



**File No: SEAC/HR/2024/164**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(Issued by the State Environment Impact Assessment**  
**Authority(SEIAA), HARYANA)**

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Date **03/01/2025**



To,

M/S MARUTI UDYOG LIMITED.  
Old Palam Gurgaon Road , GURUGRAM, HARYANA, , 122015  
madan.bansode@maruti.co.in

**Subject: Environment Clearance for Proposed expansion of existing Industrial shed for automobile manufacturing unit at Plot No. 01, Sector-3A, IMT, Manesar, Gurugram, Haryana by M/s Maruti Udyog Limited.**

**Sir/Madam,**

This has reference to your Proposal No. **SIA/HR/INFRA2/495027/2024** dated **03.09.2024** subsequent letter dated **17.09.2024** and **22.11.2024** for obtaining **Environment Clearance** under Category **8(b)** of EIA Notification dated 14.09.2006 along with submission of due Scrutiny fee (as applicable) of **Rs.2,00,000/- vide DD No.032496 dated 01.08.2024.** (in compliance of Haryana Government, Environment & Climate Change, Department Notification No. DE&CCH/3060 dated 14.10.2021). The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., Form-1, Form1-A, Conceptual Plan, ToR, EIA/EMP Report and additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF&CC, GoI vide their Notification dated 21.02.2022, in its **300th meeting held on 12.09.2024.**

2. The particulars of the proposal are as below :

<b>(i) EC Identification No.</b>	EC24B3813HR5413540N
<b>(ii) File No.</b>	SEAC/HR/2024/164
<b>(iii) Clearance Type</b>	Fresh EC
<b>(iv) Category</b>	B1
<b>(v) Project/Activity Included Schedule No.</b>	8(b) Townships/ Area Development Projects / Rehabilitation Centres Proposed expansion of existing Industrial shed for automobile manufacturing unit at Plot No.01, Sector-3A, IMT, Manesar, Gurugram, Haryana by M/s Maruti Suzuki India Limited.
<b>(vii) Name of Project</b>	MARUTI SUZUKI INDIA LIMITED
<b>(viii) Name of Company/Organization</b>	GURUGRAM, HARYANA
<b>(ix) Location of Project (District, State)</b>	

(x) Issuing Authority

SEIAA

(xi) Applicability of General Conditions as per  
EIA Notification, 2006

No

2. It is inter-alia, noted that the project involves in the **Environment Clearance for Proposed expansion of existing Industrial shed for automobile manufacturing unit at Plot No. 01, Sector-3A, IMT, Manesar, Gurugram, Haryana**

3. The basic details of project are as under:

S.No.	Particulars	Existing	Expansion	Total
1.	Online Proposal Number: SIA/HR/INFRA2/495027/2024			
2.	Latitude	28°22'0.93"N	Nil	28°22'0.93"N
3.	Longitude	76°53'26.15"E	Nil	76°53'26.15"E
4.	Plot Area (sqm.)	21,76,200.00	Nil	21,76,200.00
5.	Permissible Ground coverage (sqm.)	792021.85	Nil	792021.85
6.	Proposed FAR	21.95%	1.67%	23.62%
7.	Total Built Up area (sqm.)	4,77,697.010	36308.00	5,14,005.01
8.	Total Green Area (sqm.)	4,37,060.88	Nil	Total green area of the project is 437060.88 m <sup>2</sup> (20 % of the plot area) in which block plantation area 324962.6 m <sup>2</sup> or 80.3 acre (14.93% of the plot area).
9.	Total parking area (sqm.)	39721	2783	42504
10.	Employment/population (nos.)	15,227	100	15,327
11.	Total Raw water Requirement (KLD)	5995	5	6000
12.	Total Drinking water Requirement (KLD)	1272	3	1275
13.	Total Flushing water Requirement (KLD)	423	2	425
14.	Total Horticulture water Requirement (KLD)	3295	Nil	3295
15.	Raw water requirement for Industrial use (Machines, cooling) (KLD)	2525	Nil	2525
16.	Domestic Sewerage generated (KLD)	1596	4	1600
17.	Quantity of treated water use per day from STP (KLD)	1516.4	3.6	1520
18.	Total trade effluent generated during process (KLD)	5840	Nil	5840
19.	Quantity of treated water use per day from ETP (KLD)	4549	Nil	4549
20.	STP capacity (M3/Hr)	80 (50+30)	Nil	80 (50+30)
21.	ETP capacity (M3/Hr)	300 (60+60+180)	Nil	300 (60+60+180)
22.	Employment/population (nos.)	15,227	100	15,327
23.	Total Raw water Requirement (KLD)	5995	5	6000
24.	Solid Waste Generation (kg/day)	4253	27	4280
25.	Biodegradable waste (kg/day)	1701	11	1712
26.	Non-Biodegradable waste (kg/day)	2552	16	2568
27.	Organic Waste Convertor (Kg/day)	500	Nil	500
28.	Maximum number of floors	G+2F	G	G+2F
29.	Hazardous Waste generation (TPA)	17,546	1,423	18,969
30.	Plastic Waste (TPA)	2,060	Nil	2,060

31.	E-Waste (TPA)		25	Nil	25
32.	Battery Waste (TPA)		100	Nil	100
33.	Bio-Medical Waste (TPA)		2.5	Nil	2.5
34.	Other Waste (Metal, wooden, paper and glass scrap) (TPA)		1,44,420	Nil	1,44,420
35.	Rain water Harvesting	Storage Capacity of the pit (Lagoon capacity)- 1,58,780 m <sup>3</sup> (7 Nos.) and recharge wells of 119 Nos.		Nil	Storage Capacity of the pit (Lagoon capacity)- 1,58,780 m <sup>3</sup> (7 Nos.) and recharge wells of 119 Nos.
36.	Total Parking ECS provided (nos.)		1727	121	1848
37.	Total Power Requirement (MW)		67.95	Nil	67.95
38.	Power backup details as GT,ST(MW)		75.9	Nil	75.9
39.	Power backup details as DG and GG Set	DG - 3,100 KVA (3×500 KVA +2×700 KVA+1× 200 KVA GG- (1×1.95) MW	GG – (0.6 × 3) MW + (0.23 ×1) MW		DG - 3,200 KVA (3×500 KVA +2×750 KVA+1× 200 KVA GG- (1×1.95)MW + (0.6 × 3) MW + (0.23 × 1) MW
40.	Capacity of Solar Power (MW)		41.3	10	51.3
41.	Passenger Cars and Utility Vehicles (Nos. /day)		3,572	Nil	3,572
42.	Transmission (Nos. /day)		7,143	Nil	7,143
43.	Engine (Nos. /day)		6,557	Nil	6,557
44.	Total Project Cost (in Lakhs) i) Land Cost ii) Construction cost		14,99,799.45	77,490.00	15,77,289.45
45.	Stories		G+2F	G	G+2F
46.	EMP Budget	Construction phase	Capital Cost	--	196 lakhs
			Recurring Cost		49.5 lakhs
		Operation Phase	Capital Cost	--	19740 lakhs
			Recurring Cost		1467.6 lakh
		Budget outside the project Site (Capital cost )		Renovation of Government School	370 lakhs
				Govt. Polytechnic College Manesar	99.98 lakhs
47.				CSR activities in Bas Kushla, Kasan, Khoh village, Bas hariya, Aliyar and Dhana village	200 lakhs
48.	Incremental Load in respect of:	i) PM 2.5	--	--	0.23003g/m <sup>3</sup>
		ii) PM 10	--	--	0.38801g/m <sup>3</sup>
		iii) SO <sub>2</sub>	--	--	0.63877 g/m <sup>3</sup>
		iv) NO <sub>2</sub>	--	--	0.46998 g/m <sup>3</sup>
		v) CO	--	--	0.0000457 mg/m <sup>3</sup>
49.	Construction Phase:	Power Back-up	--	--	Existing Power capacity and source
		Water Requirement & Source	--	--	Fresh water – 50 KLD for drinking & sanitation. Source:

					Fresh water – HSIIDC Construction Water – HSIIDC
		STP	--	--	Existing STP of total capacity 80 m3/hr
		Anti-Smog Gun	--	--	02 Nos of Anti-smog gun

#### EMP Budget

During Construction Phase			During Operational Phase		
Description	Capital Cost (In Lakhs)	Recurring Cost (In Lakhs per Year)	Description	Capital Cost (In Lakhs)	Recurring Cost (In Lakhs per Year)
Barricading of the site	180	-	Green Hydrogen Plant 1	10980	336
Dust Mitigation Measures	10	10	Solar Power Plant	5290	364.5
Anti-smog gun	5	1	Biogas Plant with Swirling jet purification & Chemical methanation	2550	192.5
AQI Monitoring sensors	1	1	Green Hydrogen Plant 2 (300 KW)	920	67
Construction waste disposal		37.5	ETP with ZLD and STP operation	-	397
			Coprocessing for Hazardous waste	-	106.9
			Environment Monitoring	-	3.7
<b>TOTAL</b>	<b>196</b>	<b>49.5</b>		<b>19740</b>	<b>1467.6</b>

#### EMP Budget outside the Project Site

Sr. No.	Activities	Rs. In Lakhs
1	Govt. Polytechnic College Manesar	99.98
2	CSR activities in Bas Kushla, Kasan, Khoh village, Bas hariya, Aliyar and Dhana village	200
3	Upgradation of infrastructure in nearby Government schools	370

#### Total EMP Budget

Component	Capital Cost (INR Lakh)	Recurring Cost (INR Lakh/Yr)
During Construction Phase	196	49.5



During Operation Phase	19740	1467.6
Budget for nearby Government School for improvement of infrastructure	370	
Govt. Polytechnic College Manesar	99.98	
CSR activities in Bas Kushla, Kasan, Khoh village, Bas hariya, Aliyar and Dhana village	200	
<b>Total</b>	<b>20605.98</b>	<b>1517.1</b>

5. In view of the recommendations made by State Expert Appraisal Committee (SEAC) in the said case and further consideration of the documents/details submitted by the Project Proponent; the Authority after discussions decided during 188th Meeting held on 22.11.2024 to “GRANT ENVIRONMENT CLEARANCE” to M/s Maruti Udyog Limited (as per the Regular Allotment Letter no. HSIIDC/7560 dated 05.04.2004 and HSIIDC/20593-94, dated 04.01.2005 under category 8(b) of EIA Notification dated 14.09.2006 of the Ministry of Environment and Forest, Government of India.

### Copy To

1. Director (IA Division), MoEF& CC, GoI, Indira Paryavaran Bhavan, Zorbagh Road-New Delhi-110003.
2. Chairman, State Environment Impact Assessment Authority, Bay's No. 55-58, Prayatan Bhawan, Sector-2, Panchkula, Haryana.
3. Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula.
4. Director, Environment & Climate Change Department, Haryana, Bay's No. 55-58, Prayatan Bhawan, Sector-2, Panchkula, Haryana.
5. Director General, Town & Country Planning Haryana, Plot No. 3, Sector - 18A, Madhya Marg, Chandigarh- 160018.
6. Regional Office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh-160018.
7. Concerned File/ Office Copy.

### **Annexure 1**

#### **Standard EC Conditions for (Townships/ Area Development Projects / Rehabilitation Centres)**

#### **1. Statutory Compliance**

S. No	EC Conditions
1.1	The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
1.2	The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
1.3	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
1.4	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
1.5	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.

S. No	EC Conditions
1.6	The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
1.7	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
1.8	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
1.9	The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.
1.10	The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.

## 2. Air Quality Monitoring And Preservation

S. No	EC Conditions
2.1	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
2.2	A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
2.3	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5) covering upwind and downwind directions during the construction period.
2.4	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
2.5	Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
2.6	Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.
2.7	Wet jet shall be provided for grinding and stone cutting.

S. No	EC Conditions
2.8	Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
2.9	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules 2016.
2.10	The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
2.11	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
2.12	For indoor air quality the ventilation provisions as per National Building Code of India.

### 3. Water Quality Monitoring And Preservation

S. No	EC Conditions
3.1	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.
3.2	Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
3.3	Total fresh water use shall not exceed the proposed requirement as provided in the project details.
3.4	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
3.5	A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
3.6	At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
3.7	Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.

S. No	EC Conditions
3.8	Use of water saving devices/fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.
3.9	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
3.10	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
3.11	The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.
3.12	A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.
3.13	All recharge should be limited to shallow aquifer.
3.14	No ground water shall be used during construction phase of the project.
3.15	Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.
3.16	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
3.17	Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.
3.18	No sewage or untreated effluent water would be discharged through storm water drains.
3.19	Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.
3.20	Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
3.21	Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and



S. No	EC Conditions
	disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

#### 4. Noise Monitoring And Prevention

S. No	EC Conditions
4.1	Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.
4.2	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
4.3	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

#### 5. Energy Conservation Measures

S. No	EC Conditions
5.1	Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.
5.2	Outdoor and common area lighting shall be LED.
5.3	Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
5.4	Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.
5.5	Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.
5.6	Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

#### 6. Waste Management



S. No	EC Conditions
6.1	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.
6.2	Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
6.3	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.
6.4	Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
6.5	All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
6.6	Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
6.7	Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environment friendly materials.
6.8	Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.
6.9	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
6.10	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

## 7. Green Cover

S. No	EC Conditions
7.1	No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
7.2	A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.

S. No	EC Conditions
7.3	Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
7.4	Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

## 8. Transport

S. No	EC Conditions
8.1	A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria. a) Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. b) Traffic calming measures. c) Proper design of entry and exit points. d) Parking norms as per local regulation.
8.2	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.
8.3	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

## 9. Human Health Issues

S. No	EC Conditions
9.1	All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
9.2	For indoor air quality the ventilation provisions as per National Building Code of India.
9.3	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

S. No	EC Conditions
9.4	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.
9.5	Occupational health surveillance of the workers shall be done on a regular basis.
9.6	A First Aid Room shall be provided in the project both during construction and operations of the project.
9.7	<b>Corporate Environment Responsibility</b> The project proponent shall comply with the provisions of CER, as applicable.
9.8	The company shall have a well laid down environmental policy duly approved 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 share holders/ stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
9.9	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
9.10	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

#### 10. Miscellaneous

S. No	EC Conditions
10.1	The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed.
10.2	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.
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.
10.4	The project proponent shall submit six-monthly reports on the status of the compliance of the

S. No	EC Conditions
	stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
10.5	The company shall have a well laid down environmental policy duly approved 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 regard shall be submitted to the MoEF&CC as a part of six-monthly report.
10.6	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 report to the head of the organization.
10.7	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
10.8	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.
10.9	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.
10.10	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
10.11	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the Expert Appraisal Committee.
10.12	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).
10.13	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.
10.14	The Ministry/SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
10.15	The Ministry/SEIAA reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
10.16	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



S. No	EC Conditions
	furnishing the requisite data / information/monitoring reports.
10.17	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.
10.18	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.
10.19	<b>The validity of this environment clearance letter is valid up to 10 years from the date of issuance of EC letter in accordance with the MoEF &amp; CC, GoI Notification No. S.O.1807 (E), dated the 12th April, 2022. The environment clearance conditions applicable till life space project will continue to apply. In case of violation the action will be taken as per the laid down law of land. Compliance report shall be sent to this office till life of the project.</b>
10.20	<b>If project is not completed within the validity period then the project proponent shall submit the application for extension of validity within one month before the lapse of validity period of Environment Clearance.</b>

#### 11. Specific Conditions

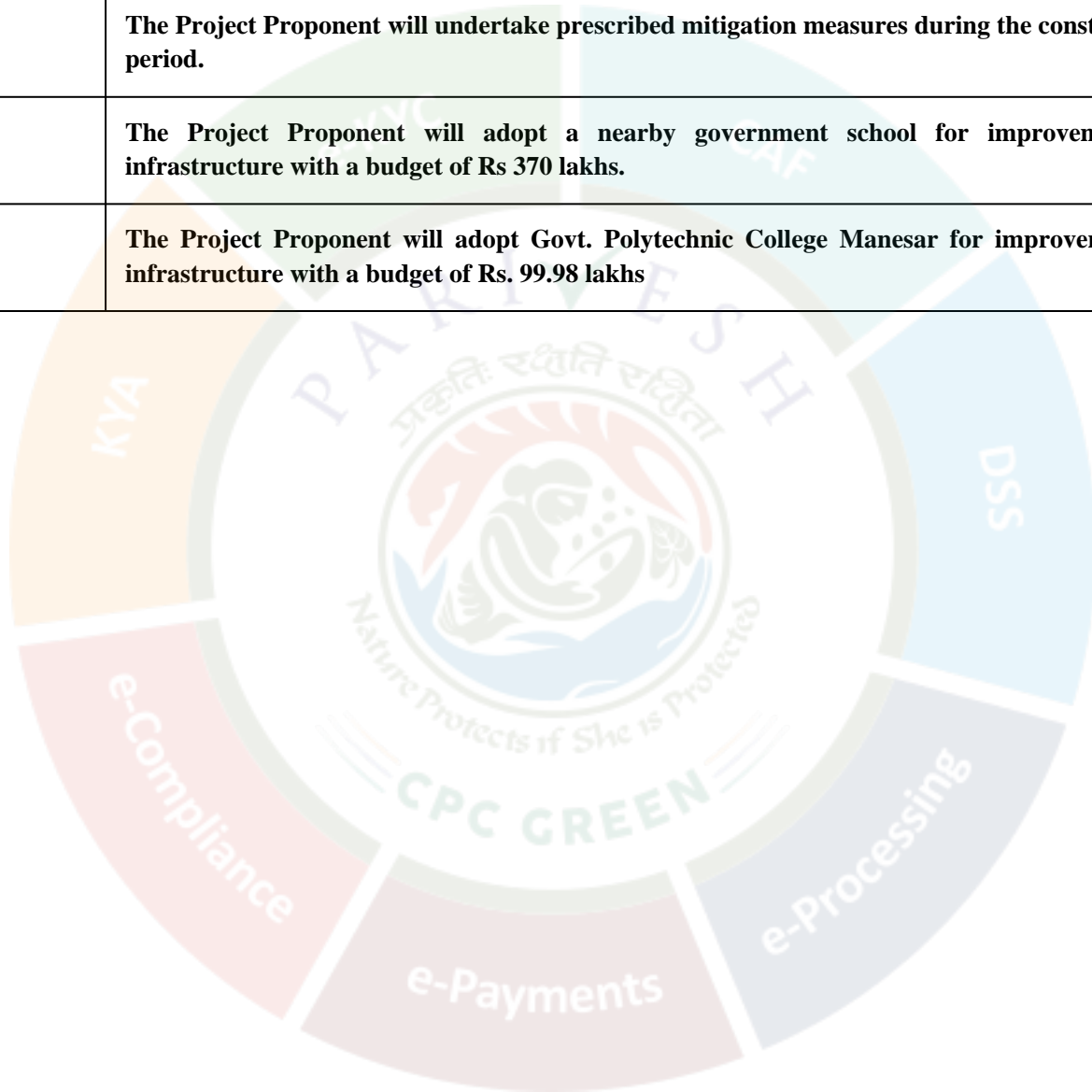
S. No	EC Conditions
11.1	<b>The project is recommended on concept basis as such in case of any change in planning, the PP will obtain fresh EC.</b>
11.2	The PP shall take the necessary approval from PESO, if applicable.
11.3	The PP shall follow the compliance of Public Liability Insurance Act, 1991
11.4	The PP shall carry the isolated storage of each chemical to be stored with the existing precautions as per the MSHIC Rules, 1989 and abide by all conditions of MSDS
11.5	The Approval of the Competent Authority shall be obtained for structural safety of building code due to earthquakes, adequacy of firefighting equipments etc. as per National Building Code including protection measures from lightening etc
11.6	The PP shall ensure that total EMP Budget shall be spent on project during construction as well as during operational phase as per table given above. The EMP cost on Socio Economic activities shall be used before the commencement of the project & EMP recurring inside the project shall be implemented throughout the operation of the project.
11.7	The PP and consultant agree to display the First Aid measure, Fire Fighting Measure, Accidental Release measure, Exposure and control (Personal Measure) at the site.
11.8	The project proponent shall upload the status of compliance of the basic details (given in above



