.31/03/2029) and in pursuance of rules 102 and 103 of the Explosives Rules, 2008, there is no objection for granting licence under the Explosives Rules, 2008 to M/s.Salvo Industries Private Ltd, of address At.Plot No.17, Sri Malani, Co-op Housing Society, Indian Airlines Colony, Tirumalghery, Secunderabad, Village-Tirumalghery, Dist.Hyderabad, State-Telangana for the following purpose, kinds and quantities of explosives in the premises at Gut No.1, Village Bhivpuri Camp, Tal.Karjat, Dist.Raigad Purpose (Note: Please write only one purpose corresponding to one Article No. as stated in Table of purposes and authority in Part 1 of Schedule IV annexed to the Explosives Rules, 2008) :-

Licence to possess for use, explosives of class 1, 2, 3, 4, 5, 6 or 7

1) Kinds and quantities of explosives: (As mentioned by applicant in application)

Sr. No.	Name of Explosives	Class	Div.	Quantity In One time
(a)	Nitrate Mixture	2	0	10000 Kg.
(b)	Safety Fuse	6	1	5000 Mtrs
(c)	Detonating Fuse	6	2	40000 Mtrs
(d)	Electric and / or Ordinary Detonators	6	3	44000 NOs

Note:- The following particulars have been verified/considered while issuing this No Objection Certificate.

- The antecedents of the applicant (in case of individual or proprietary firm) /partners (in case of partnership company) or directors (in case of limited company) or office bearers in case of society or association and also occupier of the premises.
- The lawful possession of the site by the applicant.
- Interest of public.
- Requirement of explosives for use in mines or quarries (possessed by the applicant) or in the area proposed by the licensee have been considered.
- Genuineness of purpose.
- Any other matter pertinent to public safety;

Conditions :-

- Compliance with the provisions of the Explosives Rules, 2008 shall remain mandatory.
- All such safety precautions shall remain mandatory during the use of explosives.
- In case of danger or damage anyone's life or property during the use of explosives, the applicant and the licensee shall be fully responsible for the same.
- While carrying out control blasting at the said location, it will be mandatory for all concerned to comply with the terms and conditions mentioned in the permission dated 19/05/2025 issued by the Ministry of Environment, Forest and Climate Change, Government of India.



Copy- Chief Controller of Explosives PESO, A Block, 5 th floor, CGO Complex, Seminary Hills, Nagpur-440006.

Sd/-xxx

(Kishan N.Jawale)

District Magistrate Raigad

- Copy- Controller of Explosives, Mumbai, A-1 & A-2 Wing, 3th Floor, CGO Complex, ¹¹¹
Belapur, Navi Mumbai - 400614.
- Copy- Superintendent of Police, Raigad-Alibag
- Copy- Executive Magistrate Karjat.
- Copy- M/s.Tata Power Company Ltd., At.Sr.No.01, Bhivpuri Camp, Tal.Karjat, Dist.Raigad.
- Copy- M/s.Tata Project Ltd., At.Sr.No.01, Bhivpuri Camp, Tal.Karjat, Dist.Raigad.
- Copy- M/s.Salvo Industries Private Ltd, At.Plot No.17, Sri Malani, Co-op Housing Society, Indian
Airlines Colony, Tirumalghery, Secunderabad, Village-Tirumalghery, Dist.Hyderabad, State-
Telangana.
- Copy- Order File.


(Kishan G. Jawale)
District Magistrate Raigad





Emergency Response Plan



**Civil and HM
works for 1000
MW Bhivpuri
PSP**



TPL - HCC BHIVPUR PSP JOINT VENTURE

Project Quick Emergency Response Plan



HCC

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP

Project:

Civil and HM works for 1000 MW Bhivpuri PSP

Quick Emergency Response Plan

Revision No.: 01

Revision date: 01.12.2025

DOCUMENT RELEASE AUTHORIZATION

Prepared by **Manager – Safety**

: Mr. Rajesh Upadhyay

Reviewed by **Chief Safety Manager**

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Approved by **Project Director and
Project Manager**

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Issued by **Document Controller**

:

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TPL - HCC Bhivpuri PSP JOINT VENTURE

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CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP

HISTORY OF REVISIONS

Revision No.	Revision issue date	Chapter/Clause no. & text affected	Reason for revision
00	15.05.2025	-	First Issue
01	01.12.2025		Add Emergency Scenario



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Project Quick Emergency Response Plan



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7	Head QSS	Controlled
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9	Planning Manager	Controlled
10	Procurement Manager	Controlled
11	QAQC In charge	Controlled
12	HSE In charge	Controlled
13	Head Office of TPL & HCC	Controlled

1.0 INTRODUCTION

Emergency means "sudden / unexpected situation which may lead to any major accident or fire and may result in loss of life or property, damage or serious impact on environment".

A system shall be drawn up in anticipation of incidents of some magnitude and the persons involved shall be trained so as to function well when an emergency occurs. Having such a system in place would call for immediate action as and when the crisis occurs. Evacuation procedures are allied to this system.

Emergency Preparedness Plan lays down the code of conduct for all personnel in the premise and the procedures to be adopted by them in the event of an "**Emergency.**" The individuals under the direction of the respective department heads and designated volunteers shall carry out the responsibilities assigned.

It is suggested that all personnel read these procedures and have the same registered in their mind to ensure orderly & discipline action and to ensure the safety of the personnel, plant & machinery.

2.0 PURPOSE

- 2.1 To define an emergency incident based on the identified scenario groupings.
- 2.2 To contain & control incidents of emergency.
- 2.3 To prevent the emergency from escalation and contain the same within the boundary of occurrence.
- 2.4 To define the emergency response command network and methods of operation.
- 2.5 To define steps to be taken in any of the identified scenario grouping by project personnel.
- 2.6 To define roles and responsibilities for key personnel in the emergency management process.
- 2.7 To provide guidelines for prompt notification of incidents to management.
- 2.8 To facilitate prompt rescue operations and treatment of the injured person.
- 2.9 To preserve records, equipment etc. and to organize investigation into the cause of the emergency and preventive measures to stop its recurrence.

3.0 SCOPE

This Quick Emergency Response Plan (QRP) is designed to link all the emergency scenarios that have been identified as possibly occurring Project (herein after referred to as the project) during construction. Each of the identified risks has had a sub plan prepared to link each risk category to a standard response and management system.

The QREP is applicable to all the construction activities carried out at Bhivpuri PSP for both day and night time operations.

4.0 DEFINITIONS

Accident - An accident is an unplanned event, which has a probability of causing personal injury, property damage or both. It may result in physical harm (injury or disease) to person (s), damage to property, loss to the company, a near miss or any combination of these effects.

Emergency: - An emergency could be defined as any situation which presents a threat to safety of persons or / and property. It may require outside help also.

Quick Emergency Response Plan: - The Quick Emergency Response Plan deals with measures to prevent and control situation in emergencies and take appropriate actions to mitigate within the Site office and different site location without affecting outside public or environment.

5.0 Scope of Work

The brief scope of work is as below for Bhivpuri Off-Stream Open-Loop Pumped Storage Project (PSP).

Major Scope of work -Civil

- Geomembrane Faced Rockfill Dam (GFRD)
- Open pit Powerhouse; Replace
- Intake Structures
- Head Race Tunnel
- Tail Race Tunnel
- Surge Shaft
- Surface penstocks
- Pressure Shaft
- Pressure Tunnel
- Butter Fly Valve Chamber
- Adit
- Cable Tunnel
- Building and Yards

Major Scope of work H&M

- Trash Racks
- Intake Gate
- Butter Fly valve
- Surge Shaft Gate
- EOT Crane
- Penstock steel liner works

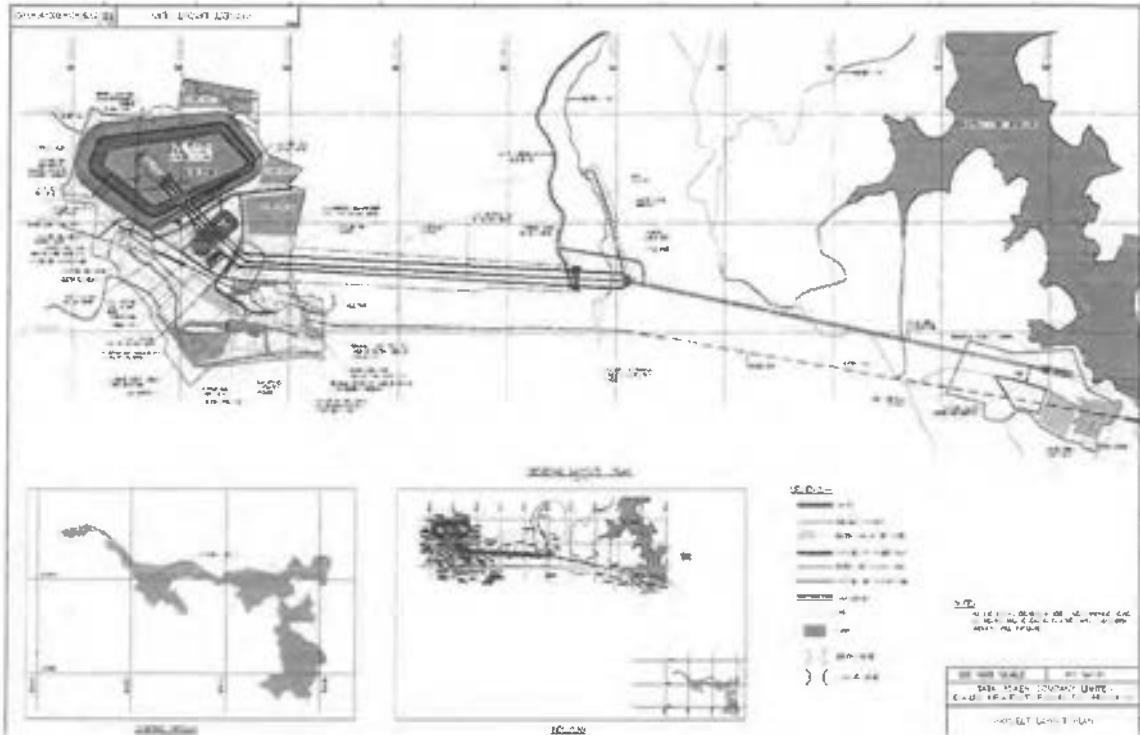
Other works

- Road Works
- Bailey Bridge
- Box Culvert
- Architectural Works
- Cross Drainage
- Instrumentation & Monitoring

5.1 Project highlights and Location

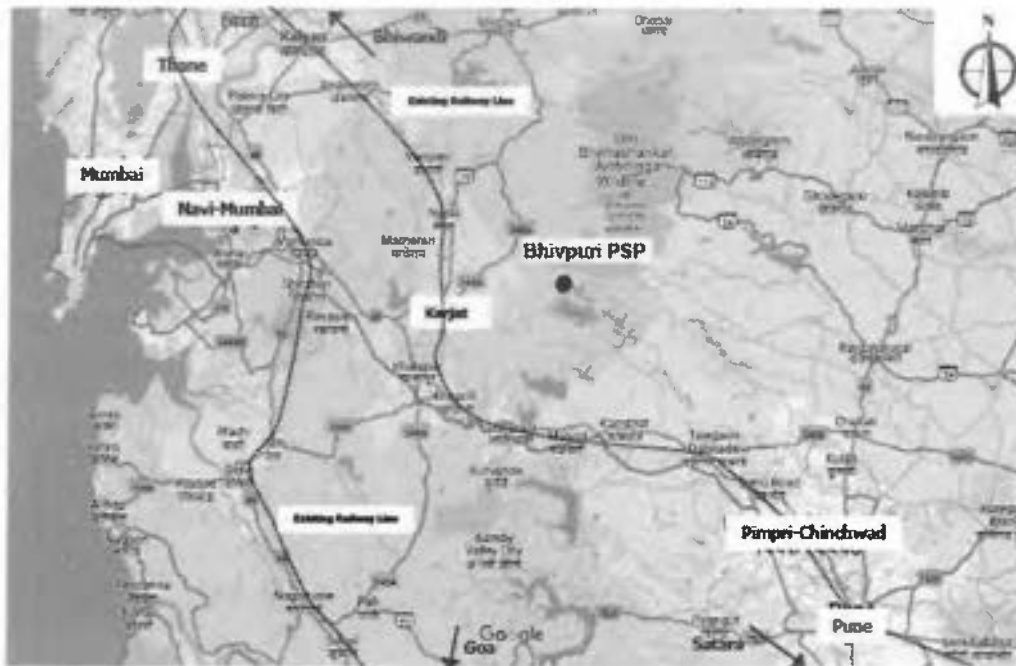
The project envisages utilization of water for generation of 1000MW (4 x 200 MW+2 x 100 MW) of power. The Upper reservoir is the existing Thokerwadi lake which shall be used for meeting the water requirement of pumped storage operations of this project. The lower reservoir is proposed artificial reservoir which shall be created through the construction of Geomembrane faced rockfill embankment dam. The water from the upper reservoir shall be utilized for generating power during peaking hours and during off-peak periods, water from lower reservoir shall be pumped back to upper reservoir using surplus off-peak power available from solar and wind projects.