S. No	EC Conditions
	tables), stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
11.9	Sewage shall be treated in the STP based on latest Technology with tertiary treatment i.e. Ultra Filtration. The Treated effluent from STP shall be recycled/ reused for flushing. DG cooling, Gardening and HVAC.
11.10	The PP shall comply with provisions of Occupational Safety health and working conditions Code 2019.
11.11	The Project Proponent would devise a monitoring plan to the satisfaction of the State Pollution Control Board so as to continuously monitor the treated waste water being used for flushing in terms of faecal coli forms and other pathogenic bacteria.
11.12	The Project Proponents would commission a third party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
11.13	Separate wet and dry bins must be provided for facilitating segregation of waste. Solid Waste shall be segregated into wet garbage and inert materials. Wet Garbage shall be composted in Organic waste convertor. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The Inert waste from the project will be sent to solid waste dumping site through authorized vender.
11.14	The PP shall implement the EMP and assess that the implemented EMP is adequate and periodic environmental audits shall be conducted and maintained the records of audit. These audits shall be followed by Corrective action plan to correct the various measures identified during the audits (CAP).
11.15	The PP shall install the Eco Friendly Green Transformer based on ester oil to reduce the carbon footprint. The PP shall shift to gas based generator set when the gas is available. The PP shall install APCM for the DG set. The PP shall reduce the SO <sub>2</sub> load by 30% if HSD is used.
11.16	The PP shall not carry any construction below the HT Line passing through the project, if any.
11.17	The PP shall not carry any construction above or below the Revenue Rasta, if any.
11.18	The PP shall obtain the permission regarding withdrawal of ground water from CGWA/State water Authority, Haryana before the start of the project and also obtained the CTO from HSPCB after the approval from CGWA.
11.19	The PP shall not allow parking of the vehicles on the roads or revenue Rasta outside the project area.
11.20	The PP shall not give occupation or possession before the water supply and sewage connection permitted by the competent authority.
11.21	The PP shall develop the onsite and offsite emergency plan in consultation with the regulatory

S. No	EC Conditions
	authority.
11.22	The PP shall install Digital water level recorder for monitoring the water recharge and carry out quarterly maintenance and cleaning of <b>recharge wells/lagoons</b>
11.23	The PP shall ensure the compliance of provisions of Plastic Waste Management (Amendment) Rules, 2022 relevant for the project.
11.24	The PP may provide electric charging stations to facilitate electric vehicle commuters.
11.25	PP shall submit timeline regarding implementation of green plan, RWH.
11.26	The PP shall not allow establishment of any category A or B type industry in the project area.
11.27	The PP shall carry out the quarterly awareness programs for the staff.
11.28	Any change in stipulations of EC will lead to Environment Clearance void-ab-initio and PP will have to seek fresh Environment Clearance.
11.29	The PP shall comply with provisions of Manufacturing storage and import of Hazardous chemical rules.
11.30	No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority.
11.31	Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
11.32	A minimum of 1 tree for every 80sqm of land should be planted and maintained. The Existing trees will be counted for this purpose. The landscape planning should include plantation of native species.
11.33	The species with heavy foliage, broad leaves and wide canopy cover are desirable.
11.34	Water intensive and/or invasive species should not be used for landscaping.
11.35	As proposed <b>total green area of the project is 437060.88 m<sup>2</sup> (20 % of the plot area).in which block plantation area 324962.6 m<sup>2</sup> or 80.30 Acre(14.93% of the total plot area).</b>
11.36	<b>07 lagoons and 119 recharge wells</b> shall be provided for ground water recharging as per the CGWB norms.
11.37	The PP shall install required number of <b>Anti Smog Guns</b> at the project site as per the requirement of HSPCB.
11.38	<b>The PP shall provide additional 10 MW solar plant in addition to already developed 41.3 MW of solar plant in the expansion phase.</b>
11.39	<b>The PP shall carry out plantation of saplings in the proposed green area as a part of the tree plantation campaign “Ek Ped Maa Ke Naam” and shall upload the details of the same in the</b>

S. No	EC Conditions
	<b>MeriLiFE Portal (<a href="http://merilife.nic.in">http://merilife.nic.in</a>).</b>
<b>11.40</b>	The PP shall register themselves on the <a href="http://dustapphspcb.comportal">http://dustapphspcb.comportal</a> as per the Direction No.14 dated 11.06.2021 issued regarding dust mitigation by Commission for Air Quality Management in National Capital Region and Adjoining Areas.
<b>11.41</b>	<b>The Project Proponent will install DG sets for the project as per latest Guidelines of GRAP, NCAP &amp; CPCB.</b>
<b>11.42</b>	<b>The Project Proponent will undertake prescribed mitigation measures during the construction period.</b>
<b>11.43</b>	<b>The Project Proponent will adopt a nearby government school for improvement of infrastructure with a budget of Rs 370 lakhs.</b>
<b>11.44</b>	<b>The Project Proponent will adopt Govt. Polytechnic College Manesar for improvement of infrastructure with a budget of Rs. 99.98 lakhs</b>



MSIL:CUIP:ESEC:ENV:2025-26:111

26-Nov-2025

To  
Ministry of Environment, Forest and Climate Change  
Integrated Regional Office  
Bays No 24-25, Sector – 31 A  
Dakshin Marg  
Chandigarh - 160030

**Sub:** Half yearly report for the compliance of conditions given in the Environment Clearance issued to M/s Maruti Suzuki India Limited for Proposed expansion of existing Industrial shed for Automobile Manufacturing Unit at Plot No. 1, Sector-3A, IMT Manesar, Gurugram, Haryana

**Ref:** Environment Clearance Letter issued by MoEFCC-State Environment Impact Assessment Authority (SEIAA), Haryana vide **File No. SEAC/HR.2024/164 & EC Identification no. EC24B3813HR518706**, dated **03.01.2025**.

Dear Sir,

Enclosed please find herewith the half yearly compliance report for the period of April'25 to September'25 related to Environment clearance issued for our proposed expansion of existing industrial shed for Automobile Manufacturing Unit situated at IMT Manesar, Gurugram.

Thanking You.

Yours Faithfully  
  
**Paresh Mani Sharma**  
**DGM (Environment)**  
**Maruti Suzuki India Limited**

Paresh Mani Sharma  
Deputy General Manager (Environment)  
Maruti Suzuki India Limited, Gurgaon

**MARUTI SUZUKI INDIA LIMITED**

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Manesar Plant:  
Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199

# **“Six Monthly Compliance Report”**

**April’25 to September’25**

For the conditions stipulated in  
Environment Clearance issued for  
Proposed expansion of existing  
Industrial shed for Automobile  
Manufacturing Unit at Plot No.1,  
Sector-3A, IMT Manesar, Gurugram



Submitted by-  
M/s Maruti Suzuki India Limited,  
Gurugram Plant, Palam Gurugram Road  
Gurugram-122015, Haryana



**MARUTI SUZUKI INDIA LIMITED, MANESAR, HARYANA**

**Ref: Environment clearance issued from SEIAA; Haryana vide File No. SEAC/HR/2024/164 & identification no. EC24B3813HR5413540N dated 03.01.2025**

S. No.	Stipulated Condition in Environment Clearance	Compliance Status
<b>1. Statutory Compliance</b>		
1.1	The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.	Noted.
1.2	The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.	Noted.
1.3	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.	Not applicable, the expansion projects are situated inside the MSIL plot of notified Industrial Estate-Industrial Model Township (IMT) Manesar of HSIIDC
1.4	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not applicable. The project is situated in the notified Industrial Estate-Industrial Model Township (IMT) Manesar of HSIIDC.
1.5	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.	Noted.
1.6	The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.	Noted.
1.7	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.	Letter received from Dakshin Haryana Bijli Vitran Nigam (DHBVN), same has been attached as <b>Annexure 1</b> .
1.8	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.	Noted.
1.9	The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.	Noted.
1.1	The project proponent shall follow the ECBC/ECBC-R prescribed by the Bureau of Energy Efficiency, Ministry of Power strictly.	Noted.
<b>2. Air Quality Monitoring and Preservation</b>		

2.1	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.	Noted.
2.2	A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.	Dust mitigation measures as well as measures mentioned in the EMP are being followed to contain any exceedance in ambient air quality at site.
2.3	The project proponent shall install a system to carry out Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM <sub>10</sub> and PM <sub>2.5</sub> ) covering upwind and downwind directions during the construction period.	Ambient Air Quality monitoring is being carried out regularly through MoEFCC & NABL recognized laboratory and the reports are attached as <i>Annexure 2</i> .
2.4	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.	Noted.
2.5	Construction site shall be adequately barricaded before the construction begins. Dust, smoke and other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.	Noted & compliance will be done as per given norms during commencement of the project.
2.6	Sand, murram, loose soil, and cement stored on site shall be covered adequately so as to prevent dust pollution.	Noted.
2.7	Wet jet shall be provided for grinding and stone cutting.	Noted.
2.8	Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.	Noted.
2.9	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules 2016.	Noted.
2.10	The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.	Noted.

2.11	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.	Noted, adequate stack height shall be provided as per CPCB standards.
2.12	For indoor air quality the ventilation provisions as per National Building Code of India.	Ventilation and fresh air supply will be as per National Building Code of India.
<b>3. Water Quality Monitoring and Preservation</b>		
3.1	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rainwater.	Not applicable, as the project exists within the notified industrial estate (Industrial Model Township-IMT Manesar) of HSIIDC.
3.2	Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.	Noted.
3.3	Total freshwater use shall not exceed the proposed requirement as provided in the project details.	Noted, and the quantity of freshwater consumption will be monitored regularly. The values are attached to <a href="#">Annexure 3</a> .
3.4	The quantity of freshwater usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.	The quantities of freshwater usage, wastewater recycling are being monitored regularly. The records for the last six months (April'25 to September'25) are attached to <a href="#">Annexure 3</a> .
3.5	A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.	Water assurance letter obtained from HSIIDC, Manesar, same has been attached as <a href="#">Annexure 4</a> .
3.6	At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.	Noted.
3.7	Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.	STP outlet is used for landscape irrigation. ETP followed by ZLD is also installed for the process water demand.
3.8	Use of water saving devices/fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.	Low flow water fixtures have been used for all relevant areas.
3.9	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.	Noted.

3.1	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Noted.
3.11	The local bye-law provisions on rainwater harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rainwater harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.	Rainwater harvesting lagoons of adequate capacity are already available for storage of storm water & ground water recharge.
3.12	A rainwater harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built-up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rainwater should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.	Rainwater harvesting lagoons of adequate capacity are already available for storm water storage & ground water recharge.
3.13	All recharge should be limited to shallow aquifer.	Noted.
3.14	No ground water shall be used during construction phase of the project.	Noted.
3.15	Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.	Noted.
3.16	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.	The quantities of freshwater usage, wastewater recycling are being monitored regularly. The records for the last six months (April'25 to September'25) are attached as <i>Annexure 3</i> .
3.17	Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed of into municipal drain.	Unit has installed 80 (50+30) m <sup>3</sup> /hr capacity of STP plant within the premises. The treated STP water is being used for landscape irrigation.
3.18	No sewage or untreated effluent water would be discharged through storm water drains.	Noted.
3.19	Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.	Unit has installed 80 (50+30) m <sup>3</sup> /hr capacity of STP plant within the premises. The treated STP water is being used for landscape irrigation. The adequacy report for STP is attached as <i>Annexure 5</i> .
3.2	Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.	The quality of treated STP water is being monitored regularly. The monitoring reports are attached as <i>Annexure 6</i> .

3.21	Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.	Sludge from STP is being used in the Horticulture area.
<b>4. Noise Monitoring and Preservation</b>		
4.1	Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.	Necessary measures will be being taken to reduce the noise level during the construction phase. Monitoring of ambient noise levels is being done regularly, and reports are attached as <i>Annexure 7</i> .
4.2	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Monitoring of ambient noise levels is being done regularly, and reports are attached as <i>Annexure 7</i> .
4.3	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.	Acoustic enclosures are provided in all DG and Gas based gensets. PPEs are also provided for operators working nearby.
<b>5. Energy Conservation Measures</b>		
5.1	Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.	Noted.
5.2	Outdoor and common area lighting shall be LED.	All lighting fixtures are LED based.
5.3	Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.	Concepts such as landscaping, building envelopes, appropriate fenestration etc. will be used for designing the buildings for energy optimization.
5.4	Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.	All installed exterior lightings are LED based.
5.5	Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.	The solar power plant initially had a capacity of 41.3 MWp. An additional 10 MWp has recently been installed, increasing the total capacity to 51.3 MWp.



5.6	Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.	The solar power plant initially had a capacity of 41.3 MWp. An additional 10 MWp has recently been installed, increasing the total capacity to 51.3 MWp.
<b>6. Waste Management</b>		
6.1	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.	Noted.
6.2	Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Noted.
6.3	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.	The solid waste is segregated and stored before disposal as per the Solid waste management rules 2016. Sufficient bins are provided within the plant premises.
6.4	Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.	Organic waste shall be used to feed in-house bio-gas plant.
6.5	All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.	All non-biodegradable hazardous recyclable waste is being sent to authorized recyclers.
6.6	Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.	Noted.
6.7	Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environment friendly materials.	Noted.
6.8	Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.	Noted.
6.9	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.	Noted.

6.10	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.	LED lights are being used within the plant premises. The same shall be disposed of via authorized recyclers.
<b>7. Green Cover</b>		
7.1	No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).	The project is situated in the notified Industrial Estate-Industrial Model Township (IMT) Manesar of HSIIDC.
7.2	A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.	Native species are being planted in the designated green area. Details of the Green area are attached as <i>Annexure 8</i> .
7.3	Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.	Noted, Details of Green area is attached as <i>Annexure 8</i> .
7.4	Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.	Noted.
<b>8. Transport</b>		
8.1	A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria. a) Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. b) Traffic calming measures. c) Proper design of entry and exit points. d) Parking norms as per local regulation.	Internal traffic movement plan of the plant is attached as <i>Annexure 9</i> .
8.2	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.	Noted, vehicles of good condition and having valid pollution certificate will only be used for bringing construction material.

8.3	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.	Noted and Internal traffic movement plan of the plant is attached as <b>Annexure 9</b> .
<b>9. Human Health Issues</b>		
9.1	All workers working at the construction site and involved In loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.	Noted, Dust mask shall be provided to workers.
9.2	For indoor air quality the ventilation provisions as per National Building Code of India.	Ventilation and fresh air supply as per National Building Code of India shall be ensured.
9.3	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Noted.
9.4	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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Noted.
9.5	Occupational health surveillance of the workers shall be done on a regular basis.	Preventive health check-ups shall be done regularly.
9.6	A First Aid Room shall be provided in the project both during construction and operations of the project.	Noted.
9.7	Corporate Environment Responsibility, the project proponent shall comply with the provisions of CER, as applicable.	Noted.
9.8	The company shall have a well laid down environmental policy duly approved 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 share holders/ stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	The Environmental Policy duly approved by the management is attached as <b>Annexure 10</b> .

9.9	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	MSIL has a dedicated department for managing the environmental activities and measures.
9.10	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	Noted, and the Environment Management plan (EMP) is already submitted to the authority during the EC approval.
<b>10. Miscellaneous</b>		
10.1	The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed.	Advertisement was published in Amar Ujala (Hindi) and Times of India (English). The copy of the same is attached as <i>Annexure 11</i> .
10.2	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 are already submitted to local bodies. The acknowledgement copies are attached to <i>Annexure 12</i> .
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.	Noted.
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.	Six monthly compliances shall be submitted on the website of MoEFCC regularly.
10.5	The company shall have a well laid down environmental policy duly approved 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 regard shall be submitted to the MoEF&CC as a part of six-monthly report.	The Environmental Policy duly approved by the management is attached as <i>Annexure 10</i> .

10.6	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 report to the head of the organization.	MSIL has a dedicated department for managing the environmental activities and measures.
10.7	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	Noted, and the Environment Management plan (EMP) is already submitted to the authority during the EC approval.
10.8	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.	Environment Statement (Form V) is being submitted regularly to Haryana State Pollution Control Board (HSPCB). Copy of acknowledgement copy of Form V for FY2024-2025 is attached as <b>Annexure 13</b> .
10.9	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.
10.10	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Noted.
10.11	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the Expert Appraisal Committee.	Noted.
10.12	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).	Noted.
10.13	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.	Noted.
10.14	The Ministry/SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.
10.15	The Ministry/SEIAA reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted.
10.16	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.

10.17	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.
10.18	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.
10.19	The validity of this environment clearance letter is valid up to 10 years from the date of issuance of EC letter in accordance with the MoEF & CC, GoI Notification No. S.O.1807 (E), dated the 12th April, 2022. The environment clearance conditions applicable till life span project will continue to apply. In case of violation the action will be taken as per the laid down law of land. Compliance report shall be sent to this office till life of the project.	Noted.
10.20	If project is not completed within the validity period then the project proponent shall submit the application for extension of validity within one month before the lapse of validity period of Environment Clearance.	Noted.
<b>11. Specific Conditions</b>		
11.1	The project is recommended on concept basis as such in case of any change in planning, the PP will obtain fresh EC.	Noted.
11.2	The PP shall take the necessary approval from PESO, if applicable.	Necessary approvals are taken and renewed timely.
11.3	The PP shall follow the compliance of Public Liability Insurance Act, 1991	The copy of the PLI insurance is attached as <b>Annexure 14</b> .
11.4	The PP shall carry the isolated storage of each chemical to be stored with the existing precautions as per the MSIHC Rules, 1989 and abide by all conditions of MSDS	Noted.
11.5	The Approval of the Competent Authority shall be obtained for structural safety of building code due to earthquakes, adequacy of firefighting equipments etc. as per National Building Code including protection measures from lightning etc.	Noted.
11.6	The PP shall ensure that total EMP Budget shall be spent on project during construction as well as during operational phase as per table given above. The EMP cost on Socio Economic activities shall be used before the commencement of the project & EMP recurring inside the project shall be implemented throughout the operation of the project.	Noted.
11.7	The PP and consultant agree to display the First Aid measure, Fire Fighting Measure, Accidental Release measure, Exposure and control (Personal Measure) at the site.	First aid measures, firefighting measures and emergency response measures will be displayed at all relevant sites.



11.8	The project proponent shall upload the status of compliance of the basic details (given in above tables), stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Noted.
11.9	Sewage shall be treated in the STP based on latest Technology with tertiary treatment i.e. Ultra Filtration. The Treated effluent from STP shall be recycled/ reused for flushing. DG cooling, Gardening and HVAC.	MSIL has installed two STP of total capacity 80(30 m <sup>3</sup> /hr & 50 m <sup>3</sup> /hr), within the premises with Membrane Bioreactor (MBR) technology. The treated effluent meets the prescribed parameters of HSPCB and is used for horticulture purposes.
11.10	The PP shall comply with provisions of Occupational Safety health and working conditions Code 2019.	MSIL is complying with the provision of the Factories Act 1948 which is applicable for factory premises. MSIL shall ensure to take all necessary measures.
11.11	The Project Proponent would devise a monitoring plan to the satisfaction of the State Pollution Control Board so as to continuously monitor the treated waste water being used for flushing in terms of faecal coli forms and other pathogenic bacteria.	The STP treated effluent meets the prescribed standard of the Haryana State Pollution Control Board (HSPCB) before being used for horticulture.
11.12	The Project Proponents would commission a third party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.	The third-party study related to efficiency of treatment plants is attached as <i>Annexure 5</i> .
11.13	Separate wet and dry bins must be provided for facilitating segregation of waste. Solid Waste shall be segregated into wet garbage and inert materials. Wet Garbage shall be composted in Organic waste convertor. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The Inert waste from the project will be sent to solid waste dumping site through authorized vender.	The solid waste is segregated and stored as per the Solid waste management rules 2016. Sufficient bins are provided within the plant premises. Wet garbage is being used in captive biogas plant.
11.14	The PP shall implement the EMP and assess that the implemented EMP is adequate and periodic environmental audits shall be conducted and maintained the records of audit. These audits shall be followed by Corrective action plan to correct the various measures identified during the audits (CAP).	Noted.