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP



General Project Layout

The project is located near Bhivpuri town, Karjat Taluka in Raigad District of Maharashtra State. It is in the vicinity of the existing Bhivpuri hydro-electric project (HEP) situated about 20 km from Karjat town.



Project Location

6.0 PROBABLE EMERGENCY SITUATIONS

The following potential major emergencies have been identified at **Bhivpuri PSP**.

1. Natural Calamities, Cyclon,
2. Natural Calamities Earth quake,
3. Land slide inside tunnel
4. Fire & Explosion
5. Ventilation/Illumination Failure inside the tunnel
6. Snake Bites, Wild life attack
7. Overturning/Collapse of vehicle/Equipment's/ fall of person
8. Electrocutation

6.1 Natural calamity: Cyclone

- On receiving information of Cyclonic alert from Indian Meteorological dept (Regional IMD) OR TPCL, emergency controller will circulate an alert to site team.
- Understand the siren for emergency related to earth quake for four times On-Off.
- All equipment to be switched off / stopped immediately.
- Cranes to be taken to a secured place and to boom down.
- Persons working at heights to stop the work and come down to ground level after securing all loose gear.
- Stop The work inside tunnel & evacuate all peoples to Emergency assembly point.
- Any work permit issued earlier should be cancelled and area cleared.
- Gather all employees at assembly point and evacuate in batches to their place of safety.
- All outside vehicles / site transport vehicles should be cleared out.
- On completion of the above, declare a General Emergency.
- Chief emergency controller to continue to be in touch with Port signal / local Metrological dept. to keep update of the situation.
- Once emergency is under control, All clear to be declared by chief emergency controller & people to return to work.

Preventive Measures:

- Provide proper training to face the natural calamities like cyclone.
- Prepare a sound plan and educate the workmen for the same.
- Always get updated about the weather forecast from weather authority before planning any activity.
- Display Quick Response Team (QRT) contact numbers at prominent location.
- Keep First Aider & Ambulance ready to assist in case of emergency.
- Keep record of man power deployed at site.

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP**Post Emergency measures:**

- Record the situation & head counts.
- Manage first aid as well as evacuation if any injury case happened.
- Find out missing person if occurred.
- Get help from disaster management agency for expert rescue aids if required.
- Report to Insurance agency about the loss in the calamity.

6.2 Natural Calamity: Earth Quake

- Understand the siren for emergency related to earth quake for four times On-Off.
- Evacuate the peoples to nearest assembly point & move the peoples at safe place away from trees or building structures.
- Keep ready of Back hoe loader & other earth moving equipment to assist in case of evacuation requirements.
- Inform First Aider & Ambulance ready nearby assembly point or place where needed.
- Inform to tie-up Hospital for get ready for the treatment of injured person if occurred.
- Inform to local disaster management agency for any assistance if required.
- Keep fire extinguishers ready to fight the small fire or get help from TPCL fire brigade.
- Inspect the area by Geo-expertise about any rock cracks developed, soil collapsed after earth quake.
- Take headcount record after evacuation to ensure all clear.

Preventive Measures:

- Provide proper training to face the natural calamities like Earth Quake.
- Prepare a sound plan and educate the workmen for the same.
- Display Quick Response Team (QRT) contact numbers at prominent location.
- Keep First Aider & Ambulance ready to assist in case of emergency.
- Keep record of man power deployment at site.

6.3 Land slide inside tunnel.

- Understand the fire emergency siren as its sound is intermittent and three times Off-On of the siren
- Evacuate the peoples from land slide area to safe place outside tunnel.
- Call First Aider & Ambulance if needed.
- Provide first aid to injured person if occurred.
- Deploy earth moving equipment to remove land slide area and provide emergency escape route.
- Provide emergency light like torches for access lighting in case of electricity failed.
- Inform to tie – up hospital for any medical assistance.
- Inform to Local Disaster management agency for any help if required.

Precautionary Measures:

- Maintain a detailed inventory of all personnel inside the tunnel and their locations.
- Identify safe evacuation routes from the tunnel, including backup routes in case of primary route blockage.
- Conduct thorough geological surveys, Ground condition, vibration monitoring, to provide early warnings of potential landslides, such as unstable slopes, soil types.
- Define clear communication protocols for reporting incidents, coordinating response efforts, and disseminating information to relevant personnel, including project staff, emergency services, disaster management team, and local authorities.
- Establish an Emergency Control Centre with designated personnel to manage the response, coordinate resources, and communicate with stakeholders.
- Assess the structural integrity of the tunnel and its support systems, considering factors like ground conditions, water pressure.
- Display of Quick Emergency Response Team members contact numbers at prominent locations.
- Report to Insurance agency about the loss in the calamity.

6.4 Fire/ Explosion

- Understand the fire emergency siren as its sound is intermittent and three times Off-On of the siren.
- Know the nearest location of the fire extinguishers.
- Work fast to extinguish it, but do not get excited, fires are faster than the human efforts.

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP

- Try to protect surrounding properties from fire exposure just as vigorously as you are trying to put out the fire.
- Shut down equipment immediately before fire reach to it.
- Keep windward area to be safe from heat, smoke or gas.
- Evacuate the peoples from tunnel to emergency assembly point if fire exploded inside tunnel.
- Keep water source ready inside tunnel to fight the fire.
- Keep ready of Torches to get illumination in case of electricity shut off.
- First put out the ground fire and continue towards the source if it is upward;
- Never direct a water jet on fire of B, C and D type i. e. oil, petrol, electrical fires, machinery fire, reactive chemicals and metal fires;
- Make sure that the fire is completely put out;
- Do not leave the scene of fire unless relieved or authorized;
- Try to shut off electrical supply in case of electrical fire;
- Do not leave the equipment unattended at a fire place;
- Report all types of fire incidence to the safety department immediately thereafter.
- Remember "Maximum saving and Minimum loss".
- After extinguishing the fire collect the used powder and debris to the possible extent and dispose properly.

Preventive Measures:

- Provide adequate number of fire extinguishers and sand filled buckets at all prominent locations.
- Ensure periodical inspection and maintenance of fire extinguishers.
- Conduct demo classes on first aid firefighting.
- Display the contact number of / Nearest Government Fire Brigade Station.

Post Emergency measures:

- Segregate the area and remove max. Possible inflammable & combustible materials from the spot.
- Record the situation & head counts.
- Manage first aid as well as evacuation if any injury case happened.
- Find out missing person if occurred.
- Get help from disaster management agency for expert rescue aids if required.
- Report to Insurance agency about the loss in the calamity.

6.5 Ventilation/illumination failure inside the tunnel

- Instruct to people about do not panic.
- Stop all the activity along with equipment operation.

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP

- Clear the access & Use the torches / emergency lights for safe evacuation outside the tunnel.
- If required open the utility pipe line and supply compressed air to the scene of accident for ensuring minimum percentage of Oxygen.
- Evacuate the peoples to move outside the tunnel to get fresh air.

Preventive Measures:

- Ensure to check the condition of ventilation duct periodically and arrest the leakages for ensuring good air flow.
- Avoid number of folding while laying the ventilation duct in all the portal faces, access tunnel.
- Ensure to check periodically the over load relay setting, vibration readings for the ventilation blowers and undertake preventive maintenance if required.
- Ensure to route the lighting cables away from sharp edges, hot surfaces, water logging, and vehicular movement.
- Ensure to check the illumination levels at different locations with the help of lux meter.
- Ensure to carry out regular electrical inspections as per monthly activity plan.
- Avoid laying of welding cables over lapping way on the lighting cables.
- Avoid setting of dust material on the surface of lighting cables which reduces the heat emitting property and subsequently damages the cable.
- Avoid taking number of tapings from single lighting source.

Post Emergency measures:

- Provide adequate number of Self-Contained Breathing Apparatus to the work men for emergency rescue
- Route / lay the ventilation duct at a reasonable height in the portal to avoid direct exposure to the exhaust pipes of the automobile equipment.
- Ensure proper anchorage supports to the ventilation duct.
- Display the flow chart (line diagram) of the ventilation ducting at prominent location in the portal.
- Ensure adequate safety measures to be followed while under taking hot work inside the portal in connection with ventilation laying work.

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP

- Provide adequate number of emergency lights at prominent locations.
- Ensure to fix the light fittings in a rigid way with clamp arrangement to avoid transfer of vibrations and subsequent failure of bulb filament.
- Provide / replace rubber gaskets for all the light fittings to avoid entry of water and dust.
- Provide good earthing to all the lighting distribution boards.

6.6 Snake bites:

- Limit liquid intake because the body pumps the fluids to the bite site, increasing painful swelling. Avoid alcohol which increases metabolism and impair judgement.
- Remember that most bites even from poisonous snakes are not fatal. Panic can increase the danger to the victim by increasing heartbeat.
- Don't excite the victim or even allow the victim to walk if it can be avoided. Doing so will increase the blood circulation, speeding the spread of the venom beyond the area of the bite.
- Don't cut an 'X' or suck out the venom with mouth. This is ineffective and increases trauma in the area of the wound.
- Do not bleed the wound.
- Do not put any ice on the bite area
- Snake bite can often cause severe pain at bite site. This can be treated with pain killers like paracetamol. Do not take Aspirin tablet.
- Immediate call to First Aider for snake bite first aid.
- Ensure with hospital about availability to antivenom injection.
- Shift the person to nearest hospital to get antivenom treatment.

Preventive Measures:

- Sprinkle the Snake repellent powder / Carry out pest control at prominent locations.
- Use of snake pad with safety shoe / Gumboot along with mandatory PPE.
- Ensure good housekeeping at work locations by clearing iron junk & waste bushes, vegetation.
- Conduct first-aid demo / Give first-aid tips to workmen for giving treatment to snake bite.

6.7 Overturning/Collapse of vehicles/ equipment's

- Escape the driver & cleaner from vehicle.
- Provide First Aid to injured person.
- Keep in informed to Doctor as well as First Aider about further medical aids.
- Provide Emergency Vehicle / Ambulance to send Injured person to hospital.
- Barricade the incident area to avoid interference by others.
- Mechanical team will remove the vehicle after thoroughly investigation.

Preventive Measures:

- Deploy experienced / trained operators for operating the HEM vehicles.
- Deploy experienced / trained operators for all type of crane operation
- Avoid overloading the dumper during mucking operation.
- Ensure proper gradient/ slope for the access roads at portal, shaft, dumping yard.
- Provide defensive driving training to all the HEM Operators
- Avoid lifting of heavy loads more than the SWL (Safe Work Load).
- Provide proper training to operator/drivers.
- Provide adequate communication system to safe operation.
- Ensure to carryout vision test for all the HEM operators before recruitment
- Provide adequate number of signalmen for mucking, to control the vehicular movement.
- Provide good illumination in the access roads.
- Ensure to carryout preventive maintenance regularly for all the HEM vehicles
- Ensure to carryout vehicle fitness inspections regularly by Mechanical / HSE department.
- Arrange robust rail guide ways with proper foundation for gantry cranes.
- Provide periodic maintenance of equipment.
- Periodic third-party test to be done.

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP**6.8 Electrocutation:**

- Don't touch an injured person who is still in contact with an electrical current.
- Switch off the electrical supply.
- Remove electrocuted person from electrical system either by himself or use dry wooden stick & separate him from electrical system.
- Put Iron rod over the person & touch to ground to discharge residual current from the body.
- Begin CPR if the person shows no signs of circulation, such as breathing, coughing or movement.
- Try to prevent the injured person from becoming chilled.
- Apply a bandage. Cover any burned areas with a sterile gauze bandage, if available, or a clean cloth.
- Call Doctor & First Aider for medical assistance along with Ambulance at spot.
- Shift the Injured person to nearest Hospital.
- Investigate the incident for any findings & Implement e corrective action
/Preventive action at site.

Preventive Measures:

- Deploy trained electricians for electrical works.
- Do deenergize and lock out or tag out to electrical circuits/parts while working on or nearby.
- Wear suitable personal protective equipment & use proper tools when de-energizing or testing live electrical circuits/parts.
- Ensure machinery and power tools are properly grounded or double insulated.
- Disconnect the all the plug.
- Do not Use any power tool or machinery before inspecting or repairing.
- Keep metal and other conductive objects away from live electrical circuits/parts.

Once emergency is under control, all clear to be declared by Chief emergency controller and people to return to work.

6.9 Oil Spills / Leaks

1. Alert the people to be at a safe distance.
2. Type & extent of spillage is to be ascertained.
3. If the spillage is of flammable chemical (HSD, LDO), appropriate fire precautions to be taken.
4. Do not allow any spark producing activity near spillage.
5. If possible; without endangering life, try to put sand on spillage. This will help to disperse spillage in controlled way.
6. Stop all traffic on road coming in vulnerable zone of hazard.
7. If there are any burn affected casualties, move them to the nearby hospital.
8. General Alert to be issued, if required. The following procedure to be adopted:

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP

- Stop work & secure machinery in case of a fire
- Gather personnel at assembly point
- Evacuate personnel to assembly point
- Take head count and search for missing people
- Further evacuation, if required.