11.15	The PP shall install the Eco Friendly Green Transformer based on ester oil to reduce the carbon footprint. The PP shall shift to gas based generator set when the gas is available. The PP shall install APCM for the DG set. The PP shall reduce the SO2 load by 30% if HSD is used.	Gas based generators are installed within premises. Solar power and Government grid power will be used during operation phase. APCM such as installation of RECD and CPCB IV compliant generator sets shall be used. All emission standards prescribed by the Commission for Air Quality Management (CAQM) and Environment (Protection) Act, 1986 shall be followed.
11.16	The PP shall not carry any construction below the HT Line passing through the project, if any.	Noted.
11.17	The PP shall not carry any construction above or below the Revenue Rasta, if any.	Noted.
11.18	The PP shall obtain the permission regarding withdrawal of ground water from CGWA/State water Authority, Haryana before the start of the project and also obtained the CTO from HSPCB after the approval from CGWA.	Noted.
11.19	The PP shall not allow parking of the vehicles on the roads or revenue Rasta outside the project area.	Noted.
11.20	The PP shall not give occupation or possession before the water supply and sewage connection permitted by the competent authority.	Noted.
11.21	The PP shall develop the onsite and offsite emergency plan in consultation with the regulatory authority.	An onsite emergency plan shall be prepared and shared to the concerned authority before commencing operations.
11.22	The PP shall install Digital water level recorder for monitoring the water recharge and carry out quarterly maintenance and cleaning of recharge wells/lagoons	Digital water level recorder installed to monitor the water recharge. Quarterly maintenance and cleaning being ensured for wells/ lagoons.
11.23	The PP shall ensure the compliance of provisions of Plastic Waste Management (Amendment) Rules, 2022 relevant for the project.	Noted.
11.24	The PP may provide electric charging stations to facilitate electric vehicle commuters.	Noted.
11.25	PP shall submit timeline regarding implementation of green plan, RWH.	The green area plan is already submitted to authority during the EC application.
11.26	The PP shall not allow establishment of any category A or B type industry in the project area.	Noted.
11.27	The PP shall carry out the quarterly awareness programs for the staff.	Noted.
11.28	Any change in stipulations of EC will lead to Environment Clearance violation and PP will have to seek fresh Environment Clearance.	Noted.
11.29	The PP shall comply with provisions of Manufacturing storage and import of Hazardous chemical rules.	Complied.

11.30	No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority.	Noted.
11.31	Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).	Noted.
11.32	A minimum of 1 tree for every 80sqm of land should be planted and maintained. The Existing trees will be counted for this purpose. The landscape planning should include plantation of native species.	Noted.
11.33	The species with heavy foliage, broad leaves and wide canopy cover are desirable.	Noted.
11.34	Water intensive and/or invasive species should not be used for landscaping.	Noted.
11.35	As proposed total green area of the project is 437060.88 m <sup>2</sup> (20 % of the plot area).in which block plantation area 324962.6 m <sup>2</sup> or 80.30 Acre(14.93% of the total plot area).	Noted and details of the green area are attached as <i>Annexure 8</i> .
11.36	07 lagoons and 119 recharge wells shall be provided for ground water recharging as per the CGWB norms.	Complied.
11.37	The PP shall install required number of Anti Smog Guns at the project site as per the requirement of HSPCB.	Noted.
11.38	The PP shall provide additional 10 MW solar plant in addition to already developed 41.3 MW of solar plant in the expansion phase.	The installation of an additional 10 MW solar has been completed recently bringing the overall capacity to 51.3 MWp.
11.39	The PP shall carry out plantation of saplings in the proposed green area as a part of the tree plantation campaign "Ek Ped Maa Ke Naam" and shall upload the details of the same in the MeriLiFE Portal ( <a href="http://merilife.nic.in">http://merilife.nic.in</a> ).	Plantation has already been carried out as part of the campaign "Ek Ped Maa Ke Naam". Details of same uploaded on MeriLiFE Portal. Reference of same attached as <i>Annexure 15</i> .
11.40	The PP shall register themselves on the <a href="http://dustapphspcb.comportal">http://dustapphspcb.comportal</a> as per the Direction No.14 dated 11.06.2021 issued regarding dust mitigation by Commission for Air Quality Management in National Capital Region and Adjoining Areas.	Noted.
11.41	The Project Proponent will install DG sets for the project as per the latest Guidelines of GRAP, NCAP & CPCB.	Noted.
11.42	The Project Proponent will undertake prescribed mitigation measures during the construction period.	Noted.
11.43	The Project Proponent will adopt a nearby government school for improvement of infrastructure with a budget of Rs 370 lakhs.	Noted.
11.44	The Project Proponent will adopt Govt. Polytechnic College Manesar for improvement of infrastructure with a budget of Rs. 99.98 lakhs	Noted.

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE  
NORHTERN REGIONAL OFFICE  
CHANDIGARH

**DATA SHEET**

1.	Project Type: River Valley/ Mining / Industry/Refinery/Transportation/Tourisms/Thermal /Nuclear/Other (Specify)	Construction Activity for Expansion of existing Industrial Shed for Automobile Manufacturing Unit.
2.	Name of the Project:	Proposed expansion of existing Industrial shed for automobile manufacturing unit at Plot No. 01, Sector-3A, IMT, Manesar, Gurugram, Haryana by M/s Maruti Udyog Limited.
3.	Clearance letter (s)/O.M No. & dates:	EC issued from SEIAA, Haryana vide File No.: SEAC/HR/2024/164 & EC Id. No.: EC24B3813HR5413540N dated 03.01.2025.
4.	Location: a) District (s) b) State (s) c) Latitudes/longitudes	District: Gurugram State: Haryana Latitude: 28°22'0.93"N Longitude: 76°53'26.15"E
5.	Address for correspondence: a) Address for Correspondence  b) Address of executive Project In-charge	Mr. Paresh Mani Sharma Deputy General Manager-Environment Maruti Suzuki India Limited Email: <a href="mailto:PareshMani.Sharma@maruti.co.in">PareshMani.Sharma@maruti.co.in</a> Phone: 0124 – 2346721 ~ 30 Extn: 3583  -
6.	Salient features: a) Of the project b) Of the environmental management plans	Salient features of the project and Environment Management plan details are enclosed in <b>Annexure A.</b>
7.	Breakup of the project area: a) Submergence area: Forest & Non- forest.  b) Others	Not Applicable.  There is no forest land involved in project because the project site is located in the notified industrial area of IMT (Industrial Model Township) Manesar, Gurugram, Haryana.
8.	Break up of project affected population with enumeration of those losing houses /dwelling units and agricultural land only both dwelling units and agricultural land and landless labourers/artisans. a) SC/ST/Adivasis b) Others (Please Indicate whether these figures are based on any scientific and systematic survey carried out only provisional figures. If a survey has been carried out , give details and year of survey)	Not Applicable.

9.	<p>Financial details:</p> <p>a) Project cost as originally planned and subsequent revised estimates and the year of price reference.</p> <p>b) Allocations made for environmental management plans with item wise and year wise breakup.</p> <p>c) Benefit cost ratio /internal Rate of Return and the year of assessment.</p> <p>d) Whether (c) includes the cost of environmental management as shown in b) above.</p> <p>e) Actual expenditure incurred on the project so far.</p> <p>f) Actual expenditure incurred on the environment management plans so far.</p>	<p>Project Cost: Rs. 774.90 Cr</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p>
10.	<p>Forest land requirement:</p> <p>a) The status of approval for diversion of forest land for non- forestry use.</p> <p>b) The status of clear felling.</p> <p>c) The status of compensatory afforestation if any.</p> <p>d) Comments on the viability &amp; sustainability of compensatory afforestation program in the light of actual field experience so far.</p>	Not Applicable
11.	The Status of clear felling in the non-forest areas (Such as submergence area of non-reservoir, approach road) if any, with quantitative information.	Not Applicable
12.	<p>Status of Construction:</p> <p>a) Date of Commencement (actual and /or planned)</p> <p>b) Date of completion (actual and /or planned)</p>	The construction of the project is likely to be completed in 60 months after date start of construction of the project.
13.	Reasons for the delay if the project is yet to start:	Not applicable.

**SALIENT FEATURES OF PROJECT:**

1	Name of the Project	Proposed Expansion of Existing Industrial shed for Automobile Manufacturing, (integrated facilities) Unit
2	Capacity	1. Passenger Cars & Utility Vehicles = 3572 nos./ day 2. Transmission Assembly = 7143 nos./ day 3. Engine Assembly = 6557 nos./ day
3	Location	Plot No. 1, Sector 3A, IMT Manesar, Gurugram, Haryana
4	Total project cost	Existing: 14997.9945 Cr + Expansion: Rs. 774.90 Cr =15772.8945 Crores
5	Plot Area	21,76,200.00 sq. mtr.

**ENVIRONMENTAL MANAGEMENT PLAN*****Water Pollution control:***

- Entire wastewater will be treated and reused for landscaping.
- Waste oil generated during maintenance of construction equipment will be collected and provided to approve waste oil recyclers for recycling and reuse.
- Municipal and other waste generated at the proposed project will be collected and disposed of suitability as per standards practices and regulatory requirement.
- Suitable drainage networks would be made to ensure proper draining of wastewater from the construction sites, so that such water does not form stagnant pools nor aggravate soil erosion.

***Air Pollution control:***

- Water sprinkling and transporting construction materials with tarpaulin coverage during the construction stage. During the sub-grade construction, sprinkling of water will be carried out on regular basis during the entire construction period, especially in the winter and summer seasons. Special attention will be given in the sections where the alignment passes through sensitive areas such as schools, hospitals, and urban areas. As soon as construction is over the surplus earth will be utilized properly and in no case, loose earth will be allowed to pile up along the alignment.
- All the vehicles used during the construction stage to have valid PUC certificate.
- Integration with the local government awareness campaign programs on good practices of vehicle maintenance etc. to reduce the air emissions.

***Noise Pollution Control:***

- Ear plugs and Earmuffs shall be provided to the workers at construction site.
- All the construction sites will be provided with barricades.
- Big foliage trees shall be planted around the periphery of the construction site.
- Provision of silencers at the exit of noise source on the machinery.
- Vehicles shall be properly maintained and serviced.

***Ground Water:***

- Rainwater harvesting lagoons have been constructed to take care of surface run off and recharge the aquifers.

***Green belt development:***

- Adequate green area will be developed with local area species having capacities to reduce SPM and noise levels.



# Letter regarding sanction of power load to MSIL plant at IMT Manesar

DHBVN

**DAKSHIN HARYANA BIJLI VITRAN NIGAM**  
(A Power Distribution & Retail Supply Utility, Govt. of Haryana)  
An ISO 9001:2008 Complaint Utility, CIN: U99999HR-1999SG03416  
Chief Engineer/Commercial, DHBVN, Hisar.

DHBVN

Regd. Office Vidyut Sadan, Vidyut Nagar, Hisar-125005 (Haryana)

Phone No. 01662-223093 Fax: 01662223153

Website: dhbvn.org.in

E-mail: cgmcommercialdhbvn@gmail.com

To,

SE/OP, Circle,  
DHBVN, Gurgaon-I.

Memo No. Ch-4/SE/C-SOL-363

Dated: 04/07/2017

**Subject: Sanction of 67950 KW load with CD 75500 KVA to M/s Maruti Suzuki India Ltd. (MSIL) at Plot No. 1, Phase -3A, IMT Manesar, on 220 KV supply pressure applied vide A&A No. 52890/LS dated 17-04-2017 under (OP) S/Divn. Manesar.**

Please refer to your office memo no. Ch. 2/PC-GC-527/MNSR dated 27-04-2017 on the subject cited matter above.

Approval of sanction of load 67950 KW with CD 75500 KVA to M/s Maruti Suzuki India Ltd. at Plot No. 1, Phase -3A, IMT Manesar under HT/Industrial Category, under (OP) S/Divn. Manesar is hereby accorded subject to compliance of the terms and conditions given as under:-

1. The load of 67950 KW load with CD 75500 KVA will be fed from proposed 220 KV S/Stn. transport HUB adjoining Sector 8, IMT Manesar regarding feeding the load of M/s Maruti & its ancillary units through single point connection at 220KV voltage level.
2. The load of Single Point Industrial Connection with its ancillaries has been sanctioned conditionally to M/s MSIL, subject to the approval of HERC. In case HERC does not approve, such type of arrangement then the load will be released to MSIL only and separate connection will be released to its ancillaries by DHBVN for which an under taking has been given by MSIL.
3. That a 220KV S/Station of appropriate capacity will be created by M/s Maruti Suzuki India Ltd. (MSIL) to be supplied from proposed 220KV S/Station Transport Hub Sec-8 IMT Mansesar through 220 KV

independent Feeder to release 75.5 MVA load to M/s MSIL (M/s Maruti Suzuki India Ltd.).

4. Protection scheme to be provided on independent feeder at the applicant's end for obtaining supply at 220 KV level be got approved from the M&P wing of both DHBVN & HVPN.
5. An undertaking be obtained from the consumer that the technical feasibility shall be examined afresh every time the consumer applies for extension of load.
6. CEA guidelines and IE rules regarding Safety precaution should be adhered to for connecting the electrical system.
7. The applicant will deposit the share cost as per the instructions of HVPN, if required.
8. The applicant will enter into tripartite agreement with HVPN and DHBVN.
9. No applicant, senior to the instant applicant/ consumer is waiting for sanction of load / extension of load.
10. Processing charges, Consumption security & other applicable charges be recovered from the applicant as per Nigam Instruction.
11. Documentary proof in support of the identification of the authorized signatory i.e. copy of ration card, driving license etc. shall be obtained from the applicant / consumer.
12. The applicant will submit documentary proof in support of ownership of land.
13. Non- judicial stamp worth Rs. 3/- on the left corner of A&A be got affixed by the SDO before taking further action.
14. The consumer will not raise any claims against the department for un-notified unscheduled power cuts, which are beyond the control of the department and an undertaking will be obtained from him.
15. The applicant shall comply with the instructions of the Nigam issued by this office time to time.
16. The HT brochure may contain old instructions, as such an additional affidavit be obtained from the consumer to abide by the provision of the Electricity Act 2003 and complying of all the instructions of SMI & Sales Circular issued as well as amended by the Nigam from time to time before release.

17. Necessary clearance from various Govt. Department i.e. CEI, Pollution Control Board etc. shall be taken.
18. For the creation of S/Stn. / transmission lines & before erection of major items, inspection will be got carried out from DHBVN / HVPN Authorities. The inspection charges @ 1.5% of the estimated cost of work shall be paid by the applicant to DHBVN / HVPN as the case may be.
19. The applicant shall erect underground HT lines & other infrastructure as per specification and design of the Nigam.
20. All other formalities as required as per instruction issued/adopted by Nigam time to time shall be completed.
21. Metering equipments including CTs of matching capacity as per specifications / design of Nigam shall be provided at feeding S/Stn. as per Nigam instructions.
22. The applicant shall comply with provision of Haryana Renewable Energy Department regarding installation of solar photovoltaic Power plant applicable from time to time.

This issues with the approval of Director/OP, DHBVN, Hisar at NP-06, of file No. SOL-363.

  
CE/Commercial  
DHBVN, Hisar

CC to:-

1. PS to Director/OP, DHBVN, Hisar for kind information of Director/Op, please.
2. CE/PD&C, DHBVN, Hisar.
3. CE/Op, DHBVN, Delhi.
4. CE/TS, HVPN, Hisar.
5. CE/Planning, HVPN, Panchkula.
6. SE/TS, HVPN, Gurugram
7. SE/NCR, HVPN, Gurgaon.
8. Xen(OP), Division, DHBVN, Manesar.
9. SDO 'OP' S/Divn., DHBVN, Manesar.
10. M/s Maruti Suzuki India Ltd. at Plot No. 1, Phase-3A, IMT Manesar.

# Ambient Air Quality Monitoring Reports





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouse@hthlabs.com



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250524107

ULR No. : TC781125100014766F

Party's Ref No. : Nil

Booking Date : 24/05/2025

Period of Testing : 24/05/2025 To 31/05/2025

Reporting Date : 31/05/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 23/05/2025 (09:50 Hrs) to 24/05/2025 (09:50 Hrs)  
Sample Location : Cop Lab Area  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.16 m<sup>3</sup>/min
2. Total volume of air sampled : 1695.08 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	82.59	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	40.82	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	16.18	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	36.23	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	23.47	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.83	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	1.031	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828016

ULR No. : TC781125100017506F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 26/08/2025 (09:30 Hrs) to 27/08/2025 (09:30 Hrs)  
Sample Location : COP Lab Area  
Instrument used : Air Sampler GTI-311 (Sr. No. 09 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.23 m<sup>3</sup>/min
2. Total volume of air sampled : 1764.00 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	70.86	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	35.35	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	11.22	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	27.26	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	21.45	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	14.25	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.344	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1





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TC-7811



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250529071

ULR No. : TC781125100014767F

Party's Ref No. : Nil

Booking Date : 29/05/2025

Period of Testing : 29/05/2025 To 05/06/2025

Reporting Date : 05/06/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 26/05/2025 (09:30 Hrs) to 27/05/2025 (09:30 Hrs)  
Sample Location : JV Gate Area  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.26 m<sup>3</sup>/min
2. Total volume of air sampled : 1812.89 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	87.71	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	45.27	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	19.72	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	38.25	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	25.73	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	21.27	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.916	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

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Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1





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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828017

ULR No. : TC781125100017507F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 26/08/2025 (09:30 Hrs) to 27/08/2025 (09:30 Hrs)  
Sample Location : JV Gate Area  
Instrument used : Air Sampler GTI-311 (Sr. No. 10 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.21 m<sup>3</sup>/min
2. Total volume of air sampled : 1742.40 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	79.78	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	41.17	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	13.09	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	28.45	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	22.64	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	16.63	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.916	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250529072

ULR No. : TC781125100014768F

Party's Ref No. : Nil

Booking Date : 29/05/2025

Period of Testing : 29/05/2025 To 05/06/2025

Reporting Date : 05/06/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 27/05/2025 (10:30 Hrs) to 28/05/2025 (10:30 Hrs)  
Sample Location : SND Gate  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.27 m<sup>3</sup>/min
2. Total volume of air sampled : 1830.32 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	89.06	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	48.12	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	21.29	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	39.90	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	24.49	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.76	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	1.146	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

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# HTH Laboratories Pvt. Ltd.