Once emergency is under control, all clear to be declared by Chief emergency controller and people to return to work

6.10 Man slipped/ fallen in deep excavation

- No untrained person shall enter the excavation.
- Provide proper access ladder, stair, or rescue tripod.
- Install shoring / trench box if required
- Ensure edge protection is intact
- Communicate with the victim if conscious
- Check for soil stability and risk of collapse
- Test oxygen level if depth >1.5 m or confined condition
- Rescuers must wear (Full body harness, Helmet, Safety shoes, Hand gloves & Reflective jacket)
- Avoid disturbing soil unnecessarily

Preventive Measures

- Proper shoring/sloping for deep excavation
- Barricading and warning signage
- Post clear "Danger: Open Excavation" or "Keep Out" signs in multiple languages
- Install substantial guardrails (consisting of a top rail, mid-rail, and toe board) around the perimeter. These should be strong enough to withstand a person's weight if they lean or fall against them.
- Use high-visibility fencing (like chain-link or orange safety mesh) to completely isolate the excavation.
- When mobile equipment (like dump trucks) needs to tip materials into the excavation, use physical stop blocks or "logs" to prevent the vehicle from over-running the edge.
- Safe access ladders at all times
- Keep all "spoils" (excavated soil) and heavy equipment at least 2 feet (0.6 meters) away from the edge. This prevents material from sliding back in and reduces the pressure on the trench walls.

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP

- Ensure the site is well-lit, especially during night shifts or in areas where the public might walk. Use blinking warning lights for unattended excavations at night.
- Daily inspection by competent person
- Permit system for deep excavation
- Worker training and mock drills

6.11 Concrete Slurry / Cement Sludge Discharge

Preventive Measures

- Use ready-mix concrete (RMC) to minimize on-site slurry generation.
- Avoid over-watering during mixing, curing, and cleaning of equipment.
- Use controlled concrete pouring methods to prevent spillage.
- Ensure proper formwork sealing to avoid leakage of slurry.
- Install bunds, curbs, or barriers around concrete work areas.
- Use drip trays under mixers, pumps, and transit mixers.
- Ensure washout pits are clearly marked and barricaded.
- Reuse **settled concrete waste** as filling material where permitted.
- Dispose hardened sludge only at **approved dumping yards**.
- Never discharge slurry into **open land, drains, or water bodies**

6.12 Dust Pollution Emergency

1. STOP all dust-generating activities immediately
2. Inform Site Emergency Coordinator / Safety Officer
3. Activate Dust Suppression
4. Barricade affected areas AND Control vehicle movement.

Preventive Action

- Resume work only after dust levels are controlled
- Increase frequency of water sprinkling
- Install / repair wind barriers & green nets
- Optimize vehicle speed limits inside site
- Use covered trucks for material transport
- Maintain wheel washing system
- Weather monitoring – stop work during high wind

6.13 Waste Mismanagement Incident

1. Waste was disposed of outside the designated waste collection area
2. Waste was left uncovered, causing dust and potential water pollution
3. Cement slurry flowed into nearby soil/drain due to lack of barricading

Preventive Measure

- Implement site-specific Waste Management Plan
- Provide color-coded waste bins (hazardous / non-hazardous / recyclable)
- Conduct waste handling training for workers
- Appoint waste management in-charge
- Daily housekeeping inspection
- Display waste segregation signage
- Maintain waste disposal record

7 EMERGENCY RESPONSE MANAGEMENT

7.1 Identification of the emergency

It is necessary for a broad recognition be adopted to determine what circumstances or set of circumstances constitute an emerging emergency, which would in turn cause the activation of the Quick emergency response team (QRT).

7.2 Emergency Alarm/ Siren

The site level emergency siren will be blown if the emergency situation is difficult to control within a short period of time or is uncontrollable and is likely to adversely affect the persons working in areas / plants / departments in the complex and the population working or residing nearby. The site level emergency siren requires immediate response according to established procedures.

A person identifying the emergency situation should request to emergency controller to activate the siren. The site level siren will be sounded in different manners to distinguish different type of emergencies as stated below.

For example

Emergency due to natural Calamity: Buzz the siren for four times ON/OFF.

Emergency due to Collapse in the tunnel: Buzz the siren for three times ON/OFF.

Emergency due to land slide: Buzz the siren for three times ON/OFF.

Emergency due to Snake bite: Buzz the siren for three times ON/OFF.

Emergency due to Fire : Buzz the siren for three times ON/OFF

All Clear Signal: Siren will be blown in continuous mode for two minutes.

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7.3 Site Evacuation

Whenever an emergency alarm or siren is sounded all persons working at the construction site must respond as follows.

- ☞ They should rush to the nearest assembly point.
- ☞ They should follow the instructions of site coordinator.
- ☞ Run in direction opposite to the wind direction in case of any FIRE.

7.4 Emergency Assembly Points

When an emergency siren is blown, all the workers should stop their work and see that all the ignition sources in their area such as welding sets, gas cutting sets, diesel tank isolation valve, etc are shut down.

During an emergency evacuation all workers and staff should rush to the nearest assembly point, which are indicated by signboards.

The assembly points at Project are located at following locations:

Point No	Location	Assembly Point for
1	Near Project Office area (Upper Reservoir)	Project office staff, Visitors, Workmen Camp
2	Near Upper Intake workmen Camp	Workers
3	Near Project Office area (Lower Reservoir)	Project office staff, Visitors
4	Near Lower Reservoir	Relevant area workers / Staff
5	Near Lower Reservoir	Relevant area workers / Staff
6	Near Lower Workmen Camp	Workers inside camp
7	Near penstock Fabrication Yard	Fabrication team
8	Near Surge Shaft	Tunnel activity team

The locations of all the Assembly Points are marked on the Plot Plan as given below.

All Employees, will stand at their allotted places at the Assembly Point for facilitating easy head count.

Project Construction Head (PCH) / Site In charge, with assistance of Team Member, will be responsible for the headcount.

The visitors and contractor's workers will stand with the employees they are visiting for facilitating headcount.

7.5 Proposed Plot plan for Emergency Assembly Points



7.6 Points to be kept in mind during emergency evacuation.

- Do not stop to collect personal belongings.
- Turn off generators, compressors, and other power equipment except for those providing power for emergency services.
- Turn off all heat producing equipment and shut cylinder valves.
- Secure the Crane boom & Shut off it before leaving.
- Attack fire with equipment provided, if it is safe to do so.
- Obey the instructions of site fire safety coordinator / JV representative or supervisory staff.
- Personal Department / time office to verify that all employees have been evacuated at assembly point.
- Do not re-enter the site unless all-clear siren is given or QRT member instructs you.

7.7 Emergency Control room

Emergency control room shall be equipped with the entire emergency response equipment's as listed below. It is the place from where emergency controller will

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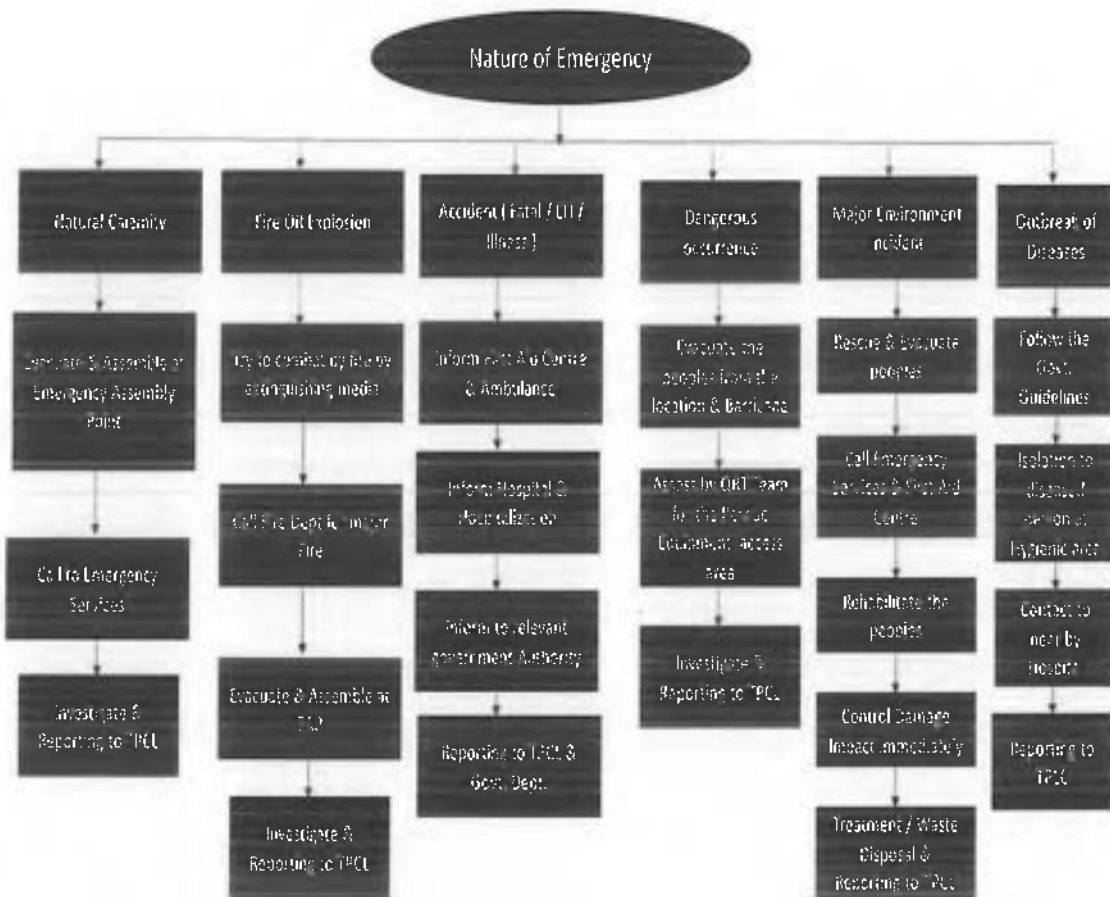
have control over all the activities of the project to fight any emergency arising.

This emergency control room should be equipped with following;

1. Emergency Plan
2. A copy of the location map / plot plan of the work site showing locations of various units of site plan.
3. Internal / External Communication System
4. Emergency Numbers
5. Emergency Number of all Emergency Team Members
6. Emergency Power Supply and Emergency Light
7. Public Address System
8. Fire Extinguisher
9. Sufficient drinking water
10. First Aid Box
11. PPEs like Safety Belt, Life Jacket, Hand Gloves, etc.

At site level the emergency control room is identified as Stores. The store shall be equipped with all above stated necessary items to meet with the requirements.

7.8 Flow Chart to respond different Emergencies



8 QUICK EMERGENCY RESPONSE TEAM (QRT)

QRT have been selected based on following criteria:

1. The team should cover every activity of the site.
2. The team leader should be in position to handle any emergency.
3. The team leader should have enough powers delegated to fight an emergency.
4. Each member of the team should be trained to carry out his or her assigned duties.

8.1 RESPONSIBILITY & AUTHORITY

8.2 Emergency Control Team Leader

The Project Director / Project Manager will identify Project Site Incharge as the "Emergency Control Team Leaders" for respective shifts as mentioned in the flow diagram.

8.3 Functions of the Emergency Control Team Leader (ECTL)

- The Emergency Control Team Leader is authorized to declare an emergency.
- He shall assume overall control of the emergency at the site and co-ordinate all Emergency Control activities and make sure that all persons carry out their assigned duties in the pre-determined manner.
- Inform to concerned officials at HCC, TPL JV site office and seek necessary assistance in terms of co-ordination with Government authorities, Municipal Corporation Officials, Fire Brigade, Police Head Quarters etc.
- The site management shall inform to the Finance Department to co-ordinate with our Insurer/Surveyor/Loss Assessor and hasten up settlement of claims, if any.
- Constitute a committee to examine/investigate the situations that resulted in the incident and to identify steps to be taken to prevent recurrence of such incidents in future.

8.4 Role of Project Construction Head (PCH)

- Make sure that communication is established with Access Tunnel and Shaft Locations
- Make sure that "EMERGENCY RESCUE LIGHTS" are available to rescue trapped persons.
- Facilitate conducting "CHECK IN/CHECK OUT" of Access Tunnel and shaft personnel by checking against attendance record/or with the automated access monitoring system.
- Provide information to Project Director / Project Manager as well as TPCL.
- Give instructions to discontinue / shutdown operations of the Batching Plant in a planned phased manner.
- Give instructions to discontinue operations involving Gantry crane.
- Give instructions for "NO DRILLING/BLASTING" to all peoples involved in work.
- Render necessary support services to the QRT.

8.5 Functions of CSM

- Provide support and information needed by Emergency Control Team Leader / Members.
- Co-ordinate with and guide the Fire Brigade Team on arrival at the site, through the site roads;
- Provide guidance / assistance in Fire water pump sprinkling (if required)
- Contact Company Doctor, Ambulance service, Hospital and seek necessary assistance if necessary.
- Function as the facilitator of the Site Team conducting an investigation who the causes of the incident so that such incidents are not repeated in future.

8.6 Functions of Mechanical In-charge

- Discontinue / Shutdown Plant operations on hearing the wailing siren.
- Stop washing unit, compressors, moving machinery, all cranes including Boomers, Shotcrete Machines etc.
- Make sure that cranes and other lifting machinery has stopped & do not obstruct the movement of Fire Brigade vehicles, Ambulances, etc.
- If any vehicle breakdown takes place, then arrange to use cranes to clear the pathway for Fire Tender and Ambulance.
- Facilitate use of cranes for retrieving fallen objects, parts of collapsed structures (if any);
- Liaise with crane rental agencies if their services are called for on an urgent basis.
- Render necessary support services to the Emergency Control Team Leader viz. Project Manager / Project Chief Engineer.