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828018

ULR No. : TC781125100017508F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 27/08/2025 (10:00 Hrs) to 28/08/2025 (10:00 Hrs)  
Sample Location : SND Gate  
Instrument used : Air Sampler GTI-311 (Sr. No. 09 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.15 m<sup>3</sup>/min
2. Total volume of air sampled : 1648.80 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	75.81	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	39.50	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	15.33	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	31.21	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	23.54	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.14	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.458	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

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Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250524106

ULR No. : TC781125100014765F

Party's Ref No. : Nil

Booking Date : 24/05/2025

Period of Testing : 24/05/2025 To 31/05/2025

Reporting Date : 31/05/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 22/05/2025 (09:30 Hrs) to 23/05/2025 (09:30 Hrs)  
Sample Location : STP Area  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.16 m<sup>3</sup>/min
2. Total volume of air sampled : 1595.29 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	84.62	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	44.22	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	18.86	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	35.81	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	26.49	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	21.01	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.687	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

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# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouse@hthlabs.com



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828019

ULR No. : TC781125100017509F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 27/08/2025 (10:00 Hrs) to 28/08/2025 (10:00 Hrs)  
Sample Location : STP Area  
Instrument used : Air Sampler GTI-311 (Sr. No. 10 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.09 m<sup>3</sup>/min
2. Total volume of air sampled : 1562.40 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	72.32	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	37.43	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	14.58	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	33.58	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	25.62	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	15.49	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.573	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1

**MARUTI SUZUKI INDIA LIMITED, IMT Manesar, HARYANA**  
**Month wise water consumption details**

**Raw Water Consumption:**

<b>Month</b>	<b>Quantity in KL per Month (KLM)</b>
April'25	143941
May'25	155368
June'25	126693
July'25	118229
August'25	102448
September'25	116074
<b>Total</b>	<b>763753</b>

**Waste Water Recycling:**

<b>Month</b>	<b>Quantity in KL per Month (KLM)</b>
October-24	151587
November-24	160541
December-24	133367
January-25	141348
February-25	134780
March-25	134477
<b>Total</b>	<b>856100</b>

Letter regarding  
additional raw water  
supply for MSIL plant at  
IMT Manesar

हरियाणा राज्य औद्योगिक एवं  
आधारभूत संरचना विकास  
निगम लिमिटेड



**Haryana State Industrial &  
Infrastructure Development  
Corporation Ltd.**

**IMT, Manesar, Gurgaon**

IMT Manesar, Tel No. 0124- 2290501  
2290502, Fax : 2291448

(A State Government Undertaking)

No.HSIIDC:DGM(IA):IMT:10:5675.  
Dated 9<sup>th</sup> March, 2010.

M/s. Maruti Suzuki India Ltd.,  
Palam Gurgaon Road,  
Gurgaon.

**Kind attention: Sh. Vinay Varshney, Chief General Manager (PRDS)**

**Sub: Additional raw water supply for Maruti Suzuki India Ltd., Manesar.**

Dear Sirs,

HSI IDC is currently supplying 1MLD (0.4 cusec) of untreated raw water to you through your own dedicated pumping system installed in our water treatment facilities situated at Sector 7, IMT Manesar.


Further to your request for additional 5MLD (2.00 cusec) of raw water vide your letter dated 4.3.2010, we wish to inform you that HSI IDC is planning to augment its raw water transportation system, to meet future requirement of IMT, Manesar.

Out of your total additional demand of 5MLD (2.00 cusec) of raw water, HSI IDC will be able to supply you 2MLD (0.8 cusec) additional untreated raw water from September, 2010 onwards.

Remaining 3MLD (1.2 cusec) of raw water will be made available after completion of augmentation of our canal water supply system. This augmentation is planned to be completed by September, 2011.

Thanking you,

Yours faithfully,  
for Hr. State Indl. & Infra. Dev. Corpn. Ltd.

  
Dy. General Manager (IA)

*hsidc - your partner in progress*



# Report on Adequacy of Sewage Treatment Plant of MSIL Manesar Plant



PROJECT NO: 14012324/1/4



**REPORT  
ON  
THE ADEQUACY OF SEWAGE TREATMENT PLANTS  
OF  
M/s. MARUTI SUZUKI INDIA LTD.  
VEHICLE PLANT,  
IMT MANESAR, GURUGRAM (HARYANA)**

**(Annexure to Test Certificate No.-C1/0000332017, Dated 25.07.2023)**

**SUBMITTED TO**

**M/S. MARUTI SUZUKI INDIA LIMITED  
SECTOR-18, PALAM GURGAON ROAD  
GURUGRAM (HARYANA)-122015**

*Submitted by:*

**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**  
**[A Unit of Shriram Scientific and Industrial Research Foundation]**  
**19, UNIVERSITY ROAD, DELHI (INDIA) – 110 007**

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PROJECT NO: 14012324/1/4



**REPORT  
ON  
THE ADEQUACY OF SEWAGE TREATMENT PLANTS  
(JUNE, 2023)**

**AT  
M/S. MARUTI SUZUKI INDIA LIMITED  
VEHICLE PLANT,  
IMT MANESAR (HARYANA)**

**(Annexure to Test Certificate No.-C1/0000332017, Dated 25.07.2023)**

*Submitted to*

**M/S. MARUTI SUZUKI INDIA LIMITED  
SECTOR-18, PALAM GURGAON ROAD  
GURUGRAM (HARYANA)-122015**

  
Project In-charge





PROJECT NO: 14012324/1/4



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## **1. Introduction**

## **2. Process Description**



Project No. / Job Order No.	:	1401-2324-1-4/ 2306-1-411-2181 & 2307-12-411-509
Work Title	:	Adequacy Study of Sewage Treatment Plant
Test Certificate No.	:	C1/0000332017 dated 25.07.2023
Client	:	M/s. Maruti Suzuki India Limited

## 1.0 INTRODUCTION:

Maruti Suzuki India Limited (MSIL), a subsidiary of Suzuki Motor Corporation, Japan, is India's largest passenger car maker. The Company, formerly known as Maruti Udyog Limited, was incorporated as a joint venture between the Government of India and Suzuki Motor Corporation, Japan in February, 1981. MSIL has manufacturing facilities in Gurgaon and Manesar in Haryana and a state of the art R&D centre in Rohtak, Haryana.

Maruti Suzuki understands that green technology is the need of the way to achieve and strives to maintain the environmental performance of its manufacturing operations, products and thus develops strategies to mitigate these impacts. Hence the Company took the responsibility to utilize the natural resources in such a way that it does not damage or cause in-convenience to people or the society. Keeping this in view setting up Sewage Treatment Plants (STPs) and Effluent Treatment Plants (ETPs) for treating sewage water and wastewater respectively for the sources causing water pollution.

## 1.1 PURPOSE OF THE STUDY:

M/s. Maruti Suzuki India Ltd. assigned the project to Shriram Institute for Industrial Research, Delhi to study the adequacy of Sewage Treatment Plants. The purpose of the study is to evaluate the effectiveness and performance efficiency of the installed Sewage Treatment Plant during operation of all components of STP. Performance of STP is determined by its adequacy and efficacy. The overall performance of the STP was evaluated considering all the dimensions, actual flow and Hydraulic Retention Time (HRT) of units then find whether the design is adequate for that flow or not. This is known as STP adequacy. Water samples were collected at each stage of treatment units and analyzed for the major water quality parameters, such as pH, Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Total Dissolved Solids (TDS), Ammonical Nitrogen, Oil & Grease which is being treated in Effluent Treatment Plant of the MSIL. The performance efficiency of each selected unit in treating the pollutants was calculated as STP efficacy. This study will help industry to achieve the desired norms of Haryana State Pollution Control Board (HSPCB). Accordingly, recommendations will help in improving the performance of STP.





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## 1.2 RECONNAISSANCE SURVEY:

SRI Scientists made a visit on 27.06.2023 and 06.07.2023 and after surveying STP, decided to collect five samples for analysis of the designed parameters at various stages of treatment process of each Sewage Treatment Plant (STP-2 and STP-1 respectively). The quality of sewage wastewater was also analyzed by its physico-chemical analysis. The obtained results are very much useful in identification and rectification of operational and maintenance problems and it can be also utilized to establish methods for improving performance of industry and plant waste minimization strategies.

## 2.0 PROCESS DESCRIPTION:

### B. Wastewater Treatment Process:

The treatment plants are designed for handling 1600 KL/day i.e., 80m<sup>3</sup>/hr. (20 hrs./day-operation) of sewage wastewater generated from toilets, wash basins, canteen, pantry, floor washing, water cooler drain, AC condensate drain, security barrack, etc.

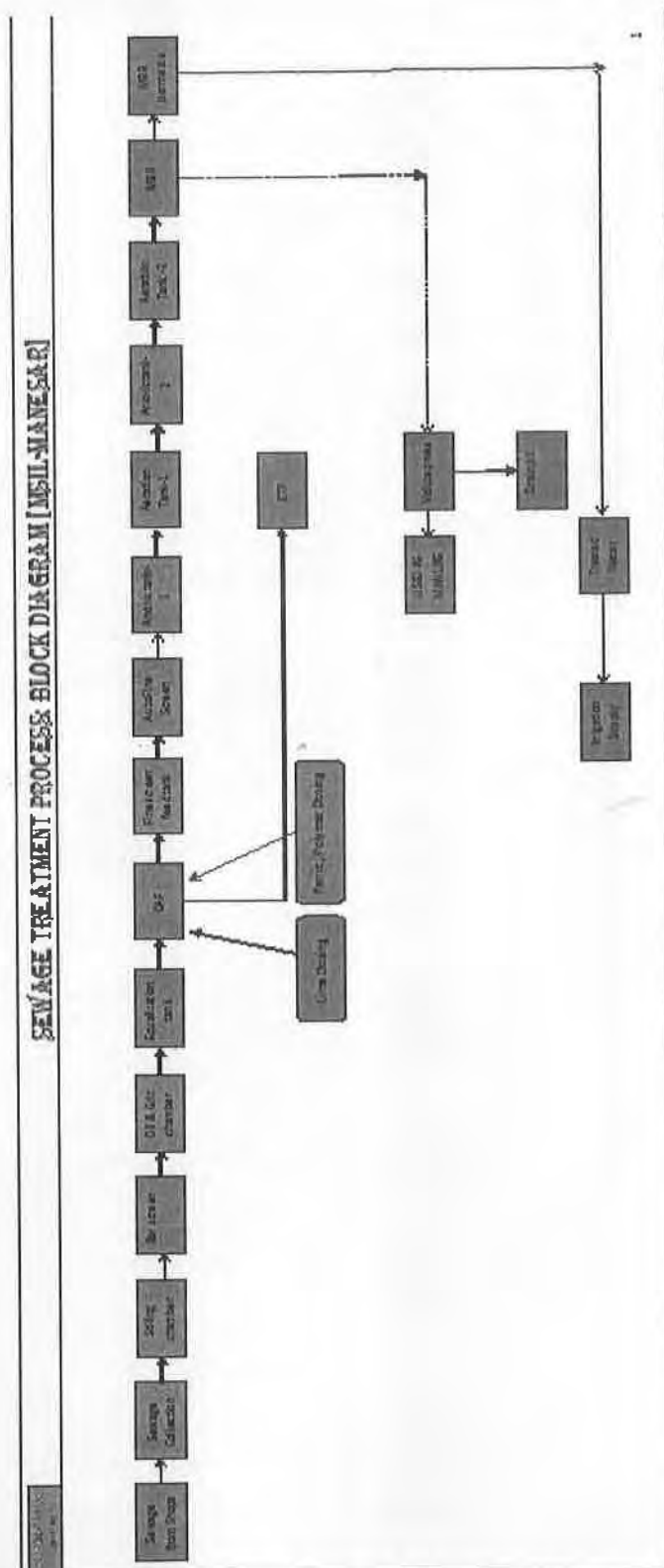
MSIL-Vehicle Plant have zero wastewater discharge facility and the company declared that it is not discharge of wastewater outside the factory premises. The recycled water is further used for some processes, cleaning and horticulture and is reused within the factory premises. At MSIL, the STP sludge used as manure within the factory premises while the STP waste oil trapped from STP are sold to the authorized waste management companies.

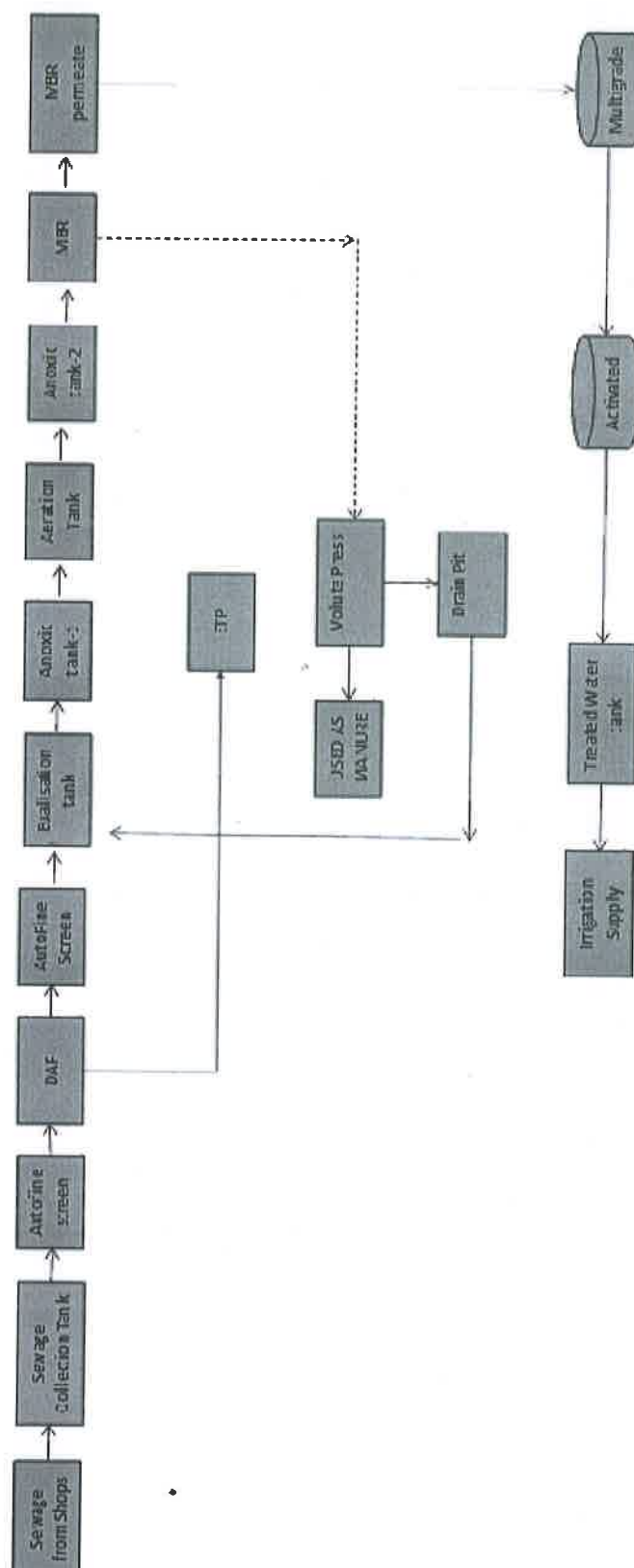
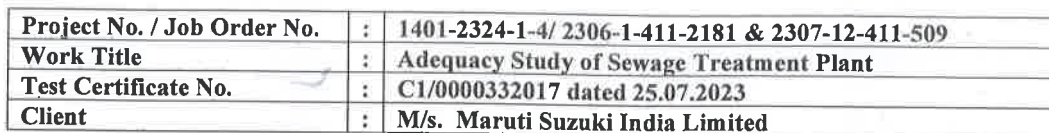
### **3. Treatment Scheme**



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### 3.1 TREATMENT SCHEME:





#### **4. Guidelines for Operating STP**



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#### 4. Guidelines for operation of various units of STP:

**Receiving sump(s):** The receiving sump(s) at STP should be of adequate capacity and should have arrangement for minimum three pumps, keeping one as stand-by. The pumps are required to have regular maintenance adopting preventive maintenance system. The leakages are required to be attended regularly and as per preventive maintenance system. The operator(s) are required to maintain a logbook for duration of operation of each pump and also the flow/ quantity of wastewater pumped.

**Equalisation Tank:** The equalisation tank of minimum 8 hours detention time is a must for sewage wastewater. To prevent the settling of suspended matter, the equalisation tank should have an arrangement of either compressed air for agitation or mechanical agitator. The equalisation tank should be fitted with a pumping arrangement for a regulated feed to the subsequent treatment units. There should be one stand-by pump provided.

**Primary treatment:** The basic objective of the primary treatment is to remove suspended and/ or colloidal matters for this purpose, clarifloculator or air flotation units are provided. The coagulants are normally used for enhancing removal of suspended and colloidal matter. There should be a proper coagulant dosing system provided, preferably with an automatic arrangement. Arrangement for pH correction, where necessary shall be provided. Adequate storage of chemicals, for a minimum of three months requirement, shall be made and regular supply of power shall be ensured with arrangement of DG set of adequate capacity. For handling the sludge from such unit(s), there should be a proper dewatering system (either centrifuge or vacuum drum filter). The dewatered sludge shall be transported by authorized vendor through trollies or tankers for storing and final disposal, as per authorisation obtained from HSPCB.

**Biological treatment unit(s):** The biological treatment unit can comprise anaerobic system, aerated lagoon, activated sludge process, extended aeration, trickling filter etc. For operation of these systems, it is necessary to ensure that the wastewater is within the required range of pH, Total Dissolved Solids (TDS) and designed value of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and hydraulic load (flow). It is also to ensure that there is no toxic constituent, which could hamper microbial activity in the biological treatment plant. As the input of sewage to the biological treatment unit enhances the treatability besides providing nutrient for biological activity, the addition of sewage at the





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inlet of biological system is advisable, wherever feasible. The various operating parameters such as pH, Mixed Liquor Suspended Solids (MLSS), Mixed Liquor Volatile Suspended Solids (MLVSS) and minimum Dissolved Oxygen (DO) in case of aerobic system should be maintained as per design. There is also necessity to record these parameters on day-to-day basis. Proper aeration throughout the area of the aeration tank needs to be ensured. The diffused aeration system ensures such distribution of aeration throughout the aeration tank. The success of biological treatment depends upon secondary settling system for proper removal of suspended solids (biomass) sludge recycling/removal and dewatering system. The operator should maintain all the operating parameters as per design and also for recirculation of the sludge and its removal periodically (to have active biomass). The removed sludge should be dewatered and such quantity recorded in the logbook. The sludge should be transported to an appropriate place as prescribed by HSPCB in the consent order under Water (Prevention & Control of Pollution) Act or as per authorisation under Hazardous Waste (Management & Handling) Rules.

**Tertiary System:** The wastewater may be required to be further treated before reuse, depending upon the recipient system and the local conditions. The tertiary system may comprise activated carbon and/ or Ultra-Filter (UF) system or recovery of water through reverse osmosis with an arrangement for rejects to be subjected to evaporation for disposal as residue (solid waste). All the operating parameters, as per the manual of STP, should be maintained and the readings entered into the logbook including final wastewater quantity (flow) disposed of and/or reused.

**Maintenance:** The Manager of STP should ensure that preventive maintenance system is followed for proper operation of all pumps, mechanical devices and monitoring equipment. Spare parts (commonly used) should be made available at the site. In case of break down, the same should be attended on urgent basis.