8.7 Functions of HR Personnel and Administration Incharge

- Keep the list of persons who are on duty during the particular shift, with a view to facilitate Head count (and thus ensure that all persons are accounted for)
- Depute Time Keeper to take Head count.
- Interact with the local press reporters / agencies. Share authentic information about the incident;

8.8 Functions of Electrical In-Charge

- Make sure that electricity to the affected areas of the site is selectively switched off;
- Make sure that Diesel Generator set is ready for start-up, if required.
- Provide necessary support to the Emergency Control Team Leader to control the Emergency.

8.9 Functions of Stores Incharge

- Ensure that the Stores issue counter is open and necessary items to facilitate emergency control are issued / delivered to the concerned persons.
- If any emergency/short notice purchase is needed then Store Manager shall arrange to procure all such items, immediately.

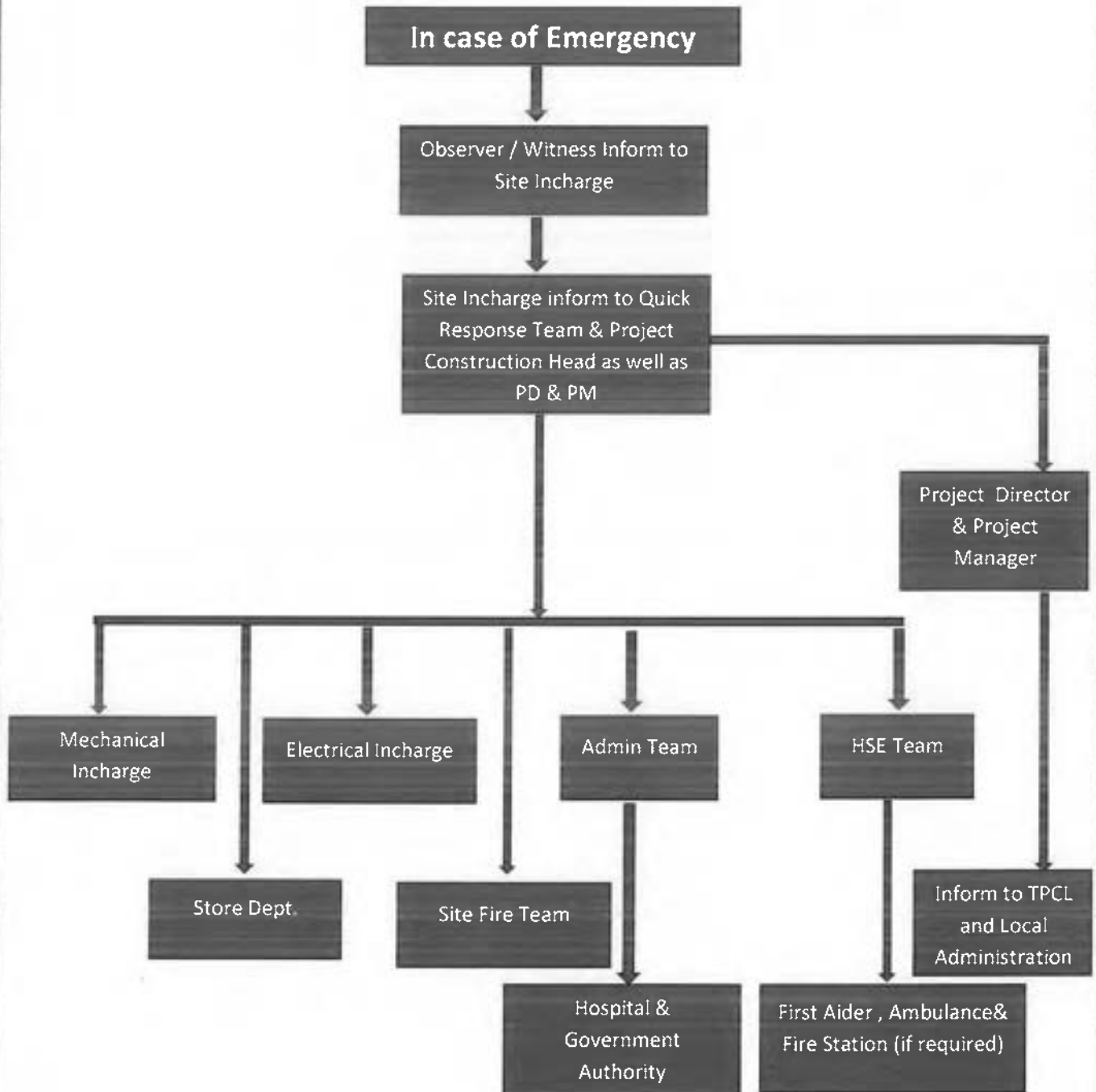
8.10 Functions of Fire Fighting Team

- Firefighting team should initiate the action for controlling the fire. They are the trained fire fighters having knowledge of various types of fires and use of firefighting equipment's.
- Rescue the people whoever trapped inside the fire.
- Should not allow any unauthorized person to use equipments.

8.11 Functions of Security Guard

- Provide guidance on how to reach the site.
- Arrange emergency lights and safety equipment's from emergency control room
- Make sure that there will be no unauthorized people involvement
- Restrict / Block all non-essential telephone calls.
- The main function of this team is to cordon-off the site and control the mob.
- The team members also should help the Fire Fighting team and guide external agencies like Fire Brigade to the place of emergency.

9.0 EMERGENCY RESPONSE FLOW CHART



9.1 Quick Emergency Response Teams of Project

Quick Response Team of Project is shown in Table below. The teams have been selected based on above-mentioned criteria and headed by sectional heads. Each member will be

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provided with training to carry out the assigned duties and responsibilities. The members are selected such that both night shift as well as day shift can be attended.

9.2 QRT Members Contact Numbers (Proposed):

Sr.No.	Designation	Name	Contact Number
1	Project Director	Mr. Satyan Sood	8097269197
2	Project Manager	Mr. Yalal Sharanappa	9906674872
3	Project Control Head	Mr. Eshan Gandotra	8492076182
4	Project PCH (Lower Intake)	Mr. Binod Kumar	9811753103
5	Project PCH (Upper Intake)	Mr. Shresha Addoni	7020870629
6	CSM	Mr. Gouri S Gouda	9438325271
7	Personnel & Admin Manager	Mr. Mahesh Singh Mr Zahoor Masoodi Mr. Suresh Maniyeri	8476924633 6006104383 9070801614
8	Project Mechanical Engineer/Manager	Mr. Kapil Gangwar	7889766132
9	Project Electrical In- Charge/Engineer	Mr. Rajoo Prasad	915202697
10	Fire Station Karjat		101
11	Nearest Hospital	Ekvira Hospital, Khandi Matoshree Hospital, Karjat	9307866276 9545710190
12	Company Doctor	Mr. Shailesh Gandhi	9898071322
13	Ambulance Driver	Mr. Mastan	84104417261
14	First Aid Centre	Mr. Bhimrao	7308200019

10.0 COMMUNICATION SYSTEM IN THE TUNNEL/ SHAFT

As there is signal problems inside the tunnel/shaft

- A landline telephonic system shall be installed at every appropriate distance
- Walkie-Talkie shall be available in side the tunnel
- Intercom connection to all junction inside tunnel to be provided
- Public address system to be introduced for emergency evacuation.
- Siren to be installed all junction points for evacuation during blasting and emergency

11.0 EMERGENCY LIGHTING SYSTEM

- In case of electrical failure, a 24-volt battery operated emergency lighting system shall be available OR Battery operated Torch.

12.0 EMERGENCY RESPONSE ARRANGEMENT

- First Aid kits
- Torch
- Traffic Control in tunnel
- Fire/Emergency alarm system
- Fire extinguisher and buckets
- Well-equipped Ambulance
- First Aid Centre
- Oil spillage kit

First Aid Box: 26noc. First aid item equipped with box shall be placed at prominent location at site.



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First Aid Centre: Well Facilitated Ambulance Room / First Aid room shall be provided at site.



Ambulance / Emergency Vehicle: Well-equipped ambulance / Emergency Vehicle shall be kept readily available at site.



Fire Extinguisher: Fire extinguisher of ABC, CO2, Foam Type and Fire Bucket shall be provided at prominent location at Site.



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Oil Spillage Kit: Oil Spillage Kit shall be arranged at Workshop area, Store at site.



Emergency Torch Light: Emergency Torch light shall be kept at Prominent location at site.





TPL - HCC BHIVPUR PSP JOINT VENTURE

Project Quick Emergency Response Plan



CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP

Schedule of Mock Drill

Month	Type of Emergency	Scenario	Responsible Dept/ Person	Remarks
Sep-25	Fire Emergency	Fire on site	Safety Officer & Fire Team	Coordinate with Executi. Team
Oct-25	Electrical Shock	Electrocution	Safety Officer & Electrical Engineer	Demonstrate rescue with insulated tools
Nov-25	Medical Emergency	Worker fainting	Safety & First Aid Team	involve certified first aiders
Dec-25	Snake Bite	Snake Bite	Safety & Medical Team	Include transportation to hospital
Jan-26	Road Accident	Vehicle collision	Safety & P&M	
Feb-26	Rescue Drill	Confined Space	Safety & Civil	
March-26	Fire Evacuation	Fire in B plant / C Plant	Safety Officer & Fire Team	Year-end combined drill

CIVIL AND HM WORKS FOR 1000 MW BHIVPURI PSP**List of First Aider**

Sr. No.	Name
1	Shubham Bhosale
2	Rakesh Agarwal
3	Ayan Kumar Kundu
4	B. Lokanath Reddy
5	Kunvar Bhadur Singh
6	Raj Shekhar Patil
7	Vikash Singh
8	Amarjit Sahoo
9	Sunil Pavashe
10	Indrajeet Yadav



TPL - HCC BHIVPUR PSP JOINT VENTURE

Project Quick Emergency Response Plan



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List of Fire Fighter

<u>Sr.No.</u>	<u>Name</u>	<u>Department</u>	<u>Contact no.</u>
1	Kalyan Rao	HSE	9611900468
2	Yuvraj	HSE	8007729207
3	Nitesh	HSE	9130195756
4	Aamarjit Sahoo	HSE	8342090262
5	Manish Kumar	HSE	9899110119
6	Shubham Bhosle	HSE	7822852087



**TATA POWER COMPANY LIMITED
BHIVPURI HYDRO POWER STATION**

VEHICLE ENTRY PERMISSION

Dept. : _____

Date :

Thru : HOD

To,
The Security-In-Charge,
Bhivpuri Hydro Power Station.

Sir,

Kindly allow following vehicle of M/S _____ inside the
company premises for (purpose) _____

Vehicle Number: _____

Driver Name: _____

Number of occupants (excl. Driver): _____

Name of Supervisor/Proprietor available at site during Loading/Unloading of the
Vehicle: _____

Signature of applicant

Section 10.2

CATCHMENT AREA TREATMENT PLAN

10.2 CATCHMENT AREA TREATMENT PLAN

It is a well-established fact that reservoirs formed by dams on rivers are subjected to sedimentation. The process of sedimentation embodies the sequential processes of erosion, entrainment, transportation, deposition and compaction of sediment. The steady erosion and sediment in reservoir reduce its capacity, and thus affecting the water availability for the designated use. The eroded sediment from catchment when deposited on streambeds and banks causes braiding of river reach. The removal of top fertile soil from catchment adversely affects the land productivity in the area. Thus, a well-designed Catchment Area Treatment (CAT) Plan is essential to ameliorate the above-mentioned adverse effects of soil erosion. Soil erosion can be defined as detachment, transportation and deposition of soil particles from one place to other by means of transporting agent like air, water or animals. Soil erosion is mainly affected by rainfall intensity and runoff, slope gradient and length, soil erodibility and vegetation cover (landuse pattern). Therefore, study of erosion and sediment yield from catchments are of great importance. Soil erosion leads to:

- loss in production potential
- reduction in infiltration rates
- reduction in water-holding capacity
- loss of nutrients
- increase in tillage operation costs
- reduction in water supply

To control the rate of soil erosion in the catchment, Catchment Area Treatment (CAT) is an ineluctable part. The CAT plan pertains to preparation of a management plan for treatment of erosion prone areas through adequate preventive measures. An effective CAT plan is a key factor to make the project eco-friendly and sustainable. Thus, a well-designed Catchment Area Treatment (CAT) Plan is essential to ameliorate the above-mentioned adverse process of soil erosion. CAT plan essentially consists of the following steps.

1. Calculation of soil erosion using Revised Universal Soil Loss Equation (RUSLE), combined with Remote Sensing (RS) and Geographic Information System (GIS) technologies.
2. Prioritizing the areas for treatment using Silt Yield Index (SYI).
3. Planning of suitable erosion control measures.
4. Cost estimation for CAT plan.