## **5. Technical Details of STP**



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## 5 TECHNICAL DETAILS /SPECIFICATION OF STP:

Area	Tank Name	Dimensions (in m)
STP-1	Stilling chamber	1.5*1.9*1.2
	Bar screen	1.5*1.0*1.0
	Oil & grease chamber	3.27*2.2*2.7
	Grit chamber	3.27*2.2*2.5
	Equalization tank	9.0*6.5*3.2
	Oil Sludge collection tank	3.0*2.5*2.5
	DAF sludge collection tank	2.0*2.5*2.5
	Sludge thickener tank-1	5.0(Ø)*2.5
	Fine screen feed tank	6.5*4.8*2.2
	Fine screen chamber manual	1.5*1.0*0.8
	Anoxic tank-1	9.2*6.0*3.5
	Aeration tank-1	9.0*13.5*5.0
	Sludge holding tank	6.0*2.8*2.0
	Sludge thickener tank-2	3.5(Ø)*2.5
	Anoxic tank-2	7.5*3.0*4.5
	Aeration tank-2	7.25*14.5*4.7
	MBR tank	5.4*3.1*3.0
	Permeate tank	5.1*2.5*4.5
	Treated water tank	5.0*6.0*2.7
	Drain sump	6.0*3.27*2.4
	Sludge drying bed	3.2*2.1*0.6
STP-2	Inlet chamber-1	2.5*2.5*1.2
	Bar screen	4.45*1.0*0.4
	Sewage collection pit	4.5*9.0*3.0
	Oil skimmer tank	2.0*6.7*1.9
	Equalization tank	9.5*6.7*4.5
	Anoxic tank-1	4.3*6.7*4.6
	Aeration tank-1	16.4*8.2*4.5
	Intermediate tank	1.2*3.0*4.4
	Anoxic tank-2	4.6*3.0*4.4
	Aeration tank-2	8.6*3.0*4.3
	MBR permeate tank	6.0*1.5*3.4
	Treated water tank	8.0*2.3*3.4
	Sludge thickener	3(Ø)*2.5
	Drain pit	2.7*4.3*4.4
	Sludge holding tank	2.0*1.5*1.7

**Shriram Institute for Industrial Research**

19, UNIVERSITY ROAD, DELHI-110007

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Description of STP Component/Unit	Capacity (KL)	Based on capacity flow	
		Hydraulic Retention Time (HRT) in hr.	Surface Overflow Rate (SOR) in m/hr.
STP No. # 1			
Equalization Tank	187.2	3.7	0.85
Fine screen feed tank	68.6	1.4	1.60
Anoxic tank-1	193.2	3.9	0.91
Aeration tank-1	607.5	12.2	0.41
Anoxic tank-2	101.2	2.0	2.22
Aeration tank-2	494.1	9.9	0.48
MBR tank	50.2	1.0	2.99
Permeate tank	57.4	1.1	3.91
Treated water tank	81	1.6	1.67
STP No. # 2			
Sewage collection pit	121.5	4.1	0.74
Equalization Tank	286.4	9.5	0.47
Anoxic tank-1	132.5	4.4	1.04
Aeration tank-1	605.2	20.2	0.22
Anoxic tank-2	60.7	2.0	2.17
Aeration tank-2	110.9	3.7	1.16
MBR Permeate tank	30.6	1.0	3.33
Treated water tank	62.6	2.1	1.63



Project No. / Job Order No.	:	1401-2324-1-4/ 2306-1-411-2181 & 2307-12-411-509
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### 5.1. TREATMENT OPERATIONAL DATA

Data was collected from logbook on date of visit for power and chemicals consumption and quantity of wastewater generation in industry to establish operational performance of the STP. Secondary data of pollutant load based on volumetric flow based on analytical data as well data provided by MSIL. Copies of generated data are provided in the annexure.

#### A. FLOW RATE

S. No.	Date	STP-1 Inlet (Before Screen M/c.)			STP-1 Outlet (MBR Permeate Tank Inlet)		
		Flow Rate Meter Reading (m <sup>3</sup> )	Flow Rate (m <sup>3</sup> /day)	Avg. Flow Rate (m <sup>3</sup> /hr.)	Flow Rate Meter Reading (m <sup>3</sup> )	Flow Rate (m <sup>3</sup> /day)	Avg. Flow Rate (m <sup>3</sup> /hr.)
1.	07.07.2023	99071	--	--	41095	--	--
2.	06.07.2023	98335	736	30.7	40351	744	31.0
3.	05.07.2023	97632	703	29.3	39668	683	28.5
4.	04.07.2023	96955	677	28.2	39010	658	27.4
5.	03.07.2023	96283	672	28.0	38298	712	29.7
Average			697	29.0	Average	699	29.1
% Variation			1.2		% Variation	1.5	

S. No.	Date	STP-2 Inlet (Before Screen M/c.)			STP-2 Outlet (MBR Permeate Tank Inlet)		
		Flow Rate Meter Reading (m <sup>3</sup> )	Flow Rate (m <sup>3</sup> /day)	Avg. Flow Rate (m <sup>3</sup> /hr.)	Flow Rate Meter Reading (m <sup>3</sup> )	Flow Rate (m <sup>3</sup> /day)	Avg. Flow Rate (m <sup>3</sup> /hr.)
1.	28.06.2023	143386	--	--	74904	--	--
2.	27.06.2023	142838	548	22.8	74365	539	22.5
3.	26.06.2023	142200	638	26.6	73797	568	23.7
4.	25.06.2023	141613	587	24.5	73258	539	22.5
5.	24.06.2023	140856	757	31.5	72728	530	22.1
Average			633	26.4	Average	544	22.7
% Variation			3.9		% Variation	0.8	





Project No. / Job Order No.	:	1401-2324-1-4/ 2306-1-411-2181 & 2307-12-411-509
Work Title	:	Adequacy Study of Sewage Treatment Plant
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Client	:	M/s. Maruti Suzuki India Limited

## B. POWER CONSUMPTION

S. No.	Date	STP-1, Energy Meter Reading (kWh)	Power consumption (kW/day)	Power rate (kW/m <sup>3</sup> )
1.	07.07.2023	880029	--	--
2.	06.07.2023	876486	3543	4.8
3.	05.07.2023	873140	3346	4.9
4.	04.07.2023	869728	3412	5.2
5.	03.07.2023	866465	3263	4.6
Average			3391	4.9
% Variation			1.0	1.4

S. No.	Date	STP-2, Energy Meter Reading (MWh)	Power consumption (kW/day)	Power rate (kW/m <sup>3</sup> )
1.	29.06.2023	1509	--	--
2.	28.06.2023	1507	3000	--
3.	27.06.2023	1504	2000	3.7
4.	26.06.2023	1502	2000	3.5
5.	25.06.2023	1500	3000	5.6
6.	24.06.2023	1497	2000	3.8
Average			2400	4.1
% Variation			6.5	6.4

## C. CHEMICALS FOR DOSING

S. No.	Name of Chemical	STPs-Chemical Consumption, Kg (Total), Jun-2023	
		Per month	Per day
1.	Ferric Chloride	5000	167
2.	Hydrated Lime	8000	267
3.	Anionic Polymer	125	4
4.	Cationic Polymer	210	7



## **6. Design Parameters**

## **7. Monitoring Methodology**



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## 6. DESIGN PARAMETERS

The STP is designed to treat 100 KL/day. The STP designed to ensure that treated sewage parameters are well below /within permissible limits. The designed parameters at the Final outlet should be as under:

### OUTLET PARAMETERS AFTER TREATMENT:

pH	5.5 to 9.0
TSS	Below 10 mg/L
BOD	Below 10 mg/L
COD	Below 50 mg/L.
OIL & GREASE	Not Specified
Total Nitrogen	Below 10 mg/L
Total Phosphorus	Below 1 mg/L
<i>Fecal Coliform</i>	Below 100 organisms

## 7. MONITORING METHODOLOGY:

### Methodology of sampling and analysis

#### (i) Water Sampling

Objective of water sampling is to collect a portion of water, small enough in volume to be transported conveniently to the laboratory, while still accurately representing the water source being sampled. Grab type sampling technique was used to collect the samples. The sampling locations were identified and for which the samples should be analyzed.

For present study, samples from selected component of STP were collected as per following guidelines.

- ◆ Grab water samples were collected from the water sources in clean 2-litre plastic jerry can and 250ml sterilized clean glass/pet bottle, 500ml wide glass bottle for complete physio-chemical, bacteriological and Oil/ grease tests respectively from selected sampling location.
- ◆ Prior to sampling, sample containers were rinsed thoroughly with the water of the STP component being sampled.
- ◆ Collected samples were marked and preserved as per the established guidelines and transported to SRI laboratory within the permissible time limits for testing.



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## (ii) Water Analysis

- ♦ Water samples were analysed for all test parameter prescribed by HSPCB. Depending on the results, performance of each unit was evaluated.
- ♦ All reagents used in analytical work were of AR grade or higher purity. HPLC grade water was used for reagent preparation & blank correction.
- ♦ Guidelines of following protocols were followed for water analysis
  - Standard Method for Examination of Water & Wastewater; APHA, AWWA, WEF; Ed.24<sup>th</sup>, 2023.
  - Indian Standard Specification of Sampling & Analysis of Water & Wastewater; IS: 3025 (Relevant Parts).
  - Indian Standard Specification for Method of Microbiological Analysis of Water; IS: 1622-1981.

The samples were collected on 27.06.2023 from STP-2 from Inlet, Equalisation Tank, Before DAF, Aeration Tank and STP Outlet (MBR Permeate Tank) and five samples were collected on 06.07.2023 from STP-1 from Inlet, Equalisation Tank, DAF Outlet, Aeration Tank and STP Outlet (MBR Permeate Tank).

Analysis methodology followed as under:

S. No.	Parameter	Method of testing	Protocol
1.	pH	Using a calibrated pH meter	IS:3025 Pt-11-2022
2.	BOD	IDOD – DO after 3 days at 27°C. DO by Winklers method	IS: 3025 Pt-44-1993, RA 2019
3.	COD	Dichromate reflux method	APHA 24 <sup>th</sup> Ed.5220
4.	TSS	Gravimetric method	IS: 3025 Pt-17-1984, RA 2021
5.	TDS	Gravimetric method	IS: 3025 Pt-16-2023
6.	Oil & Grease	Gravimetric after extraction with hexane	APHA 24 <sup>th</sup> Ed.5520
7.	Nitrate Nitrogen (as N)	Reduction (Nesslerization)	IS:3025 Pt-34-1988, RA 2019
8.	Total Phosphorus	Acid digestion followed by ICP	IS:3025 Pt-2-2019
9.	Ammoniacal Nitrogen (as N)	Nesslerization method	IS: 3025 Pt-34-1988, RA 2019
10.	Faecal Coliform	Muti-Tube Dilution (MTD) method as MPN	IS:1622-1981, RA-2019

Once the general parameters for the STP have been checked and deemed to be appropriate, the individual process components must be verified to ensure they have been designed properly.

## **8. Analytical Results**

## **9. Discussion on Results**





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## 8. OBSERVATIONS

S. No.	Sample Description with Location	Temperature (°C)	Appearance	Colour	Odour
STP NO. # 1					
1.	STP Inlet	31.3	Turbid	Light Greenish	Objectionable
2.	Equalization Tank	32.1	Turbid	Blackish	Objectionable
3.	DAF Outlet	32.9	Turbid with visible particles	Colourless	Objectionable
4.	Aeration Tank	33.6	Highly Turbid	Muddy	Objectionable
5.	MBR Permeate Tank (STP Outlet)	32.8	Clear	Colourless	Unobjectionable
STP NO. # 2					
1.	STP Inlet	33.6	Turbid	Blackish Yellow	Objectionable
2.	Equalization Tank	32.1	Turbid	Light Greyish Black	Objectionable
3.	Before DAF	32.9	Turbid	Muddy	Objectionable
4.	Aeration Tank	33.6	Highly Turbid	Blackish	Objectionable
5.	MBR Permeate Tank (STP Outlet)	32.8	Clear	Colourless	Unobjectionable

## 8.1 ANALYTICAL RESULTS

The analytical results obtained for each component of the STP No. # 1 are as under:

### a) STP-1 Inlet (After Bar Screen)

Wastewater after the total process reaches the inlet point for treatment.

S. No.	Parameter	Results	Protocol
1.	pH	5.7	IS:3025 Pt-11-2022
2.	Biochemical Oxygen Demand, 3 days at 27°C, mg/L	897	IS: 3025 Pt-44-1993, RA 2019
3.	Chemical Oxygen Demand, mg/L	1696	APHA 24 <sup>th</sup> Ed.5220
4.	Total Suspended Solids, mg/L	520	IS: 3025 Pt-17-1984, RA 2021
5.	Total Dissolved Solids, mg/L	648	IS: 3025 Pt-16-2023
6.	Oil and Grease, mg/L	4	APHA 24 <sup>th</sup> Ed.5520
7.	Nitrate Nitrogen (as N), mg/L	<2	IS:3025 Pt-34-1988, RA 2019
8.	Total Phosphorus (as P), mg/L	13	IS:3025 Pt-2-2019
9.	Ammoniacal Nitrogen (as N), mg/L	25	IS: 3025 Pt-34-1988, RA 2019
10.	Faecal Coliform/100 ml	330000 organisms	IS:1622-1981, RA-2019



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**b) Equalisation Tank**

S. No.	Parameter	Results	Protocol
1.	pH	6.2	IS:3025 Pt-11-2022
2.	Biochemical Oxygen Demand, 3 days at 27°C, mg/L	190	IS: 3025 Pt-44-1993, RA 2019
3.	Chemical Oxygen Demand, mg/L	376	APHA 24 <sup>th</sup> Ed.5220
4.	Total Suspended Solids, mg/L	56	IS: 3025 Pt-17-1984, RA 2021
5.	Total Dissolved Solids, mg/L	814	IS: 3025 Pt-16-2023

**c) DAF Outlet**

S. No.	Parameter	Results	Protocol
1.	pH	5.4	IS:3025 Pt-11-2022
2.	Biochemical Oxygen Demand, 3 days at 27°C, mg/L	188	IS: 3025 Pt-44-1993, RA 2019
3.	Chemical Oxygen Demand, mg/L	640	APHA 24 <sup>th</sup> Ed.5220
4.	Total Suspended Solids, mg/l	132	IS: 3025 Pt-17-1984, RA 2021
5.	Total Dissolved Solids, mg/L	1202	IS: 3025 Pt-16-2023

**d) Aeration Tank No.2**

S. No.	Parameter	Results	Protocol
1.	Mixed liquor suspended solids, mg/L (In terms of TSS)	2500	IS: 3025 Pt-17-1984, RA 2021
2.	Sludge Volume Index, g/ml	200	APHA 24 <sup>th</sup> Ed.2710





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**e) MBR Permeate Tank (STP-1 Outlet)**

S. No.	Parameter	Results	Protocol
1.	pH	7.8	IS:3025 Pt-11-2022
2.	Biochemical Oxygen Demand, 3 days at 27°C, mg/L	<1	IS: 3025 Pt-44-1993, RA 2019
3.	Chemical Oxygen Demand, mg/L	4	APHA 24 <sup>th</sup> Ed.5220
4.	Total Suspended Solids, mg/l	2	IS: 3025 Pt-17-1984, RA 2021
5.	Total Dissolved Solids, mg/L	580	IS: 3025 Pt-16-2023
6.	Oil and Grease, mg/L	<0.5	APHA 24 <sup>th</sup> Ed.5520
7.	Nitrate Nitrogen (as N), mg/L	4	IS:3025 Pt-34-1988, RA 2019
8.	Total Phosphorus (as P), mg/L	0.09	IS:3025 Pt-2-2019
9.	Ammoniacal Nitrogen (as N), mg/L	0.3	IS: 3025 Pt-34-1988, RA 2019
10.	Faecal Coliform/100 ml	21 Organisms	IS:1622-1981, RA-2019

The analytical results obtained for each component of the STP No. # 2 are as under:

**a) STP-2 Inlet**

Wastewater after the total process reaches the inlet point for treatment.

S. No.	Parameter	Results	Protocol
1.	pH	6.1	IS:3025 Pt-11-2022
2.	Biochemical Oxygen Demand, 3 days at 27°C, mg/L	3100	IS: 3025 Pt-44-1993, RA 2019
3.	Chemical Oxygen Demand, mg/L	6080	APHA 24 <sup>th</sup> Ed.5220
4.	Total Suspended Solids, mg/L	2588	IS: 3025 Pt-17-1984, RA 2021
5.	Total Dissolved Solids, mg/L	625	IS: 3025 Pt-16-2023
6.	Oil and Grease, mg/L	115	APHA 24 <sup>th</sup> Ed.5520
7.	Nitrate Nitrogen (as N), mg/L	10	IS:3025 Pt-34-1988, RA 2019
8.	Total Phosphorus (as P), mg/L	13.2	IS:3025 Pt-2-2019
9.	Ammoniacal Nitrogen (as N), mg/L	59	IS: 3025 Pt-34-1988, RA 2019
10.	Faecal Coliform/100 ml	21000 organisms	IS:1622-1981, RA-2019



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**b) Equalisation Tank**

S. No.	Parameter	Results	Protocol
1.	pH	6.4	IS:3025 Pt-11-2022
2.	Biochemical Oxygen Demand, 3 days at 27°C, mg/L	490	IS: 3025 Pt-44-1993, RA 2019
3.	Chemical Oxygen Demand, mg/L	1040	APHA 24 <sup>th</sup> Ed.5220
4.	Total Suspended Solids, mg/L	840	IS: 3025 Pt-17-1984, RA 2021
5.	Total Dissolved Solids, mg/L	534	IS: 3025 Pt-16-2023

**c) Before DAF (After Screen M/c.)**

S. No.	Parameter	Results	Protocol
1.	pH	6.6	IS:3025 Pt-11-2022
2.	Biochemical Oxygen Demand, 3 days at 27°C, mg/L	550	IS: 3025 Pt-44-1993, RA 2019
3.	Chemical Oxygen Demand, mg/L	1080	APHA 24 <sup>th</sup> Ed.5220
4.	Total Suspended Solids, mg/l	552	IS: 3025 Pt-17-1984, RA 2021
5.	Total Dissolved Solids, mg/L	570	IS: 3025 Pt-16-2023

**d) Aeration Tank**

S. No.	Parameter	Results	Protocol
1.	Mixed liquor suspended solids, mg/L (In terms of TSS)	5176	IS: 3025 Pt-17-1984, RA 2021
2.	Sludge Volume Index, g/ml	62	APHA 24 <sup>th</sup> Ed.2710







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e) MBR Permeate Tank (STP-2 Outlet)

S. No.	Parameter	Results	Protocol
1.	pH	7.6	IS:3025 Pt-11-2022
2.	Biochemical Oxygen Demand, 3 days at 27°C, mg/L	2	IS: 3025 Pt-44-1993, RA 2019
3.	Chemical Oxygen Demand, mg/L	16	APHA 24 <sup>th</sup> Ed.5220
4.	Total Suspended Solids, mg/l	10	IS: 3025 Pt-17-1984, RA 2021
5.	Total Dissolved Solids, mg/L	160	IS: 3025 Pt-16-2023
6.	Oil and Grease, mg/L	<0.5	APHA 24 <sup>th</sup> Ed.5520
7.	Nitrate Nitrogen (as N), mg/L	<2	IS:3025 Pt-34-1988, RA 2019
8.	Total Phosphorus (as P), mg/L	0.07	IS:3025 Pt-2-2019
9.	Ammoniacal Nitrogen (as N), mg/L	0.3	IS: 3025 Pt-34-1988, RA 2019
10.	Faecal Coliform/100 ml	<2 Organisms	IS:1622-1981, RA-2019







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## 9.0 DISCUSSION ON RESULTS

A comparative statement of analytical results of STP-1 can be derived as under:

S. No.	Parameter	Comparative Results							
		STP Inlet [I]	Equalization Tank-2 [II]	% Reduction [I] to [II]	DAF Outlet [III]	% Reduction [I] to [III]	STP Outlet [IV]	% Reduction [II] to [IV]	% Reduction [I] to [IV]
1	BOD, mg/l	897	190	78.8	188	79.0	< 1	99.5	99.9
2	COD, mg/l	1696	376	77.8	640	62.3	4	98.9	99.8
3	TSS, mg/l	520	56	89.2	132	74.6	2	96.4	99.6
4	Oil & Grease, mg/l	4	--	--	--	--	< 0.5	--	87.5