10.2.1 Methodology Adopted for the Study

The various steps, covered in the study, are as follows:

- Defining study area
- Defining data requirement
- Data acquisition and preparation
- Output presentation

The above-mentioned steps are briefly described in the following paragraphs:

10.2.1.1 Defining Study Area

Purpose of the study is preparation of CAT plan for the Catchment Area of Bhivpuri Off-Stream Open Loop Pumped Storage Project. Since the upper reservoir is existing Thokerwadi reservoir therefore catchment area of the stream on which lower reservoir is proposed is being considered as study area. The lower reservoir and its dam are proposed on Khadki nala, the total catchment area of the Khadki nala at the dam site for the proposed lower reservoir is only **1.43 sq km** (refer **Figure 10.1**). Further, the effective catchment area i.e. after excluding the area to be covered by the proposed project components such as lower reservoir and part of water conductor system is only **1.15 sq. km**. In view of this, an area of **1.15 sq km** is being considered as study area. Out of the total 1.15 sq km of study area, **0.79 sq. km** falls in Pune district and the rest **0.36 sq. km** falls in Raigad district.

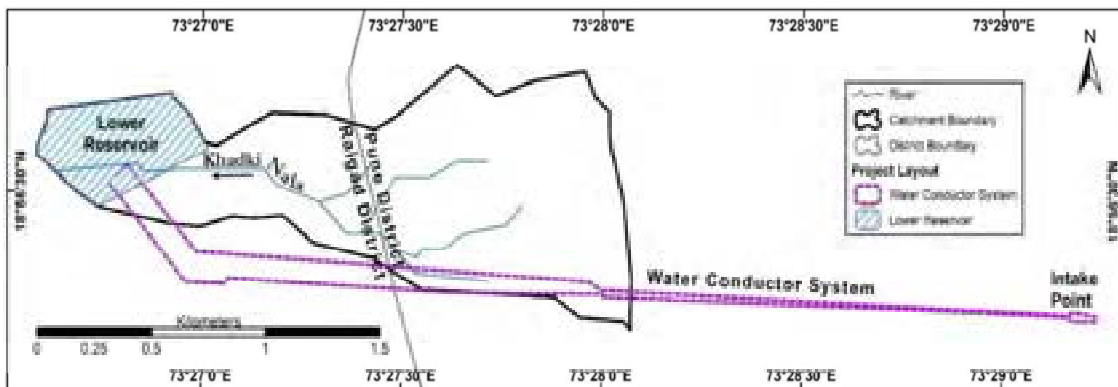


Figure 10.1: Map showing Catchment Area

In order to plan watershed management and to formulate action plans it requires micro-watershed delineation, therefore, catchment area was further delineated into micro-watershed. For the delineation of micro-watershed, Watershed Atlas of India prepared by Soil and Land Use Survey of India (SLUSI) has been referred. As per Watershed Atlas of India, the catchment area falls in a single Microwatershed. The nomenclature of Microwatershed has been assigned as follows: All drainage flowing into Arabian Sea except that at 1 Region (5); North Western Ghats Basin (5B); Savatri to Tapi Catchment (5B2); Ulhas Sub-Catchment (5B2B); Ulhas Watershed (5B2B7); Pej Subwatershed (5B2B7k); and Khadki Microwatershed (5B2B7k1).

10.2.2 Defining Data Requirement

Soil loss has been calculated through RUSLE (Revised Universal Soil Loss Equation) model which is computed by the following equation:

$$\text{Soil Loss (A)} = R * K * LS * C * P$$

Wherein; A = Soil loss (Tons/ha/year)

R is Rainfall & Runoff Erosivity Factor (MJ mm/ha-1/h-1/year-1), which depends upon the annual average rainfall in mm. Data required for R factor is rainfall intensity.

K is Soil Erodibility Factor (Tons/ha/h/ha-1/MJ-1/mm-1), which depends on the organic matter, texture permeability and profile structure of the soil. Also, it is a constant value for each soil type. Data required for K factor is soil type.

LS is Topographic Factor (dimensionless) which depends upon flow accumulation and steepness and length of slope in the area. Data required for LS factor is slope length and slope gradient.

C = Vegetation Cover and Crop Management Factor (dimensionless), which is the ratio of bare soil to vegetation and non- photosynthetic material. It is a constant value for each land use category. Data required for C factor is land use/ land cover.

P is Conservation Supporting Practice Factor (dimensionless), which takes into account specific erosion control practices like contour bunding, bench terracing etc.

10.2.3 Data Acquisition and Preparation

The data on various aspects was collected from different sources. Soil map of the catchment area was prepared from soil map of Maharashtra procured from Regional Centre of National Bureau of Soil Survey & Land Use Planning (NBSS&LUP), New Delhi. For the preparation of DEM and preparation of Slope map, Shuttle Radar Topography Mission (SRTM) 3 Arc-Second Global Digital Terrain Elevation Data (DTED) data has been used. For the preparation of land use/ land cover, map prepared by National Remote Sensing Centre (NRSC), Indian Space Research Organisation (ISRO) of Dept. of Space, Govt. of India with Partner Institution, Maharashtra Remote Sensing Application Centre, Govt. of Maharashtra has been used. The rainfall data in the catchment area has been sourced from Climatic Research Unit (CRU), a component of the University of East Anglia and one of the leading institutions concerned with the study of natural and anthropogenic climate change.

10.2.3.1 Soil

The catchment area is covered by a single Soil Mapping Unit i.e. 77, which is characterised by Very shallow, excessively drained, loamy soils on moderately steeply sloping highly dissected hill ranges with escarpments and narrow valleys with very severe erosion.

10.2.3.2 Land Use/ Land Cover

For the present study, land use/land cover maps prepared by National Remote Sensing Centre (NRSC), Indian Space Research Organisation (ISRO) of Dept. of Space with Maharashtra Remote Sensing Application Centre as partner institute has been used, in addition Google Earth was also referred.

The classified land use/ land cover map of the catchment area is shown as **Figure 10.2**. The land use/ land cover pattern of the catchment area has been given in **Table 10.2**. As can be seen from the map and table, the land use/ land cover pattern can be classified into five classes, out of these, deciduous forest covers the maximum area i.e. 85.43%, followed by scrub forest, covering 5.35%. Evergreen/ Semi Evergreen forest, agricultural land and fallow land covers 4.76%, 2.15% and 2.30% of the area respectively.

Table 10.2: Description of Soil Mapping Units in the Catchment Area

Land use/ Land cover Classes	Area (ha)	Area (%)
Evergreen/ Semi Evergreen Forest	6.80	4.76
Deciduous Forest	121.86	85.43
Scrub Forest	7.63	5.35
Agricultural Land	3.07	2.15

Land use/ Land cover Classes	Area (ha)	Area (%)
Fallow Land	3.28	2.30
Total	142.64	100

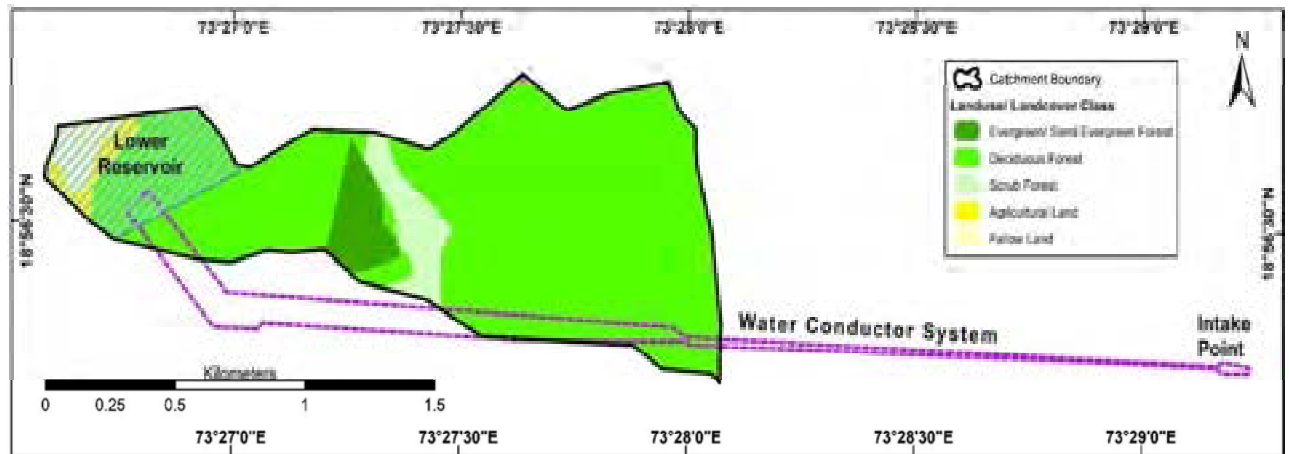


Figure 10.2: Land use/ Land cover Map of the Catchment Area

10.2.3.3 Slope

For the preparation of Slope map, Shuttle Radar Topography Mission (SRTM) 3 Arc-Second Global Digital Terrain Elevation Data (DTED) data has been used. The slope map in degrees prepared for the catchment area is given at **Figure 10.3**. In the Catchment Area, the slope ranges from 0 to around 47 degree.

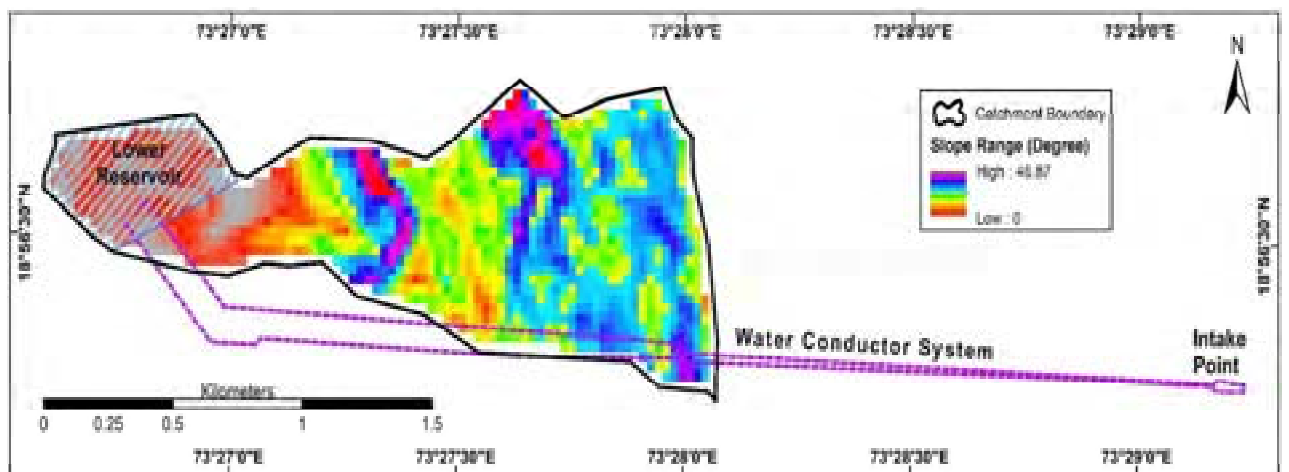


Figure 10.3: Slope Map of the Catchment Area

10.2.3.4 Rainfall

For the estimation of rainfall erosivity in the catchment area, average rainfall of 10 years has been taken from the High-resolution gridded CRU datasets. In the absence of site-specific periodic data, CRU data from the year 2011 to 2020 has been used for the calculation of R factor. In and around the Catchment Area, average rainfall of 10 years have been taken from the rain gauge station for the estimation of rainfall erosivity. The rainfall erosivity factor (R) has been calculated using equation $R = 81.5 + 0.38X$ for annual average rainfall of observed and simulated data. The value of R i.e. 1039.40 has been adopted in this study to calculate soil erosion using RUSLE.

10.2.3.5 Conservation Support Practice (P) Factor`

The P factor is an expression of the effects of supporting conservation practices, such as contouring, buffer strips of vegetation, and terracing, on soil loss at a particular site. It is the ratio of soil loss with specific support practice to the corresponding loss with up-or down-slope cultivation. In the present study, the P factor has been considered as 1.

10.2.4 Output Presentation

A thematic map for soil loss of the catchment area has been prepared using RUSLE model mentioned in the above section. The catchment area was then demarcated into different soil erosion intensity mapping units or classes based upon the extent of soil loss (see **Table 10.3 & Figure 10.4**). The catchment area under different Erosion Intensity categories is given in **Table 10.3**. As can be seen from the figure and table, around 24% of catchments are prone to less than 1 tons/ha/annum soil erosion, i.e. under negligible erosion intensity category. 46.02% of its area is prone to Severe and Very Severe soil erosion.