S. No.	Parameter	Comparative Results		
		STP Inlet [I]	STP Outlet [IV]	% Reduction [I] to [IV]
1	Nitrate Nitrogen as N, mg/L	< 2	4	50.0**
2	Total Phosphorus as P, mg/L	13	0.09	99.3
3	Ammoniacal Nitrogen as N, mg/L	25	0.3	98.8
4	Faecal Coliform/100ml	330000	21	99.99

\*\* %Addition of Nitrate nitrogen

S. No.	Parameter	Results	Flow Rate (m <sup>3</sup> /day)	Inlet Load (kg/day)	Results	Flow Rate (m <sup>3</sup> /day)	Outlet Load (kg/day)	% Reduction [I/L] to [O/L]
1	BOD, mg/l	897	736	660.19	<1	744	0.74	99.9
2	COD, mg/l	1696	736	1248.26	4	744	2.98	99.8
3	TSS, mg/l	520	736	382.72	2	744	1.49	99.6
4	Oil & Grease, mg/l	4	736	2.94	< 0.5	744	0.37	87.4
5	Nitrate Nitrogen as N, mg/L	2	736	1.47	4	744	2.98	-102.2
6	Total Phosphorus as P, mg/L	13	736	9.57	0.09	744	0.07	99.3
7	Ammoniacal Nitrogen as N, mg/L	25	736	18.40	0.3	744	0.22	98.8



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A comparative statement of analytical results of STP-2 can be derived as under:

S. No.	Parameter	Comparative Results							
		STP Inlet [I]	Equalization Tank-2 [II]	% Reduction [I] to [II]	Before DAF [III]	% Reduction [I] to [III]	STP Outlet [IV]	% Reduction [II] to [IV]	% Reduction [I] to [IV]
1	BOD, mg/l	3100	490	84.2	550	82.3	2	99.6	99.9
2	COD, mg/l	6080	1040	82.9	1080	82.2	16	98.5	99.7
3	TSS, mg/l	2588	840	67.5	552	78.7	10	98.8	99.6
4	Oil & Grease, mg/l	115	--	--	--	--	< 0.5	--	99.6

S. No.	Parameter	Comparative Results		
		STP Inlet [I]	STP Outlet [IV]	% Reduction [I] to [IV]
1	Nitrate Nitrogen as N, mg/L	10	< 2	80.0
2	Total Phosphorus as P, mg/L	13.2	0.07	99.5
3	Ammoniacal Nitrogen as N, mg/L	59	0.3	99.5
4	Faecal Coliform/100ml	21000	< 2	99.99

S. No.	Parameter	Results	Flow Rate (m <sup>3</sup> /day)	Inlet Load (kg/day)	Results	Flow Rate (m <sup>3</sup> /day)	Outlet Load (kg/day)	% Reduction [I/L] to [O/L]
1	BOD, mg/l	3100	548	1698.8	2	539	1.08	99.9
2	COD, mg/l	6080	548	3331.8	16	539	8.62	99.7
3	TSS, mg/l	2588	548	1418.2	10	539	5.39	99.6
4	Oil & Grease, mg/l	115	548	63.02	< 0.5	539	0.27	99.6
5	Nitrate Nitrogen as N, mg/L	10	548	5.48	< 2	539	1.08	80.3
6	Total Phosphorus as P, mg/L	13.2	548	7.23	0.07	539	0.04	99.5
7	Ammoniacal Nitrogen as N, mg/L	59	548	32.33	0.3	539	0.16	99.5



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**a) Effectiveness of treatment.**

**i) pH:**

- pH of the STP-1 inlet effluent was 5.7 and STP-2 inlet effluent was 6.1. Finally, after treatment process, pH of STP-1 & STP-2 outlet water was found to be 7.8 and 7.6 respectively which lies within the prescribed limits for discharging the effluent.

**ii) BOD:**

- Removal efficiency from STP-1 Inlet to Equalisation Tank is found to be 78.8%. Removal efficiency from STP-2 Inlet to Equalisation Tank is found to be 84.2%.
- Removal efficiency from STP-1 Inlet to DAF Outlet is found to 79%. Removal efficiency from STP-2 Inlet to DAF Inlet is found to 82.3%.
- Removal efficiency from Equalisation Tank to STP-1 Outlet is found to be 99.5 %. Removal efficiency from Equalisation Tank to STP-2 Outlet is found to be 99.6 %.
- Removal efficiency from STP-1 and STP-2 Inlet to Final Outlet is found to be 99.9%.

**iii) COD:**

- Removal efficiency from STP-1 Inlet to Equalisation Tank is found to be 77.8%. Removal efficiency from STP-2 Inlet to Equalisation Tank is found to be 82.9%.
- Removal efficiency from STP-1 Inlet to DAF Outlet is found to 62.3%. Removal efficiency from STP-2 Inlet to DAF Inlet is found to 82.2%.
- Removal efficiency from Equalisation Tank to STP-1 Outlet is found to be 98.9 %. Removal efficiency from Equalisation Tank to STP-2 Outlet is found to be 98.5 %.
- Removal efficiency from STP-1 and STP-2 Inlet to Final Outlet is found to be 99.8% and 99.7% respectively.

**iv) TSS:**

- Removal efficiency from STP-1 Inlet to Equalisation Tank is found to be 89.2%. Removal efficiency from STP-2 Inlet to Equalisation Tank is found to be 67.5%.
- Removal efficiency from STP-1 Inlet to DAF Outlet is found to 74.6%. Removal efficiency from STP-2 Inlet to DAF Inlet is found to 78.7%.
- Removal efficiency from Equalisation Tank to STP-1 Outlet is found to be 96.4 %. Removal efficiency from Equalisation Tank to STP-2 Outlet is found to be 98.8 %.
- Removal efficiency from STP-1 and STP-2 Inlet to Final Outlet is found to be 99.6%.



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v) **Oil & Grease:**

- STP-1 Inlet load of oil/ grease is low as contain 4 mg/l. O & G of the Final effluent was found to be less than 0.5 mg/L which lies within the prescribed limits for discharging the effluent.
- STP-2 Inlet load of oil/ grease is low as contain 115 mg/l. O & G of the Final effluent was found to be less than 0.5 mg/L which lies within the prescribed limits for discharging the effluent.

vi) **Ammoniacal Nitrogen:**

Removal efficiency from STP-1 and STP-2 Inlet to Final Outlet is found to be 98.8 and 99.5 % respectively. Ammoniacal Nitrogen was found to be 0.3 mg/L which lies within the prescribed limits for discharging the effluent.

vii) **MLSS:**

Mixed liquor suspended solids in Aeration tank 2 of STP-1 is found 2500 mg/l that are lower than designed to maintain 5000 mg/l MLSS while it is found 5176 mg/l in Aeration tank of STP-2.

viii) **Faecal Coliform:**

- Removal efficiency from STP-1 and STP-2 Inlet to Final Outlet is found to be 99.99 %. Faecal Coliform in STP-1 and STP-2 was found to be 21 mg/L and less than 2 mg/L which lies below the prescribed limits for discharging the effluent.

ix) **Nitrate Nitrogen:**

- Nitrate nitrogen in the STP-1 inlet effluent was less than 2 mg/l and finally, after treatment process, it is 4 mg/l. So, increment of nitrate nitrogen indicates presence of organic matter. All forms of nitrogen are biochemically interconvertible and are components of the nitrogen cycle. As per APHA, nitrate is found in small amounts in fresh domestic wastewater in the effluent of nitrifying biological treatment plants may be found in higher concentration.
- Removal efficiency from STP-2 to Final Outlet is found to be 80 % which is very high reduction due effective work of biological process. No maximum standard limits prescribed under schedule-VI for Nitrate nitrogen and results in the Final effluent of STP-2 was found to be less than 2 mg/l which lies below the prescribed limits 10 mg/l for discharging the effluent for new or upgraded STP.





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**x) Total Phosphorus:**

- Removal efficiency from STP-1 and STP-2 to Final Outlet is found to be 99.3 % and 99.5 % respectively. Total Phosphorous of the Final effluent was found to be 0.09 and 0.07 mg/l respectively which lies below the prescribed limits 5 mg/l for discharging the effluent. Phosphorus occurs as phosphates in activated biological sludge and incorporated into organic compounds.

**xi) SVI:**

Sludge volume index indicates the physical state of sludge produced in a biological aeration system. It is used to decide the rate of recycle of sludge required to maintain the desired MLSS and Food to Microorganism (F/M) ratio in the aeration tank to achieve the desired degree of purification. So, by reducing recycling ratio SVI can be controlled. SVI in Aeration tank2 of STP-1 was found 200 ml/g. High SVI values indicate poor settling sludge or even presence of filamentous micro-organisms. SVI in Aeration tank2 of STP-1 was found 62 ml/g. This might be a good -settling sludge that first forms a blanket and then traps fine particles as it slowly settles and compacts. SVI values of 50-150 indicate good working and low SVI values indicate presence of inorganic solids, heavy sludge and low VSS fraction.

## **10. Conclusion**



Project No. / Job Order No.	:	1401-2324-1-4/ 2306-1-411-2181 & 2307-12-411-509
Work Title	:	Adequacy Study of Sewage Treatment Plant
Test Certificate No.	:	C1/0000332017 dated 25.07.2023
Client	:	M/s. Maruti Suzuki India Limited

## 10. CONCLUSIONS

The results obtained from STPs efficacy studies were compared with the effluent discharge standards for STP prescribed to assess compliance. Comparison between the findings of the present study & the standards of wastewater discharge quality of the treatment plant given below mentioned Table.

S. No.	Parameter	Results		Standard Limits for Discharge treated domestic effluent	
		STP-1	STP-2	Inland surface water as per Schedule-VI	At final outlet of New STP
1.	pH	7.8	7.6	5.5 to 9.0	6.5 to 9.0
2.	Biochemical Oxygen Demand, 3 days at 27°C, mg/L	<1	2	Max. 30 mg/L	Max. 10 mg/L
3.	Chemical Oxygen Demand, mg/L	4	16	Max. 250 mg/L	Max. 50 mg/L
4.	Total Suspended Solids, mg/l	2	10	Max. 100 mg/L	Max. 10 mg/L
5.	Total Dissolved Solids, mg/L	580	160	Not Specified	Not Specified
6.	Oil and Grease, mg/L	<0.5	<0.5	Max. 10 mg/L	Not Specified
7.	Nitrate Nitrogen (as N), mg/L	4	<2	Not Specified	Max. 10 mg/L
8.	Total Phosphorus (as P), mg/L	0.09	0.07	Max. 5 mg/L	Max. 2 mg/L
9.	Ammoniacal Nitrogen (as N), mg/L	0.3	0.3	Max. 50 mg/L	Max. 5 mg/L
10.	Faecal Coliform/100 ml	21 Organisms	<2 Organisms	Not Specified	*Max. 100

\*Limits may not be applicable for use of treated sewage in industrial purpose

The overall performance of the effluent treatment plant was satisfactory. The design of sewage treatment plant is adequate for tested pollutants treatment for designed volume of wastewater. The treated wastewater may be reused for toilet flushing and gardening.

\*\*\*\*\*

# Sewage Treatment Plant Monitoring Reports





# HTH Laboratories Pvt. Ltd.

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250527038

ULR No. : TC781125100014600F

Party's Ref No. : Nil

Booking Date : 27/05/2025

Period of Testing : 27/05/2025 To 02/06/2025

Reporting Date : 02/06/2025

Sample Description : Sewage Water Sample (STP-Outlet)

Type of Industry : Automobile Industry  
Sample type : Sewage Water Sample (STP-Outlet)  
Date of sampling : 26/05/2025  
Date of receipt of sample : 27/05/2025  
Sample Location : STP-Outlet  
Sample quantity : 5 Ltr.  
Purpose of analysis : Monitoring  
Sampling Method : HTH/EP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Test Parameters	Unit	Result	HSPCB Max. Permissible Limit's for STP	Test Method
Discipline : Chemical, Group : Pollution & Environment					
1	pH	--	7.91	5.5 - 9.0	IS 3025 (Part 11): 2022
2	Conductivity	µmhos/cm	376.0	2000 Max.	IS 3025 (Part 14): 2013
3	Total Suspended Solids	mg/l	BLQ(LOQ 1.0)	20 Max.	IS 3025 (Part 17): 2022
4	Total Dissolved Solids	mg/l	328.0	1500 Max.	IS 3025 (Part 16): 2023
5	Biochemical Oxygen Demand (BOD) 3 Days at 27°C	mg/l	2.4	10 Max.	IS 3025 (Part 44): 2023
6	Chemical Oxygen Demand(COD)	mg/l	20.0	50 Max.	IS 3025 (Part 58): 2023
7	Oil & Grease	mg/l	BLQ(LOQ 4.0)	10 Max.	IS 3025 (Part 39): 2021
8	Ammonical Nitrogen (as N)	mg/l	BLQ(LOQ 5.0)	5 Max.	IS 3025 (Part 34/Sec-1): 2023
9	Nitrate Nitrogen (as N)	mg/l	0.65	10 Max.	IS 3025 (Part 34/Sec-1): 2023
10	Total Residual Chlorine	mg/l	BLQ(LOQ 0.05)	0.2 Max.	IS 3025 (Part 26): 2021
11	Total Nitrogen (as N)	mg/l	7.5	10 Max.	IS 3025 (Part 34/Sec-1): 2023
12	Cyanide (as CN)	mg/l	BLQ(LOQ 0.02)	ND	IS 3025 (Part 27/Sec-1): 2021
13	Dissolved Phosphate (as P)	mg/l	BLQ(LOQ 0.05)	1 Max.	IS 3025 (Part 31/Sec-1): 2022
14	Total Phosphorous (as P)	mg/l	BLQ(LOQ 0.05)	1 Max.	IS 3025 (Part 31/Sec-1): 2022
15	Fluoride (as F)	mg/l	0.83	1 Max.	APHA (24th Edition) 4500F-2023
16	Phenolic Compound (C6H5OH)	mg/l	BLQ(LOQ 0.05)	0.002 Max.	IS 3025 (Part 43/Sec-1): 2022
17	Sulphide (H2S)	mg/l	BLQ(LOQ 0.5)	0.01 Max.	IS 3025 (Part 29): 2022
18	Sulphate (as SO4)	mg/l	27.0	200 Max.	IS 3025 (Part 24/Sec-1): 2022
19	Total Alkalinity (as CaCO3)	mg/l	90.0	200 Max.	IS 3025 (Part 23): 2023
20	Calcium (as Ca)	mg/l	52.10	100 Max.	IS 3025 (Part 40): 2024
21	Bi-Carbonate (as HCO3)	mg/l	122.0	300 Max.	IS 3025 (Part 51): 2023

Rishabh Dua



Page No.: 1 of 3

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TC-7811



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250527038

ULR No. : TC781125100014600F

Party's Ref No. : Nil

Booking Date : 27/05/2025

Period of Testing : 27/05/2025 To 02/06/2025

Reporting Date : 02/06/2025

S.N.	Test Parameters	Unit	Result	HSPCB Max. Permissible Limit's for STP	Test Method
22	Total Hardness (as CaCO <sub>3</sub> )	mg/l	170.0	200 Max.	IS 3025 (Part 21): 2009
23	Chloride (as Cl)	mg/l	25.0	100 Max.	IS 3025 (Part 32): 1988
24	Anionic Surfactant (as MBAS)	mg/l	BLQ(LOQ:0.05)	1 Max.	IS 3025 (Part 68): 2019
25	Sodium (as Na)	mg/l	13.41	100 Max.	IS 3025 (Part 45): 2024
26	Magnesium (as Mg)	mg/l	9.7	60 Max.	IS 3025 (Part 46): 2023
27	Residual Sodium Carbonate	meq/l	BLQ(LOQ:0.5)	2.5 Max.	IS 11624 : 2019
28	Sodium Adsorption Ratio (SAR)	meq/l	0.45	10 Max.	HTH/EP/STP-28
29	Aluminium (as Al)	mg/l	BLQ(LOQ:0.1)	1 Max.	HTH/INS-03/STP-29
30	Arsenic (as As)	mg/l	BLQ(LOQ:0.01)	0.01 Max.	HTH/INS-03/STP-29
31	Cadmium (as Cd)	mg/l	BLQ(LOQ:0.01)	0.01 Max.	HTH/INS-03/STP-29
32	Chromium (as Cr)	mg/l	BLQ(LOQ:0.01)	0.2 Max.	HTH/INS-03/STP-29
33	Copper (as Cu)	mg/l	BLQ(LOQ:0.1)	1.5 Max.	HTH/INS-03/STP-29
34	Iron (as Fe)	mg/l	BLQ(LOQ:0.1)	5 Max.	HTH/INS-03/STP-29
35	Lead (as Pb)	mg/l	BLQ(LOQ:0.01)	0.01 Max.	HTH/INS-03/STP-29
36	Manganese (as Mn)	mg/l	BLQ(LOQ:0.1)	0.5 Max.	HTH/INS-03/STP-29
37	Mercury (as Hg)	mg/l	BLQ(LOQ:0.001)	0.001 Max.	HTH/INS-03/STP-29
38	Nickel (as Ni)	mg/l	BLQ(LOQ:0.1)	0.2 Max.	HTH/INS-03/STP-29
39	Selenium (as Se)	mg/l	BLQ(LOQ:0.01)	0.02 Max.	HTH/INS-03/STP-29
40	Vanadium (as V)	mg/l	BLQ(LOQ:0.1)	0.1 Max.	HTH/INS-03/STP-29
41	Zinc (Zn)	mg/l	BLQ(LOQ:0.1)	2 Max.	HTH/INS-03/STP-29
42	Cobalt (as Co)	mg/l	BLQ(LOQ:0.01)	0.05 Max.	HTH/INS-03/STP-29
43	Lithium (Li)	mg/l	BLQ(LOQ:0.1)	2.5 Max.	HTH/INS-03/STP-29
44	Silver (Ag)	mg/l	BLQ(LOQ:0.01)	0.1 Max.	HTH/INS-03/STP-29
45	Barium (Ba)	mg/l	BLQ(LOQ:0.1)	1 Max.	HTH/INS-03/STP-29
46	Beryllium (Be)	mg/l	BLQ(LOQ:0.1)	0.1 Max.	HTH/INS-03/STP-29
47	Boron (B)	mg/l	BLQ(LOQ:0.1)	1 Max.	HTH/INS-03/STP-29
48	Molybdenum(Mo)	mg/l	BLQ(LOQ:0.01)	0.01 Max.	HTH/INS-03/STP-29

### Discipline : Biological, Group : Pollution & Environment

#### Microbial Test

1	E. Coli	MPN/100 ml	<2	ND	IS 1622:1981
2	Faecal Coliform	MPN/100 ml	40	100 Max.	IS 1622:1981
3	Intestinal Helminth Eggs	Per Litre	Absent	ND	HTH/MB-01/STP-09

Rishabh Dua



Page No.: 2 of 3

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## TEST REPORT

**Issued To:**

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250527038

ULR No. : TC781125100014600F

Party's Ref No. : Nil

Booking Date : 27/05/2025

Period of Testing : 27/05/2025 To 02/06/2025

Reporting Date : 02/06/2025

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

**Remarks :** BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Standard Limit(pH,COD,BOD,TSS,O&G,Total Nitrogen,Total Phosphorous) as Per Client C.T.O.



Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Nao Jyoti Gupta

H.O.D. (Biological)

Gaurav Sharma

Sr. Analyst (Chemical)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250826044

ULR No. : TC781125100017617F

Party's Ref No. : Nil

Booking Date : 26/08/2025

Period of Testing : 26/08/2025 To 08/09/2025

Reporting Date : 08/09/2025

Sample Description : Sewage Water Sample (STP-Outlet)

Type of Industry : Automobile Industry  
Sample type : Sewage Water Sample (STP-Outlet)  
Date of sampling : 25/08/2025  
Date of receipt of sample : 26/08/2025  
Sample Location : STP-Outlet  
Sample quantity : 5 Ltr.  
Purpose of analysis : Monitoring  
Sampling Method : HTH/EP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Test Parameters	Unit	Result	HSPCB Max. Permissible Limit's for STP	Test Method
Discipline : Chemical, Group : Pollution & Environment					
1	pH	---	7.71	6.5 - 8.0	IS 3025 (Part 11): 2022
2	Conductivity	µmhos/cm	650.0	2000 Max.	IS 3025 (Part 14): 2013
3	Total Suspended Solids	mg/l	BLQ(LOQ 1.0)	20 Max.	IS 3025 (Part 17): 2022
4	Total Dissolved Solids	mg/l	428.0	1500 Max.	IS 3025 (Part 16): 2023
5	Biochemical Oxygen Demand (BOD) 3 Days at 27°C	mg/l	2.2	10 Max.	IS 3025 (Part 44): 2023
6	Chemical Oxygen Demand(COD)	mg/l	20.0	50 Max.	IS 3025 (Part 58): 2023
7	Oil & Grease	mg/l	BLQ(LOQ 4.0)	Nil	IS 3025 (Part 39): 2021
8	Ammonical Nitrogen (as N)	mg/l	BLQ(LOQ 5.0)	5 Max.	IS 3025 (Part 34/Sec-1): 2023
9	Nitrate Nitrogen (as N)	mg/l	BLQ(LOQ 0.5)	10 Max.	IS 3025 (Part 34/Sec-1): 2023
10	Total Residual Chlorine	mg/l	BLQ(LOQ 0.05)	0.2 Max.	IS 3025 (Part 26): 2021
11	Total Nitrogen (as N)	mg/l	BLQ(LOQ 1.0)	20 Max.	IS 3025 (Part 34/Sec-1): 2023
12	Cyanide (as CN)	mg/l	BLQ(LOQ 0.02)	ND	IS 3025 (Part 27/Sec-1): 2021
13	Dissolved Phosphate (as P)	mg/l	BLQ(LOQ 0.05)	1 Max.	IS 3025 (Part 31/Sec-1): 2022
14	Total Phosphorous (as P)	mg/l	BLQ(LOQ 0.05)	5 Max.	IS 3025 (Part 31/Sec-1): 2022
15	Fluoride (as F)	mg/l	0.63	1 Max.	APHA (24th Edition) 4500F-2023
16	Phenolic Compound (C6H5OH)	mg/l	BLQ(LOQ 0.05)	0.002 Max.	IS 3025 (Part 43/Sec-1): 2022
17	Sulphide (H2S)	mg/l	BLQ(LOQ 0.5)	0.01 Max.	IS 3025 (Part 29): 2022
18	Sulphate (as SO4)	mg/l	31.0	200 Max.	IS 3025 (Part 24/Sec-1): 2022
19	Total Alkalinity (as CaCO3)	mg/l	104.0	200 Max.	IS 3025 (Part 23): 2023
20	Calcium (as Ca)	mg/l	54.51	100 Max.	IS 3025 (Part 40): 2024
21	Bi-Carbonate (as HCO3)	mg/l	129.32	300 Max.	IS 3025 (Part 51): 2023
22	Total Hardness (as CaCO3)	mg/l	186.0	200 Max.	IS 3025 (Part 21): 2009

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## TEST REPORT

<b>Issued To:</b> <b>Maruti Suzuki India Ltd. (Vehicle Plant)</b> Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)	<b>Report No.</b> : HTH/EP/250826044 <b>ULR No.</b> : TC781125100017617F <b>Party's Ref No.</b> : Nil  <b>Booking Date</b> : 26/08/2025 <b>Period of Testing</b> : 26/08/2025 To 08/09/2025 <b>Reporting Date</b> : 08/09/2025
--	--

S.N.	Test Parameters	Unit	Result	HSPCB Max. Permissible Limit's for STP	Test Method
23	Chloride (as Cl)	mg/l	83.97	100 Max.	IS 3025 (Part 32): 1988
24	Anionic Surfactant (as MBAS)	mg/l	BLQ(LOQ 0.05)	1 Max.	IS 3025 (Part 68): 2019
25	Sodium (as Na)	mg/l	33.0	100 Max.	IS 3025 (Part 45): 2024
26	Magnesium (as Mg)	mg/l	12.2	60 Max.	IS 3025 (Part 46): 2023
27	Residual Sodium Carbonate	meq/l	BLQ(LOQ 0.5)	2.5 Max.	By Calculation
28	Sodium Adsorption Ratio (SAR)	meq/l	1.0	10 Max.	HTH/EP/STP-28
29	Aluminium (as Al)	mg/l	BLQ(LOQ:0.1)	1 Max.	HTH/INS-03/STP-29
30	Arsenic (as As)	mg/l	BLQ(LOQ:0.01)	0.01 Max.	HTH/INS-03/STP-29
31	Cadmium (as Cd)	mg/l	BLQ(LOQ:0.01)	0.01 Max.	HTH/INS-03/STP-29
32	Chromium (as Cr)	mg/l	BLQ(LOQ:0.1)	0.2 Max.	HTH/INS-03/STP-29
33	Copper (as Cu)	mg/l	BLQ(LOQ:0.1)	1.5 Max.	HTH/INS-03/STP-29
34	Iron (as Fe)	mg/l	BLQ(LOQ:0.1)	5 Max.	HTH/INS-03/STP-29
35	Lead (as Pb)	mg/l	BLQ(LOQ:0.01)	0.01 Max.	HTH/INS-03/STP-29
36	Manganese (as Mn)	mg/l	BLQ(LOQ:0.1)	0.5 Max.	HTH/INS-03/STP-29
37	Mercury (as Hg)	mg/l	BLQ(LOQ:0.001)	0.001 Max.	HTH/INS-03/STP-29
38	Nickel (as Ni)	mg/l	BLQ(LOQ:0.1)	0.2 Max.	HTH/INS-03/STP-29
39	Selenium (as Se)	mg/l	BLQ(LOQ:0.01)	0.02 Max.	HTH/INS-03/STP-29
40	Vanadium (as V)	mg/l	BLQ(LOQ:0.1)	0.1 Max.	HTH/INS-03/STP-29
41	Zinc (Zn)	mg/l	BLQ(LOQ:0.1)	2 Max.	HTH/INS-03/STP-29
42	Cobalt (as Co)	mg/l	BLQ(LOQ:0.01)	0.05 Max.	HTH/INS-03/STP-29
43	Lithium (Li)	mg/l	BLQ(LOQ:0.1)	2.5 Max.	HTH/INS-03/STP-29
44	Silver (Ag)	mg/l	BLQ(LOQ:0.01)	0.1 Max.	HTH/INS-03/STP-29
45	Barium (Ba)	mg/l	BLQ(LOQ:0.1)	1 Max.	HTH/INS-03/STP-29
46	Beryllium (Be)	mg/l	BLQ(LOQ:0.1)	0.1 Max.	HTH/INS-03/STP-29
47	Boron (B)	mg/l	BLQ(LOQ:0.1)	1 Max.	HTH/INS-03/STP-29
48	Molybdenum(Mo)	mg/l	BLQ(LOQ:0.01)	0.01 Max.	HTH/INS-03/STP-29

### Discipline : Biological, Group : Pollution & Environment

#### Microbial Test

1	E. Coli	MPN/100 ml	<2	ND	IS 1622:1981
2	Faecal Coliform	MPN/100 ml	70	100 Max.	IS 1622:1981
3	Intestinal Helminth Eggs	Per Litre	Absent	ND	HTH/MB-01/STP-09

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

**Remarks :** BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua  
Rishabh Dua (Digitally Signed)  
Review by

Nao Jyoti Gupta  
H.O.D. (Biological)

Md. Asfak Ansari  
Sr. Manager (Env.)

Page No.: 2 of 2

# Ambient Noise Level Monitoring Reports





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250524089

ULR No. : TC781125100014643F

Party's Ref No. : Nil

Booking Date : 24/05/2025

Period of Testing : 24/05/2025 To 29/05/2025

Reporting Date : 29/05/2025

Sample Description : Noise Level Monitoring-Ambient Noise

Type of Industry : Automobile Industry  
Sample Location : Main Gate No. 2  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2025)  
Date of measurement : 22/05/2025  
Weather Condition : Clear Sky  
Site observation/Remarks : Vehicular movement, Human Activity  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB “A”)			Test Method
		Lmin	Lmax	Leq	
Discipline – Chemical, Group – Atmospheric Pollution					
1	Day time (06:00 AM to 10:00 PM)	65.8	73.4	69.4	IS 9989 : 1981
2	Night Time (10:00 PM to 06:00 AM)	60.6	67.6	65.1	IS 9989 : 1981

### CPCB Standard as per Noise Pollution Rules, 2000

Area Code	Category of Area/Zone	Day Time (LeqDay) (6:00am to 10:00pm)	Night Time(LeqNight) (10:00pm to 6:00am)
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

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

Remarks : Leq:- It is an energy mean of the noise level, over a specified period

Rishabh Dua  
Rishabh Dua (Digitally Signed)  
Review by

Md. Asfak Ansari  
Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouses@gmail.com, testing@hthlabs.com



TC-7811



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250827025

ULR No. : TC781125100017544F

Party's Ref No. : Nil

Booking Date : 27/08/2025

Period of Testing : 27/08/2025 To 04/09/2025

Reporting Date : 04/09/2025

Sample Description : Noise Level Monitoring-Ambient Noise

Type of Industry : Automobile Industry  
Sample Location : Main Gate No. 2  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2026)  
Date of measurement : 25/08/2025  
Weather Condition : Clear Sky  
Site observation/Remarks : Vehicular movement, Human Activity  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB “A”)			Test Method
		Lmin	Lmax	Leq	
Discipline – Chemical, Group – Atmospheric Pollution					
1	Day time (06:00 AM to 10:00 PM)	62.1	72.9	67.9	IS 9989 : 1981
2	Night Time (10:00 PM to 06:00 AM)	55.8	68.9	64.1	IS 9989 : 1981

### CPCB Standard as per Noise Pollution Rules, 2000

Area Code	Category of Area/Zone	Day Time (LeqDay) (6:00am to 10:00pm)	Night Time(LeqNight) (10:00pm to 6:00am)
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

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

Remarks : Leq:- It is an energy mean of the noise level, over a specified period

Rishabh Dua  
Rishabh Dua (Digitally Signed)  
Review by

Md. Asfak Ansari  
Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouses@gmail.com, testing@hthlabs.com



TC-7811



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/CV/250524003

ULR No. : TC781125500000500F

Party's Ref No. : Nil

Booking Date : 24/05/2025

Period of Testing : 24/05/2025 To 29/05/2025

Reporting Date : 29/05/2025

Sample Description : Noise Level Monitoring-Ambient Noise

Type of Industry : Automobile Industry  
Sample Location : **SND Gate**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-08)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Date of measurement : 22/05/2025  
Weather Condition : Clear Sky  
Site observation/Remarks : Vehicular movement , Industrial Activities & Human Activity  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB “A”)			Test Method
		Lmin	Lmax	Leq	
Discipline – Chemical, Group – Atmospheric Pollution					
1	Day time (06:00 AM to 10:00 PM)	65.5	73.1	69.1	IS 9989 : 1981
2	Night Time (10:00 PM to 06:00 AM)	57.5	64.5	62.0	IS 9989 : 1981

### CPCB Standard as per Noise Pollution Rules, 2000

Area Code	Category of Area/Zone	Day Time (LeqDay) (6:00am to 10:00pm)	Night Time(LeqNight) (10:00pm to 6:00am)
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

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

Remarks : Leq:- It is an energy mean of the noise level, over a specified period

Rishabh Dua  
Rishabh Dua (Digitally Signed)  
Review by

Md. Asfak Ansari  
Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



TC-7811



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250827029

ULR No. : TC781125100017548F

Party's Ref No. : Nil

Booking Date : 27/08/2025

Period of Testing : 27/08/2025 To 04/09/2025

Reporting Date : 04/09/2025

Sample Description : Noise Level Monitoring-Ambient Noise

Type of Industry : Automobile Industry  
Sample Location : **SND Gate**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2026)  
Date of measurement : 26/08/2025  
Weather Condition : Clear Sky  
Site observation/Remarks : Industrial & Human Activity  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB “A”)			Test Method
		Lmin	Lmax	Leq	
Discipline – Chemical, Group – Atmospheric Pollution					
1	Day time (06:00 AM to 10:00 PM)	61.4	74.5	68.5	IS 9989 : 1981
2	Night Time (10:00 PM to 06:00 AM)	56.7	69.6	66.2	IS 9989 : 1981

### CPCB Standard as per Noise Pollution Rules, 2000

Area Code	Category of Area/Zone	Day Time (LeqDay) (6:00am to 10:00pm)	Night Time(LeqNight) (10:00pm to 6:00am)
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

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

Remarks : Leq:- It is an energy mean of the noise level, over a specified period

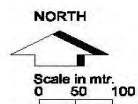
Rishabh Dua  
Rishabh Dua (Digitally Signed)  
Review by

Md. Asfak Ansari  
Sr. Manager (Env.)

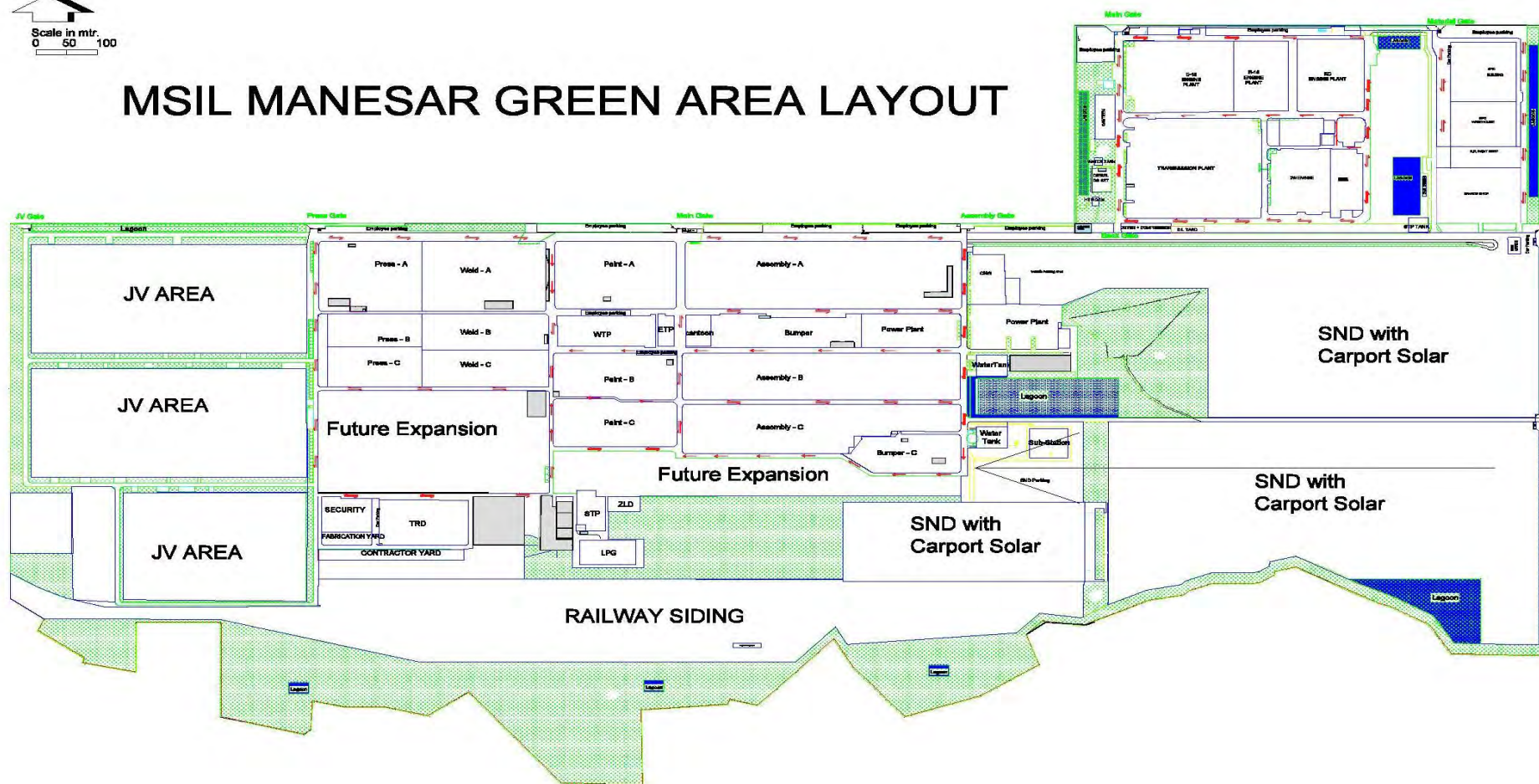
Page No.: 1 of 1



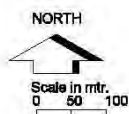
**MARUTI SUZUKI INDIA LIMITED, IMT MANESAR, HARYANA**  
**Green Area Layout**



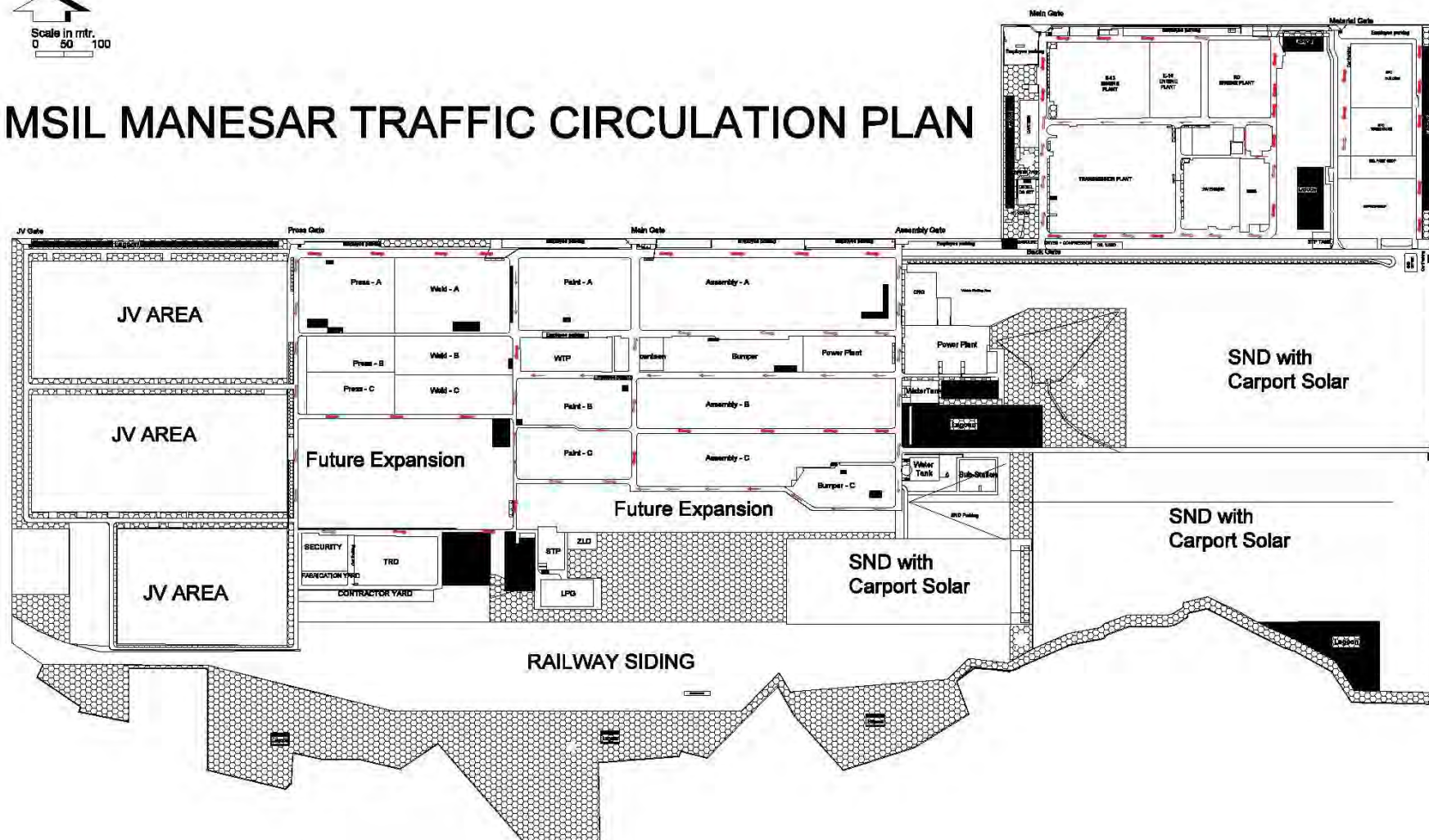
## MSIL MANESAR GREEN AREA LAYOUT



**MARUTI SUZUKI INDIA LIMITED, IMT MANESAR, HARYANA**  
**Traffic Movement Plan**



# MSIL MANESAR TRAFFIC CIRCULATION PLAN





MARUTI SUZUKI INDIA LIMITED, IMT MANESAR, HARYANA  
Environmental and Energy Policy



## Environmental & Energy Policy

In order to pass on a cleaner, safer and healthier environment to our next generation, we are committed to mitigate environmental impact resulting from our business activities, products and services by:

- ❖ Striving for continual reduction of CO<sub>2</sub> emissions by energy conservation, use of renewable energy, green sourcing and developing clean products.
- ❖ Following principles of Sho-Sho-Kei-Tan-Bi (smaller, fewer, lighter, shorter, and neater) and practicing 3R (reduce, reuse, recycle) for sustainable use of natural resources.
- ❖ Strengthening environmental management system and working beyond compliance obligations.
- ❖ Promoting environmental awareness among all persons working under our control.