Table 10.3: Area falling under different Erosion Intensity Categories

S. No.	Soil loss in tons/hectare/annum	Erosion Intensity Category	Area (ha)	Area (%)
1	<1	Negligible	34.36	24.09
2	1-5	Slight	9.15	6.41
3	5-10	Very Low	6.28	4.40
4	10-20	Low	6.99	4.90
5	20-40	Moderate	20.23	14.18
6	40-80	Severe	37.62	26.37
7	>80	Very Severe	28.02	19.65
Total			142.64	100

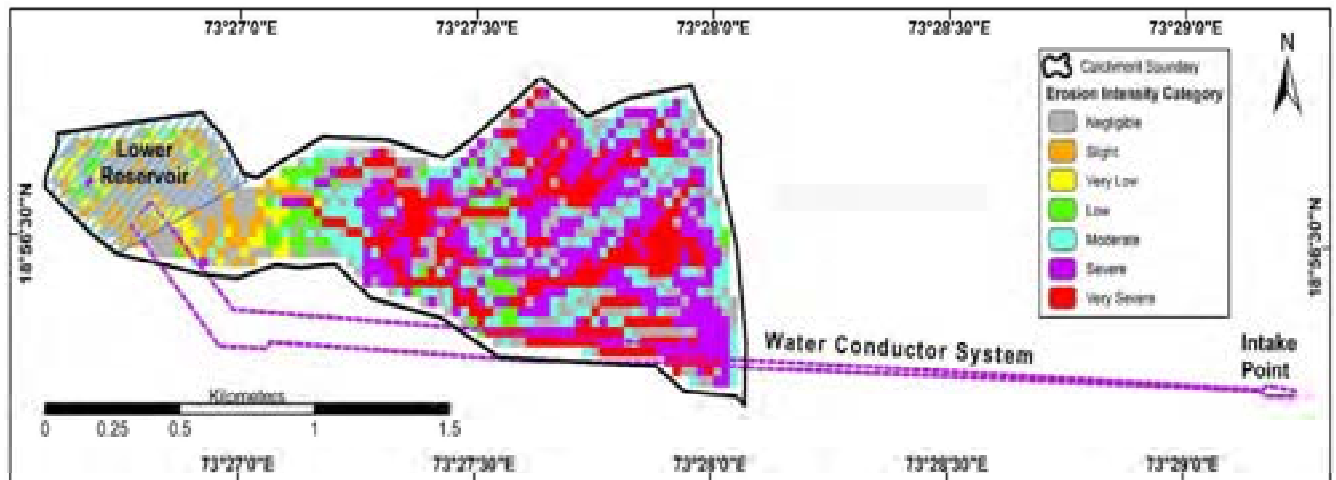


Figure 10.4: Erosion Intensity Map of the Catchment Area

10.2.5 Prioritization

'Silt Yield Index' (SYI), method conceptualized by Soil and Land Use Survey of India (SLUSI) is being used for prioritization of smaller hydrologic units within river valley project areas. Since the catchment area is only 1.43 sq km and could be delineated into only one micro watershed, therefore, prioritization is not applicable in the present study.

10.2.6 TREATMENT PLAN

10.2.6.1 Area to be taken up for Treatment

Area under severe and very severe erosion intensity category will be taken up for treatment. To arrive at such an area, first of all areas under severe and very severe erosion intensity category was extracted, which comes out to be **65.64 ha** (refer **Table 10.3**). Thereafter, areas under severe and very severe erosion intensity category falling within the proposed reservoir and water conductor system area were removed as once the project is constructed this area will not be available for treatment. The area thus arrived at and considered as treatable area comes out to be **60.38 ha** (or say **60 ha**). Out of the total 60 ha to be treated, it is proposed to treat **26 ha** by biological measures and the rest **34.0 ha** by engineering measures.

Out of the total 60.38 ha to be treated, 48.99 ha falls in Pune district and the rest 11.38 ha falls in Raigad district.

The period for implementing treatment measures including maintenance has been taken as 7 years. It is proposed to prepare micro plans for microwatershed, establish administrative setup and implement other entry point activities in the first year itself. The maintenance period (only for biological measures) will be for subsequent 5 years.

10.2.6.2 Treatment Measures

Watershed management is the optimal use of soil and water resources within a given geographical area so as to enable sustainable production. It implies changes in land use, vegetative cover, and other structural and non-structural action that are taken in a watershed to achieve specific watershed management objectives. The overall objectives of watershed management programme are to:

- increase infiltration into soil;
- control excessive runoff;
- manage & utilize runoff for useful purposes.

i. Biological Measures

The biological measures would comprise of:

- Normal Afforestation
- Aided Natural Regeneration

A. Normal Afforestation

A well stocked forest is the best insurance against soil loss as well as for ecological rehabilitation. It is therefore proposed to increase the vegetation cover in the tract. For this, patches of tree cover falling under severe and very severe erosion intensity category shall be brought under afforestation. The locality factors prevalent in the area such as fires, grazing etc. are fairly adverse to the establishment of plantations. Thus, special and intensive efforts are needed to ensure the success of afforestation work. Owing to the above enumeration factors, the plantation will require higher levels of maintenance also. This will include raising of multi-tier mixed vegetation of suitable local species. 2500 plants per hectare will be planted under this scheme. Planting will be done in pits. Earth work should be done well in advance. Plants should be healthy with strong stems. Planting should be done in June when

the water supply starts. Further, it is assessed that it is essential to make provision for soil and moisture conservation measures in the areas proposed for afforestation. Provision had been made for undertaking various necessary soil and moisture conservation measures in these areas. Provision is also made for five years maintenance of afforestation undertaken as part of the watershed management. The unit cost for afforestation including maintenance cost for five years is estimated to be Rs 6,28,030/- per ha. The detailed estimate is sourced from the Rate Structure for Compensatory Afforestation Model No. 1 prepared by the Sawantwadi Forest Division for the diversion of forest land for the project "Construction of Minor Irrigation Tank in Nirukhe Village Tal- Kudal Dist- Sindhudurg". The detailed cost norm thus prepared after making necessary changes and adopting current wage rate is furnished in **Annexure-VIII**. The area to be brought under afforestation **4 ha**.

B. Aided Natural Regeneration

In certain areas, conditions are conducive to natural regeneration provided some sort of assistance is provided. Such area shall be taken up under this component. The areas shall be closed to reduce biotic interference. Ground surface will be cleared of slash, debris and felling refuse to afford a clean seed bed to the falling seed. At certain places some soil raking may also have to be done to facilitate germination of seeds. Where natural regeneration is found deficient. It will be supplemented by artificial planting. Patch sowing in suitable areas may also be done. 625 plants per hectare will be planted under this scheme. The plantation will be maintained for subsequent five years. The unit cost for aided natural regeneration including maintenance cost for five years is estimated to be Rs. 3,66,840 per ha. The detailed estimate is furnished in **Annexure-VIII**. The area to be brought under aided natural regeneration is **22 ha**.

ii. Engineering Measures

Larger gullies must be treated to prevent further deepening and widening. The purpose of engineering measures is to reduce the gradient, reduce the flow velocity and protect the stream bank. The water is guided safely from a higher elevation to a lower elevation without causing erosion at the gully/nala bed and banks. The water pools behind the engineering promotes the percolation into the soils. Check dam/ check wall is one such engineering measure. The cost considered for the soil and moisture works is Rs. 13,748.50/- per ha. This cost includes collection of rubbles from areas upto 30m and considering the wage rate as Rs. 443.50 per man day. The cost is sourced from the Rate Structure for Compensatory Afforestation Model No. 1 prepared by the Sawantwadi Forest Division for the diversion of forest land for the project "Construction of Minor Irrigation Tank in Nirukhe Village Tal- Kudal Dist- Sindhudurg". Total area considered to be treated by the soil and moisture conservation measure is **32 ha**.

10.2.7 OTHER COMPONENTS OF CAT PLAN

Apart from the biological and engineering treatment measures in the catchment area there are other aspects of the CAT Plan to be addressed and their cost included in the overall cost estimate of the plan. The charges for operational support, forest protection, social mobilization, documentation and publication, monitoring and evaluation and providing environmental services are some of the integral ingredients which have to be considered and included while formulating the CAT plans.

10.2.7.1 Administrative Charges

For an efficient management of forest resources, it is essential that operational support to the Forest Department is adequately developed. Similarly, in remote localities there are no places for shelter for the staff, people and trekkers. Therefore, a budgetary provision of **Rs. 2.20 lakh** has been kept as administrative charges.

10.2.7.2 Provision for Micro Planning

The year-wise areas requiring treatment measures have been suggested but have not been marked. The spatial location of specific treatment to be carried out in the catchment area would require extensive detailing during the implementation of CAT and a provision for micro-planning has been made in the total CAT financial allocation. For this purpose, a provision of **Rs. 1.10 lakh** is being made.

10.2.7.3 Monitoring & Evaluation

Monitoring and evaluation will be undertaken as a part of project management. A process of self-evaluation at specified intervals of time will ensure the field level verification of suggested treatment measures and efficacy of the CAT plan.

The year-wise areas requiring treatment measures have been suggested but have not been marked. The spatial location of specific treatment to be carried out in the Catchment Area would require extensive detailing during the implementation of CAT and a provision for micro-planning has been made in the total CAT financial allocation. Thereafter, annual work plan would be prepared well in advance after undertaking initial ground surveys during micro-planning, specifying physical and financial targets, sites, locations and beneficiaries of each component of the project activity. Month-wise work schedule of various items of each component for the financial year would also be prepared in advance and its timely implementation would be ensured. Monthly progress report on all activities would be submitted by the Range Officers to Divisional Forest Officer. The monitoring committee shall be constituted at the project level for this purpose which too would monitor on a regular basis the quality and quantity of works being carried out under the CAT plan area. A provision of **Rs. 2.20 lakh** has been made for this component.

10.2.7.4 Contingencies

A provision of **Rs. 5.51 lakh** has been kept under this component for some leeway to adjust any unforeseen expenditure.

10.2.8 COST ESTIMATE

The estimated cost of implementation of Catchment Area Treatment Plan as defined above is **Rs. 121.25 lakh** and is given at **Table 10.4**. Year wise physical and financial targets for the entire catchment area, for catchment area falling under Pune district and for catchment area falling under Raigad district are given in **Table 10.5, 10.6** and **10.7** respectively.

Table 10.4: Estimated Cost of Catchment Area Treatment Plan Implementation

S. No.	Item	Rate (Rs)	Unit	Pune District		Raigad District		Catchment Area	
				Physical	Financial (Rs in lakh)	Physical	Financial (Rs in lakh)	Physical	Financial (Rs in lakh)
Biological Measures									
1	Normal Afforestation	6,28,030	ha	1.00	6.28	3.00	18.84	4.00	25.12
2	Aided Natural Regeneration	3,66,840	ha	15.00	55.03	7.00	25.68	22.00	80.70
	Sub Total A				61.31		44.52		105.83
Engineering Measures									
3	Soil & Moisture Works	13,748.50	ha	32.00	4.40	0.00	0.00	32.00	4.40
	Sub Total B				4.40		0.00		4.40
I	Total A and B				65.71		44.52		110.23
Other Components									
4	Administrative Expenditure				1.31		0.89		2.20
5	Micro Planning				0.66		0.45		1.10
6	Monitoring & Evaluation				1.31		0.89		2.20
7	Contingency				3.29		2.23		5.51
	Total II				6.57		4.45		11.02
	Grand Total				72.28		48.97		121.25

Table 10.5: Year Wise Phasing of Physical and Financial Targets for Pune District

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
A	Biological Measures																
1	Afforestation (ha)																
	Pre Monsoon Works		1	3.64											1	3.64	
	First Year Operation			1	1.30										1	1.30	
	Second Year Operation					1	0.58								1	0.58	
	Third Year Operation							1	0.37						1	0.37	
	Fourth Year Operation											1	0.19		1	0.19	
	Fifth Year Operation													1	0.19		
2	Aided Natural Regeneration (ha)														1	0.19	

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
	Pre-Monsoon Works		15	18.00										15	18.00		
	First Year Operation				15	19.92								15	19.92		
	Second Year Operation				15	5.81								15	5.81		
	Third Year Operation						15	5.81						15	5.81		
	Fourth Year Operation								15	2.74				15	2.74		
	Fifth Year Operation										15	2.74		15	2.74		
	Sub Total A		16	21.64	16	21.22	16	6.39	16	6.18	16	2.93	16	2.93	61.31		
B	Engineering measures																
3	Soil and Moisture Works		32	4.40										32	4.40		
	Sub Total B		32	4.40										32	4.40		
I	Total A and B			26.04		21.22		6.39		6.18		2.93		2.93	65.71		
II	Other Components																
4	Administrative Expenditure		0.66	0.66											1.31		
5	Micro Planning		0.66	0.66											0.66		
6	Monitoring & Evaluation			0.52		0.42		0.13		0.12		0.06			0.06		1.31
7	Contingency			1.30		1.06		0.32		0.31		0.15			0.15		3.29
	Total II		1.31	2.48		1.49		0.45		0.43		0.21		0.21	6.57		
	Grand Total (I and II)		0.00	28.52		22.71		6.84		6.61		3.14		3.14	72.28		

Table 10.6: Year Wise Phasing of Physical and Financial Targets for Raigad District

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
A	Biological Measures																
1	Afforestation (ha)																
	Pre Monsoon Works		3	10.93													
	First Year Operation				3	3.89										3	10.93
	Second Year Operation						3	1.75								3	3.89
	Third Year Operation								3	1.11						3	1.75
	Fourth Year Operation										3	0.58				3	1.11
	Fifth Year Operation												3	0.58		3	0.58
2	Aided Natural													3	0.58		0.58

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
	Regeneration (ha)																
	Pre Monsoon Works		8.40													7	8.40
	First Year Operation			7	9.30											7	9.30
	Second Year Operation					7	2.71									7	2.71
	Third Year Operation							7	2.71							7	2.71
	Fourth Year Operation															7	1.28
	Fifth Year Operation											7	1.28			7	1.28
	Sub Total A			10	19.33	10	13.19	10	4.46	10	3.82	10	1.86	10	1.86		44.52
B	Other Components																
3	Administrative Expenditure		0.45														0.89
4	Micro Planning		0.45														0.45
5	Monitoring & Evaluation				0.39		0.26		0.09		0.08		0.04		0.04		0.89
6	Contingency				0.97		0.66		0.22		0.19		0.09		0.09		2.23
	Sub Total B		0.89		1.80		0.92		0.31		0.27		0.13		0.13		4.45
	Grand Total (A and B)		0.89		21.13		14.11		4.77		4.09		1.99		1.99		48.97

Table 10.7: Year Wise Phasing of Physical and Financial Targets for the Catchment Area

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
A	Biological Measures																
1	Afforestation (ha)																
	Pre Monsoon Works			4	14.57											4	14.57
	First Year Operation					4	5.19									4	5.19
	Second Year Operation							4	2.33							4	2.33
	Third Year Operation									4	1.48					4	1.48
	Fourth Year Operation											4	0.77			4	0.77
	Fifth Year Operation													4	0.77	4	0.77
2	Aided Natural Regeneration (ha)																
	Pre Monsoon Works			22	26.40											22	26.40
	First Year Operation					22	29.22									22	29.22
	Second Year Operation							22	8.52							22	8.52

S. No.	Measures	Year I		Year II		Year III		Year IV		Year V		Year VI		Year VII		Total	
		Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)	Phy.	Fin. (Rs in lakh)
	Third Year Operation									22	8.52					22	8.52
	Fourth Year Operation											22	4.02			22	4.02
	Fifth Year Operation													22	4.02	22	4.02
	Sub Total A			26	40.98	26	34.41	26	10.86	26	10.00	26	4.79	26	4.79		105.83
B	Engineering measures																
3	Soil and Moisture Works			32	4.40											32	4.40
	Sub Total B			32	4.40											32	4.40
I	Total A and B				45.38		34.41		10.86		10.00		4.79		4.79		110.23
II	Other Components																
4	Administrative Expenditure		1.10		1.10												2.20
5	Micro Planning		1.10														1.10
6	Monitoring & Evaluation				0.91		0.69		0.22		0.20		0.10		0.10		2.20
7	Contingency				2.27		1.72		0.54		0.50		0.24		0.24		5.51
	Total II		2.20		4.28		2.41		0.76		0.70		0.34		0.34		11.02
	Grand Total (I and II)		2.20		49.65		36.82		11.62		10.70		5.12		5.12		121.25

CORPORATE ENVIRONMENT POLICY

Tata Power reaffirms its commitment to a clean, safe and healthy environment and shall Operate its facilities across the value chain of Generation (Thermal, Hydro, Waste Heat Recovery, Solar, Wind, Hybrid), Transmission, Distribution, and Energy based solutions to customers in an environmentally sensitive and responsible manner.

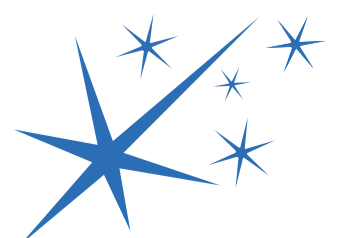
To achieve the above, Tata Power shall endeavor to:

- Comply and/or exceed all applicable environmental legislation(s).
- Conserve natural resources by improving operational efficiency, reducing wastage(s), preventing pollution, and rational and sustainable use of water and other resources.
- Integrate environmentally sound technologies and best practices for continual improvement in environmental performance by institutionalizing a robust Environment Management System.
- Minimize T & D losses from the distribution process through efficient logistics system operation.
- Proactively assess risks and opportunities and take business decisions to enable sustained environmental performance across all its operations including JVs and Subsidiaries.
- Consider environmental factors in capital investments such as mergers and acquisitions.
- Consider environmental factors while selecting supply chain partners.
- Develop and deliver more efficient and environment-friendly energy-based solutions to customers.
- Integrate the conservation, protection and promotion of biodiversity with the principle of achieving "No net loss of biodiversity".
- Communicate this Policy & Inculcate environmental consciousness amongst all its stakeholders.
- Periodically review this policy for applicability, relevance, effectiveness and congruence with the continuously evolving business environment but not lesser than once in three years.
- This policy is applicable to all establishments of Tata Power and employees.

Date: 7th October 2021



Dr. Praveer Sinha
CEO & MD



Status of implementation of EMP measures

An Environment Management Plan (EMP) outlines how to manage and mitigate the environmental impacts of a project. It provides a site-specific framework for implementing protective measures and ensuring compliance with environmental regulations.

At Bhivpuri PSP (1000 MW), all measures and budget provisions outlined in the EMP, which forms part of the Environmental Impact Assessment (EIA), are being adhered to.

EMP Implementation Matrix

S. No.	Activities	Implementing Agency	Monitoring / Supervising / Approving Agency
1	Catchment Area Treatment Plan	State Forest Department	State Forest Department
2	Compensatory Afforestation Programme	State Forest Department	State Forest Department
3	Biodiversity Management & Wildlife Conservation	State Forest Department	State Forest Department
4	Fisheries Management Plan	State Fisheries Department	State Fisheries Department
5	Muck Management Plan	Contractor	Tata Power Co. Ltd. / SPCB
6	Landscaping & Restoration of Construction Sites	Contractor / Tata Power Co. Ltd.	Tata Power Co. Ltd. / SPCB
7	Sanitation and Solid Waste Management	Contractor / Tata Power Co. Ltd.	Tata Power Co. Ltd. / SPCB
8	Public Health Delivery System	Contractor / Tata Power Co. Ltd.	Tata Power Co. Ltd. / District Administration (Health Dept.)
9	Energy Conservation Measures	Contractor / Tata Power Co. Ltd.	Tata Power Co. Ltd. / SPCB

10	Greenbelt Development Plan	Contractor / Tata Power Co. Ltd.	Tata Power Co. Ltd. / SPCB
11	Labour Management Plan	Contractor	Tata Power Co. Ltd. / District Administration
12	Control of Air, Noise and Water Pollution	Contractor	Tata Power Co. Ltd. / SPCB
13	Rehabilitation and Resettlement Plan	Tata Power Co. Ltd.	District Administration
14	Disaster Management	Tata Power Co. Ltd.	District Administration
15	Local Area Development Plan	Tata Power Co. Ltd.	District Administration
16	Environmental Monitoring	Tata Power Co. Ltd.	SPCB
17	Submission of Compliance Report	Tata Power Co. Ltd.	Regional Office MoEF&CC

3 THE CITY

NCP LEADER'S DAUGHTER-IN-LAW FOUND DEAD Supriya Sule vows justice as NCP (SP) targets Hagawane

APRIL 19, 2020
By Anand Kulkarni



MPTD member and NCP leader Supriya Sule (left) with other NCP leaders at a public meeting.

Supriya Sule, daughter-in-law of NCP leader Anand Kulkarni, was found dead in her room at the NCP headquarters in Pune on Monday. Sule was found hanging from a ceiling fan in her room. Her death has triggered a major political row in the party. Sule's husband, Anand Kulkarni, is a prominent NCP leader and a member of the Maharashtra Legislative Council. Sule was 35 years old. Her death has caused a major rift in the party. Sule's death has also led to a major political row in the party. Sule's death has also led to a major political row in the party.

The NCP has accused the Maharashtra Police of covering up the death of Supriya Sule. The party has demanded a probe into the death. The Maharashtra Police has denied the charges. The Maharashtra Police has also stated that Sule's death was a suicide. The Maharashtra Police has also stated that Sule's death was a suicide. The Maharashtra Police has also stated that Sule's death was a suicide.

FIR against man for threatening Vaishnavi's family

By Anand Kulkarni

A man has been arrested for threatening the family of a prominent NCP leader. The man is accused of threatening the family of a prominent NCP leader. The man is accused of threatening the family of a prominent NCP leader. The man is accused of threatening the family of a prominent NCP leader.

Seven fresh Covid-19 cases

By Anand Kulkarni

Seven fresh cases of Covid-19 have been reported in Pune. The cases were reported in Pune. The cases were reported in Pune. The cases were reported in Pune. The cases were reported in Pune.

Tempo driver killed as four vehicles crash on old Pune-Mumbai highway

By Anand Kulkarni

A tempo driver was killed in a four-vehicle crash on an old Pune-Mumbai highway. The crash occurred on an old Pune-Mumbai highway. The crash occurred on an old Pune-Mumbai highway.

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PUNE
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PUNE
PUNE, INDIA

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PUNE
PUNE, INDIA

Progressive Education Society
PUNE
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PUNE, INDIA

Sl. No.	Description	CARGO (MT)				COMPLETED VESSELS			
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GUKHALE EDUCATION SOCIETY
PUNE
PUNE, INDIA



Ref: TPC/BHV/2025/PSP-18

Ack

Date: 04.06.2025

To,
The District Collector,
District Collector Office,
Opposite Sassoon Hospital,
Agarkar Nagar Station Road,
District : Pune, 4110 01.

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

Yours faithfully,

For The Tata Power Company Limited,

(Fulendra Dhurandhar)
Project Head, Bhivpuri PSP.



Enclosure: Environmental Clearance Letter dated 19th May 2025.

CC:

1. SDO, Maval
2. Tahsildar, Maval
3. BDO, Maval
4. Gram Panchayat, Khand
5. Gram Panchayat, Sawale

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Horni Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



ACK

Ref: TPC/BHV/2025/PSP-18

Date: 04.06.2025

To,
The District Collector,
District Collector Office,
Opposite Sassoon Hospital,
Agarkar Nagar Station Road,
District : Pune, 4110 01.

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra.

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This is for your information and record please.

Thanking you,

Yours faithfully,
For The Tata Power Company Limited,


(Fulendra Dhurandhar)
Project Head, Bhivpuri PSP.




आवक-जावक लिपिक
उपविभागीय कार्यालय
मावल-२ विभाग पुणे
दिनांक- २१/६/२०२५

Enclosure: Environmental Clearance Letter dated 19th May 2025.

CC:

1. SDO, Maval
2. Tahsildar, Maval
3. BDO, Maval
4. Gram Panchayat, Khand
5. Gram Panchayat, Sawale

TATA POWER

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Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



Ref: TPC/BHV/2025/PSP-18

ack

Date: 04.06.2025

To,
The District Collector,
District Collector Office,
Opposite Sassoon Hospital,
Agarkar Nagar Station Road,
District : Pune, 4110 01.

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

Yours faithfully,
For The Tata Power Company Limited,

(Fulendra Dhurandhar)
Project Head, Bhivpuri PSP.



आदक जावक लिपिक
नहसिल कार्यालय, मावळ
जि. पुणे चीन नं-४९२९०६
06 JUN 2025

Enclosure: Environmental Clearance Letter dated 19th May 2025.

CC:

1. SDO, Maval
2. Tahsildar, Maval
3. BDO, Maval
4. Gram Panchayat, Khand
5. Gram Panchayat, Sawale

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Horni Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



ack

Ref: TPC/BHV/2025/PSP-18

Date: 04.06.2025

To,
The District Collector,
District Collector Office,
Opposite Sassoon Hospital,
Agarkar Nagar Station Road,
District : Pune, 4110 01.

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

Yours faithfully,

For The Tata Power Company Limited,

(Fulendra Dhurandhar)
Project Head, Bhivpuri PSP.



Enclosure: Environmental Clearance Letter dated 19th May 2025.

CC:

1. SDO, Maval
2. Tahsildar, Maval
- ✓ 3. BDO, Maval
4. Gram Panchayat, Khand
5. Gram Panchayat, Sawale

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567

8
E/E/2025

पंचायत सदसिती माबळ



Ref: TPC/BHV/2025/PSP-18

ack

Date: 04.06.2025

To,
The District Collector,
District Collector Office,
Opposite Sassoon Hospital,
Agarkar Nagar Station Road,
District : Pune, 4110 01.

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

Yours faithfully,
For The Tata Power Company Limited,

Fulendra

(Fulendra Dhurandhar)
Project Head, Bhivpuri PSP.



Enclosure: Environmental Clearance Letter dated 19th May 2025.

CC:

1. SDO, Maval
2. Tahsildar, Maval
3. BDO, Maval
4. Gram Panchayat, Khand
5. Gram Panchayat, Sawale

4/6/2025

सर्विस
कुंडलिक विद्युत निम्नलिपि
मुप ग्रामपंचायत खाते
ता. मावळ, जि. पुणे

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District: Raigad, Maharashtra 410 301

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



Ref: TPC/BHV/2025/PSP-18

Date: 04.06.2025

To,
The District Collector,
District Collector Office,
Opposite Sassoon Hospital,
Agarkar Nagar Station Road,
District : Pune, 4110 01.

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

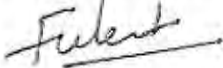
Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

Yours faithfully,
For The Tata Power Company Limited,

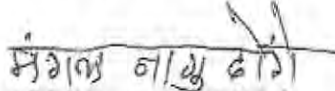

(Fuiendra Dhurandhar)
Project Head, Bhivpuri PSP.



Enclosure: Environmental Clearance Letter dated 19th May 2025.

CC:

1. SDO, Maval
2. Tahsildar, Maval
3. BDO, Maval
4. Gram Panchayat, Khand
- ✓ 5. Gram Panchayat, Sawale


सौ. मंगल नाइक
सरपंच
ग्रामपंचायत सावळे
ता. मावळ, जि. पुणे.

9/6/2025

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P Q Bhivpuri Camp, Taluka - Karjat, District - Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Horni Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



Ark

Ref: TPC/BHV/2025/PSP-19

Date: 04.06.2025

To,
The Tehsildar,
Tehsildar Office, Karjat
Dist.: Raigad,
PIN – 412 201

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Bhivpuri (Camp), Taluka Karjat, District Raigard, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Bhivpuri (Camp), Taluka Karjat, District Raigard, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

For The Tata Power Company Limited,



(Fulendra Dhurandhar)

Project Head, Bhivpuri PSP



Enclosure: Environmental Clearance Letter dated 19th May 2025.

CC:

1. SDO, Karjat
2. BDO, Karjat
3. Gram Panchayat, Bhivpuri.


महसुल सहायक
तहसिल कार्जत, रायगड
04 JUN 2025

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



Ack

Ref: TPC/BHV/2025/PSP-19

Date: 04.06.2025

To,
The Tehsildar,
Tehsildar Office, Karjat
Dist.: Raigad,
PIN – 412 201

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Bhivpuri (Camp), Taluka Karjat, District Raigard, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Bhivpuri (Camp), Taluka Karjat, District Raigard, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

For The Tata Power Company Limited,



(Fulendra Dhurandhar)

Project Head, Bhivpuri PSP



Enclosure: Environmental Clearance Letter dated 19th May 2025.

CC:

1. SDO, Karjat
2. BDO, Karjat
3. Gram Panchayat, Bhivpuri.


महसूल
उपविभागीय अधिकारी
करजत उपविभाग

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



Ack.

Ref: TPC/BHV/2025/PSP-19

Date: 04.06.2025

To,
The Tehsildar,
Tehsildar Office, Karjat
Dist.: Raigad,
PIN – 412 201

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Bhivpuri (Camp), Taluka Karjat, District Raigard, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Bhivpuri (Camp), Taluka Karjat, District Raigard, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

For The Tata Power Company Limited,

Fulendra

(Fulendra Dhurandhar)

Project Head, Bhivpuri PSP



Enclosure: Environmental Clearance Letter dated 19th May 2025.

CC:

1. SDO, Karjat
2. BDO, Karjat
3. Gram Panchayat, Bhivpuri.

CP
Charan
05/06/2025
लेखनिक
पंचायत समिती कार्यालय

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Horni Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



464

Ref: TPC/BHV/2025/PSP-19

Date: 04.06.2025

To,
The Tehsildar,
Tehsildar Office, Karjat
Dist.: Raigad,
PIN – 412 201

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Bhivpuri (Camp), Taluka Karjat, District Raigard, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Bhivpuri (Camp), Taluka Karjat, District Raigard, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

For The Tata Power Company Limited,

Fulendra

(Fulendra Dhurandhar)

Project Head, Bhivpuri PSP



Enclosure: Environmental Clearance Letter dated 19th May 2025.



1. SDO, Karjat
2. BDO, Karjat
3. Gram Panchayat, Bhivpuri.

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567

RN101213217IN IVR:8277101213217

RL KHOPOLI S.O <410203>

Counter No:1,13/06/2025,10:04

To:MINISTRY OF E,ZONAL OFFICE WES

PIN:440001, Nagpur GPO

From:YASH D GOND,PROJECT DEVELOPM

Wt:80gms,REG=17.0

Amt:43.66,Tax:6.66,Amt.Paid:44.00(Cash)

<Track on www.indiapost.gov.in>

<Dial 18002666868><Wear mask -Stay safe>

भारतीय डाक



India Post



Ref: TPC/BHV/2025/PSP-20

Date: 10.06.2025

To,
Ministry of Environment, Forest &
Climate Change, Zonal Office,
Western-Central Zone,
New Secretariat Building, Ground Floor,
East Wing, Civil Line, Nagpur – 440 001.

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

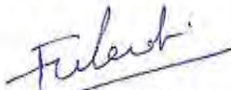
Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

Yours faithfully,
For The Tata Power Company Limited,


(Fulendra Dhurandhar)
Project Head, Bhivpuri PSP.



Enclosure: Environmental Clearance Letter dated 19th May 2025.

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



Ref: TPC/BHV/2025/PSP-22

Date: 18.06.2025

To,
Government of Maharashtra,
New Administrative Building,
15th Floor, Mantralaya,
Madam Cama Road, Mumbai – 400 032

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

Yours faithfully,
For The Tata Power Company Limited,

(Fulendra Dhurandhar)
Project Head, Bhivpuri PSP.



Enclosure: Environmental Clearance Letter dated 19th May 2025.

P.A. Bhuguse
19-06-2025

लिपिक/तां.क.:--
पर्यावरण व वातावरणीय बदल विभाग
मंत्रालय, मुंबई ४०० ०३२

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tpc@tatapower.com

Ref: TPC/BHV/2025/PSP-22



Ref: TPC/BHV/2025/PSP-22

Date: 18.06.2025

To,
Government of Maharashtra,
New Administrative Building,
15th Floor, Mantralaya,
Madam Cama Road, Mumbai – 400 032

Sub: Grant of Environmental Clearance for Tata Power's Proposed "Bhivpuri Open Loop Pumped Storage Project (1000 MW)" at Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra.

Ref.: MoEF&CC letter no. J-12011/39/2023-IA.I (R) dated 19th May 2025

Dear Sir,

In order to harness Green Energy, Tata Power has proposed "**Bhivpuri Open Loop Pumped Storage Project (1000 MW)**" at **Village Sawale & Khand, Tal. Maval, Dist. Pune and Village Bhivpuri (Camp), Tal. Karjat, Dist. Raigad, Maharashtra**. Ministry of Environment, Forests and Climate Change (MoEF&CC) has accorded Environment Clearance for the proposed project vide letter no. **J-12011/39/2023-IA.I (R) dated 19th May 2025**. A copy of Environment Clearance letter is attached herewith for your ready reference. This is in compliance with clause no. 17 (b) of General Instructions of the EC letter.

This is for your information and record please.

Thanking you,

Yours faithfully,

For The Tata Power Company Limited,

(Fulendra Dhurandhar)
Project Head, Bhivpuri PSP.



Enclosure: Environmental Clearance Letter dated 19th May 2025.

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



Ref: TPC/BHV/2025/PSP-15

Date: 21.05.2025

To,
The Member Secretary,
Maharashtra Pollution Control Board
Kalpataru Point, 3rd & 4th floor
Opp. Cine Planet, Near Sion Circle, Sion (E)
Mumbai - 400 022

Sub: Commencement of Project Site Activities for Tata Power's 1000 MW Bhivpuri Open Loop Pumped Storage Project at Village Bhivpuri (camp), Tal: Karjat, Dist: Raigad, Maharashtra.

Ref: Consent to Establish granted by the Board vide letter no. Format1.0/CAC/UAN/0000223630/CE/2501001061 dated 13/01/2025.

Dear Sir,

With reference to the above subject, the MPC Board has granted Consent to Establish for Tata Power's Proposed 1000 MW Bhivpuri Pump Storage Project (PSP) at Village Bhivpuri, Tal: Karjat, Dist: Raigad with a condition of obtaining Prior Environmental Clearance from MoEF&CC before commencement of the project activity.

We are pleased to inform you that MOEF&CC has now accorded Environmental Clearance for the said project vide file no. J-12011/39/2023-IA.I (R) dated 19/05/2025, a copy of which is enclosed herewith for your ready reference.

The project is in advanced stage of implementation with award of first phase of Civil and Hydro-Mechanical Package to Tata Projects and HCC JV. With the receipt of Environmental Clearance and Consent to Establish, we will be commencing all the project activity at site as per the plan. All the activities will be carried out following due Environmental Safeguards as stipulated in Consent to Establish as well as in Environmental Clearance granted for the Bhivpuri PSP Project.

This is for your information and record please.

Thanking you,

Yours faithfully,
For The Tata Power Company Ltd.,

Kumar Pritam
for Kumar Pritam
Chief - Hydro Projects



Enclosed: Copy of EC granted by MOEF&CC dated 19/05/2025.

CC: 1) RO, MPCB, Raigad for information.
2) RO, MPCB, Pune for information.

22/05/25
महाराष्ट्र प्रदूषण नियंत्रण मंडळ
कल्पतरु पॉइंट, २ हा मजला, सायन सर्कल,
सिनेप्लेनट समोर, सायन (पूर्व),
मुंबई - ४०० ०२२.
फोन :- २४०१०४३७ / २४०२०७८१.
Website www.mpcb.gov.in

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PLC000567



Ref: TPC/BHV/2025/PSP-15

Date: 21.05.2025

To,
The Member Secretary,
Maharashtra Pollution Control Board
Kalpataru Point, 3rd & 4th floor
Opp. Cine Planet, Near Sion Circle, Sion (E)
Mumbai - 400 022

Sub: Commencement of Project Site Activities for Tata Power's 1000 MW Bhivpuri Open Loop Pumped Storage Project at Village Bhivpuri (camp), Tal: Karjat, Dist: Raigad, Maharashtra.

Ref: Consent to Establish granted by the Board vide letter no. Format1.0/CAC/UAN/0000223630/CE/2501001061 dated 13/01/2025.

Dear Sir,

With reference to the above subject, the MPC Board has granted Consent to Establish for Tata Power's Proposed 1000 MW Bhivpuri Pump Storage Project (PSP) at Village Bhivpuri, Tal: Karjat, Dist: Raigad with a condition of obtaining Prior Environmental Clearance from MoEF&CC before commencement of the project activity.

We are pleased to inform you that MOEF&CC has now accorded Environmental Clearance for the said project vide file no. J-12011/39/2023-IA.1 (R) dated 19/05/2025, a copy of which is enclosed herewith for your ready reference.

The project is in advanced stage of implementation with award of first phase of Civil and Hydro-Mechanical Package to Tata Projects and HCC JV. With the receipt of Environmental Clearance and Consent to Establish, we will be commencing all the project activity at site as per the plan. All the activities will be carried out following due Environmental Safeguards as stipulated in Consent to Establish as well as in Environmental Clearance granted for the Bhivpuri PSP Project.

This is for your information and record please.

Thanking you,

Yours faithfully,
For The Tata Power Company Ltd.,

Kumar Pritam
for Kumar Pritam
Chief – Hydro Projects



Enclosed: Copy of EC granted by MOEF&CC dated 19/05/2025.

CC: 1) RO, MPCB, Raigad for information.
2) RO, MPCB, Pune for information.

22.05.2025
प्रादेशिक कार्यालय, रायगड, नवी मुंबई
म.प्र.नि. बंडळ, रायगड भवन, ६ वा माळ,
सी.बी.डी. चेलापूर, नवी मुंबई - ४००६१४

TATA POWER

The Tata Power Company Limited

Bhivpuri Pumped Storage Project, P O Bhivpuri Camp, Taluka - Karjat, District- Raigad, Maharashtra 410 201

Registered Office: Bombay House, 24 Homi Mody Street, Mumbai 400 001.

Website: www.tatapower.com Email: tatapower@tatapower.com CIN: L28920MH1919PL000567



Ref: TPC/BHV/2025/PSP-15

Date: 21.05.2025

To,
The Member Secretary,
Maharashtra Pollution Control Board
Kalpataru Point, 3rd & 4th floor
Opp. Cine Planet, Near Sion Circle, Sion (E)
Mumbai - 400 022

Sub: Commencement of Project Site Activities for Tata Power's 1000 MW Bhivpuri Open Loop Pumped Storage Project at Village Bhivpuri (camp), Tal: Karjat, Dist: Raigad, Maharashtra.

Ref: Consent to Establish granted by the Board vide letter no. Format1.0/CAC/UAN/0000223630/CE/2501001061 dated 13/01/2025.

Dear Sir,

With reference to the above subject, the MPC Board has granted Consent to Establish for Tata Power's Proposed 1000 MW Bhivpuri Pump Storage Project (PSP) at Village Bhivpuri, Tal: Karjat, Dist: Raigad with a condition of obtaining Prior Environmental Clearance from MoEF&CC before commencement of the project activity.

We are pleased to inform you that MOEF&CC has now accorded Environmental Clearance for the said project vide file no. J-12011/39/2023-IA.I (R) dated 19/05/2025. a copy of which is enclosed herewith for your ready reference.

The project is in advanced stage of implementation with award of first phase of Civil and Hydro-Mechanical Package to Tata Projects and HCC JV. With the receipt of Environmental Clearance and Consent to Establish, we will be commencing all the project activity at site as per the plan. All the activities will be carried out following due Environmental Safeguards as stipulated in Consent to Establish as well as in Environmental Clearance granted for the Bhivpuri PSP Project.

This is for your information and record please.

Thanking you,

Yours faithfully,
For The Tata Power Company Ltd.,

Fulekar
for Kumar Pritam
Chief - Hydro Projects



Enclosed: Copy of EC granted by MOEF&CC dated 19/05/2025.

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