This Policy shall be regularly reviewed and made available to interested parties.

Date: 23<sup>rd</sup> May, 2022



A stylized black ink signature of Hisashi Takeuchi.

Hisashi Takeuchi  
Managing Director & CEO

**MARUTI SUZUKI INDIA LIMITED, IMT MANESAR, HARYANA**  
**Advertisement in News Papers**

**1. Dainik Jagran (New Delhi-Gurugram Edition)**

**सार्वजनिक सूचना**  
**MARUTI SUZUKI**

Regd. Office : Plot No.1, Nelson Mandela Road, Vasant Kunj,  
 New Delhi, India, Pin code 110070

राज्य स्तरीय पर्यावरण प्रभाव आकलन प्राधिकरण (एसईआईएए), हरियाणा ने एम/एस मारुति सुजुकी इंडिया लिमिटेड को प्लॉट नंबर 01, आईएमटी मानेसर, गुरुग्राम, हरियाणा पिन कोड - 122051 पर स्थित ऑटोमोबाइल विनिर्माण इकाई के लिए औद्योगिक शेड के प्रस्तावित विस्तार के लिए पर्यावरण अनापत्ति दे दी है।  
 अनापत्ति पत्र की प्रति MoEFCC की वेबसाइट <https://parivesh.nic.in/> पर उपलब्ध है।

तारीख : 07.01.2025

मारुति सुजुकी इंडिया लिमिटेड  
 (पूर्व मारुति उद्योग लिमिटेड)

**2. Hindustan Times (New Delhi/Metro/Gurugram Edition)**

**PUBLIC NOTICE**  
**MARUTI SUZUKI**  
**Maruti Suzuki India Limited**

Regd. Office: Plot No.1, Nelson Mandela Road, Vasant Kunj,  
 New Delhi, India, Pincode-110070

State Environment Impact Assessment Authority (SEIAA) Haryana has accorded environment clearance for the proposed expansion of Existing Industrial shed for Automobile Manufacturing Unit Situated at Plot No.01, Sector-3A, IMT, Manesar, Gurugram, Haryana  
 The copy of Clearance Letter is available on the website of MoEF&CC-  
<https://parivesh.nic.in/>.

Dated: 07.01.2025

Maruti Suzuki India Limited  
 (Formerly Maruti Udyog Limited)

Acknowledgement  
copies for letters  
submitted to Local  
body and Municipal  
Corporation



MSIL:CUIP:ESEC:ENV:2024-25:173

Date: 21.01.2025

To,  
The Commissioner,  
Municipal Corporation Manesar,  
Gurugram, Haryana.

**Subject:** - Request for display of environment clearance letter granted to M/s Maruti Suzuki India Limited.

**Ref:** 1. Environment clearance (EC) vide Identification no. EC24B3813HR5413540N dated 03.01.2025.

Dear Sir,

With reference to the subject matter, Maruti Suzuki India Limited (formerly Maruti Udyog Limited) has obtained Environmental clearance (EC) vide File No. SEAC/HR/2024/164 and EC Identification No. EC24B3813HR5413540N dated 03.01.2025 for expansion of existing Industrial shed for automobile manufacturing unit at Plot No.01, Sector-3A, IMT, Manesar, Gurugram, Haryana.

As per the EC conditions, we are hereby submitting the copy of EC to your esteemed office for display at prominent places for 30 days.

Please acknowledge the letter after receiving the EC copy.

Thanking you.  
Yours sincerely

For M/s Maruti Suzuki India Limited

  
**Paresh Mani Sharma**  
DGM (Environment)  
Maruti Suzuki India Limited

Paresh Mani Sharma  
Deputy General Manager (Environment)  
Email: Pareshmani.sharma@maruti.co.in  
Encl: As above

**MARUTI SUZUKI INDIA LIMITED****Head Office:**

Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India  
Tel: 011- 46781000, Fax: 011-46150275/46150276  
E-mail id: contact@maruti.co.in, www.marutisuzuki.com

**Gurgaon Plant:**

Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India  
Tel: 0124-2346721, Fax: 0124-2341304

**Manesar Plant:**

Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199



MSIL:CUIP:ESEC:ENV:2024-25:176

Date: 21.01.2025

To,

The Estate Manager,  
Haryana State Industrial & Infrastructure Development Corporation Ltd- Manesar,  
Gurugram, Haryana

**Subject:** - Request for display of environment clearance letter granted to M/s Maruti Suzuki India Limited.

**Ref:** 1. Environment clearance (EC) vide Identification no. EC24B3813HR5413540N dated 03.01.2025.

Dear Sir,

With reference to the subject matter, Maruti Suzuki India Limited (formerly Maruti Udyog Limited) has obtained Environmental clearance (EC) vide File No. SEAC/HR/2024/164 and EC Identification No. EC24B3813HR5413540N dated 03.01.2025 for expansion of existing Industrial shed for automobile manufacturing unit at Plot No.01, Sector-3A, IMT, Manesar, Gurugram, Haryana.

As per the EC conditions, we are hereby submitting the copy of EC to your esteemed office for display at prominent places for 30 days.

Please acknowledge the letter after receiving the EC copy.

Thanking you.

Yours sincerely

For M/s Maruti Suzuki India Limited

**Paresh Mani Sharma**  
**DGM (Environment)**  
**Maruti Suzuki India Limited**

Paresh Mani Sharma  
Deputy General Manager (Environment)  
Email: Pareshmani.sharma@maruti.co.in  
Encl: As above

MARUTI SUZUKI INDIA LIMITED

## Head Office:

Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India  
Tel: 011- 46781000, Fax: 011-46150275/46150276  
E mail id: contact@maruti.co.in, www.marutisuzuki.com

## Gurgaon Plant:

Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India  
Tel: 0124-2346721, Fax: 0124-2341304

## Manesar Plant:

Maruti Suzuki India Limited,  
Plot no 1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India  
Tel: 0124-4884000, Fax: 0124-4884199

# Acknowledgement copy for Environmental statement submission



MSIL:CUIP:ESEC:ENV:26-26:061

22-July-2025

To,  
The Member Secretary,  
Haryana State Pollution Control Board,  
C - 11, Sector - 6,  
Panchkula, Haryana

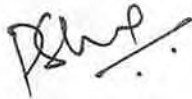
Sub: Environment Statement (Form V) for the year 2024-25 (Manesar Plant - Maruti Suzuki India Limited).

Dear Sir,

Please find enclosed herewith the Environment Statement (Form V) for the year 2024-25.

Thanking You.

Yours Faithfully  
For Maruti Suzuki India Limited



**Paresh Mani Sharma**  
DGM (Environment)  
Maruti Suzuki India Limited  
Paresh Mani Sharma  
Deputy General Manager (Environment)

✓ CC: Regional Officer HSPCB Regional Office, Gurgaon (South)

  
Haryana State Pollution Control Board  
Gurgaon Region (South)  
HSMDC Complex, IIIrd Floor,  
IMT Manesar, Gurgaon

**MARUTI SUZUKI INDIA LIMITED**

Head Office:  
Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India.  
Tel: 011-46781000, Fax: 011-46150275/46150276  
E-mail id: contact@maruti.co.in, www.marutisuzuki.com

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Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199

# Insurance Policy under Public Liability Insurance Act



UIN: IRDAN115CPLB0008V01202425

**PUBLIC LIABILITY INSURANCE**  
**(UNDER PUBLIC LIABILITY INSURANCE ACT 1991)**

**PREAMBLE**

ICICI Lombard General Insurance Company Limited ("the Company"), having received a Proposal and the premium from the proposer named in the Schedule referred to herein below, and the said Proposal and Declaration together with any statement, report or other document leading to the issue of this Policy and referred to therein having been accepted and agreed to by the Company and the Proposer as the basis of this contract do, by this Policy agree, in consideration of and subject to the due receipt of the subsequent premiums, as set out in the Schedule with all its Parts, and further, subject to the terms and conditions contained in this Policy, as set out in the Schedule with all its Parts that on proof to the satisfaction of the Company of the compensation having become payable as set out in Part I of the Schedule to the title of the said person or persons claiming payment or upon the happening of an event upon which one or more benefits become payable under this Policy, the Sum Insured/ appropriate benefit will be paid by the Company.

PART I OF SCHEDULE		Policy No. 4007/389736619/00/000	
1	Name of the insured	MARUTI SUZUKI INDIA LIMITED	
2	Mailing Address of the insured	SECTOR 18 PALAM GURGAON ROAD INDIA HARYANA GURGAON PIN - 122015	
3	Trade or Business of the insured	Automobile manufacturing	
4	Address of Premises insured	All premises owned and operated by Insured in India	
5	Paid Up Capital	1,570,000,000/-	
6	Policy period	From: April 01, 2025	To: March 31, 2026
		Time: 00:00 hrs	23:59 hrs
7	Turnover	18,270,000,000,000/-	
8	Limit of Indemnity	1:2	
	Aggregate One Year (AOY)	5,000,000,000/-	
	Any One Accident (AOA)	2,500,000,000/-	
9	Compulsory Excess	Nil	





UIN: IRDAN115CPLB0008V01202425

1 0	Total Premium  ERF Contribution  Total Payable	2,450,000/-  2,450,000/-  5,341,000/-
1 1	Co-insurance details	NA
1 2	Special conditions	
1 3	Intermediary Details	Intermediary Name 1 - MARUTI INSURANCE BROKING PVT LTD Code- 201499374460  Intermediary Name 2 - MARSH INDIA INSURANCE BROKERS PRIVATE LIMITED Code- 201466988254
1 4	GSTIN Reg. No  ILGIC GSTIN Address	
<p style="text-align: right;">Authorised signatory</p> <p>Description of services : General Insurance Business HSN/SAC : 9971</p>		



UIN: IRDAN115CPLB0008V01202425

## PART II OF SCHEDULE

### 1. Definitions

For the purpose of this policy, the following terms shall have the meaning as set forth hereunder:

- i. "Act" unless otherwise specifically mentioned shall mean the Public Liability Insurance Act 1991 as amended from time to time.
- ii. "Accident" means an accident involving a fortuitous, sudden or unintentional occurrence while handling any hazardous substance resulting in continuous, intermittent or repeated exposure to death of, or injury to any person or damage to any property but does not include an accident by reason only of war or radioactivity.
- iii. "Handling" in relation to any hazardous substance means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance.
- iv. "Hazardous Substance" and group means any substance or preparation which is defined as hazardous substance under the Public Liability Insurance Act, 1991 and the Rules framed there under
- v. "Owner" or "Insured" means a person who owns, or has control over handling of any hazardous substance at the time of accident and includes:
  - a. in the case of a firm, any of its partners
  - b. in the case of an association, any of its members, and
  - c. in the case of a company, any of its directors, managers, secretaries or other officers who is directly in charge of, and is responsible to the company for the conduct of the business of the company
- vi. "Turnover" shall mean
  - a. In case of Manufacturing Units - Entire annual gross sales turnover including all levies and taxes of manufacturing units handling hazardous substance as defined in the Public Liability Insurance Act, 1991. For the purpose of this insurance, the term "Units" shall mean all operations being carried out in the manufacturing complex in one location.
  - b. In case of Godowns/ Warehouse Owners – Total annual rental receipts of premises handling hazardous substance as defined in the Public Liability Insurance Act, 1991.
  - c. In case of Transport Operators – Total annual freight receipts
  - d. In all other cases – Total annual gross receipts

### 2. Scope of Cover

The Company hereby agrees, subject to the terms, conditions and exclusions herein contained or endorsed or otherwise expressed herein, to indemnify the Insured or Owner as defined above for the purpose of this policy against the statutory liability arising out of Accidents occurring during the currency of the Policy due to handling of hazardous substances as provided for in the Act as



UIN: IRDAN115CPLB0008V01202425

defined above, and the Rules framed there under.

### 3. Exclusions

The Company shall not be liable:

- i. For any willful or intentional non-compliance of any statutory requirements;
- ii. In respect of fines, penalties, punitive and /or exemplary damages;
- iii. Under any law or legislation except in so far as provided for in Section 8 (1) & 8 (2) of the Act;
- iv. In respect of damage to property owned, leased or hired or under hire purchase or on loan to the Insured or otherwise in the Insured Owner's control, care or custody;
- v. For any liability directly or indirectly occasioned by, happening through or in consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not) civil war, rebellion, revolution, insurrection or military or usurped power;
- vi. For any liability directly or indirectly caused by or contributed to by:
  - a. Ionizing radiation or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel.
  - b. The radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
- vii. For matter outside the scope of Public Liability Insurance Act, 1991.
- viii. In respect of losses/liability arising outside India.

### 4. Basis of Assessment of Claims

- i. The basis of assessment of claim shall be the award given by the appropriate authority under the Act.
- ii. **Claim Procedures:**

The procedure for lodging the claim shall be as under:

- c. **Claim Intimation:** Connect with us via: Toll-free no.: 1800 2666,  
Email ID: [customersupport@icicilombard.com](mailto:customersupport@icicilombard.com), on our website:  
<https://coclaims.icicilombard.com/claimstracker/CommercialClaims/ccplandingpage.aspx>

Register the claim and submit claim related documents along with claim form. You will receive a claim reference number as your reference point for future correspondence

b. On the occurrence of any Accident, whether or not the Insured receives any notice of an alleged claim / complaint, the Insured shall duly inform the Company in the manner prescribed in the 'Incident Reporting Form', detailing the Accident.

- d. The Insured shall, upon receipt of any notice of an alleged claim / complaint from

UIN: IRDAN115CPLB0008V01202425

appropriate authority, forthwith furnish the same to the Company in the manner detailed in the 'Claim Application Form'. The insured shall also furnish the copies of such documents, as prescribed by the rules, which are submitted and forwarded by the appropriate authority and/or any proposed responses, if any, by the Insured to the appropriate authorities.

- e. Upon the affixing of any legal liability upon the Insured in terms of an award of the appropriate authority, the Insured shall forthwith submit a duly filled 'Claim Settlement Form', detailing the liability accrued and the Defence Costs, if any together with any other information that the Company may require or as specified in the 'Claim Settlement Form'.
- f. The Insured shall also at all times at his own expense produce, procure and give to the Company all such further particulars, plans, specifications, books, vouchers, invoices, duplicates or copies thereof, documents, investigation reports (internal/external), proofs, evidence and information with respect to the claim (verified by statutory declaration, if so required) and the origin and cause of the loss and the circumstances under which the loss or damage occurred, and any matter touching the liability or the amount of the liability of the Company as may be reasonably required by or on behalf of the Company together with a declaration on oath or in other legal form of the truth of the claim and of any matters connected therewith.
- g. Subject to applicable law, rule, regulation or notification in this behalf, the Company hereby reserves the right as provided hereafter:

No claim in respect of loss equal to or exceeding twenty thousand rupees in value on the policy shall be admitted for payment or settled by the Company unless the Company has been given a report on the occurrence of the loss and extent of the loss, from a person who holds a license to act as a Surveyor or loss assessor, under the Insurance Act, 1938, and appointed as per the prescriptions issued by the Authority.

.

Provided that nothing hereinabove shall be deemed to take away or abridge the right of the Company to pay or to settle any claim at any amount different from the amount assessed by the Surveyor or loss assessor.

- a. The Insured shall furnish the forms duly completed together with:
  - i. all material documents, as specified therein or as requested by the Company or otherwise;
  - ii. particulars of all other insurances, if any

No claim under this policy shall be payable unless the terms of this condition have been complied with.

- h. **Turnaround Time (TAT):** Assessment sheet /Survey report will be furnished within 15 days of receipt of claim form along with claim documents. Claim will be decided within 7 days of the claim intimation / assessment sheet / survey report, as applicable





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## **5. Policy Related Terms And Conditions**

1. No admission, offer, promise or payment shall be made or given by or on behalf of the Insured under this policy without the written consent of the Company.
2. The Insured shall keep a record of their Turnover. The Company shall at all times have full rights to call for and examine such records.
3. In case the Company pays any amount to the claimant due to any statutory provision, such amount shall be recoverable from the Insured, if such amount need not have been paid but for the said statutory provision

## **PART III OF THE SCHEDULE**

### **Standard Terms and Conditions**

#### **1. Incontestability and Duty of Disclosure**

The policy shall be null and void and no benefit shall be payable in the event of untrue or incorrect statements, misrepresentation, incorrect description or non-disclosure in any material particular in the proposal form, personal statement, declaration and connected documents, or any material information having been withheld, or a claim being fraudulent or any fraudulent means or devices being used by the Insured or any one acting on his behalf to obtain any benefit under this policy

#### **2. Reasonable Care**

The Insured shall take all reasonable steps to safeguard the interests of the Insured against accidental loss, or damage that may give rise to the claim

#### **3. Observance of terms and conditions**

The due observance and fulfillment of the terms, conditions and endorsement of this policy in so far as they relate to anything to be done or complied with by the Insured, shall be a condition precedent to any liability of the Company to make any payment under this policy

#### **4. Material change**



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The Insured shall immediately notify the Company by fax and in writing of any material change in the risk and cause at his own expense such additional precautions to be taken as circumstances may require to ensure safe operation of the Insured items or trade or business practices thereby containing the circumstances that may give rise to the claim and the Company may, adjust the scope of cover and / or premium, if necessary, accordingly

#### **5. Records to be maintained**

The Insured shall keep an accurate record containing all relevant particulars and shall allow the Company to inspect such record. The Insured shall within one month after the expiry of each period of insurance furnish such information as the Company may require

#### **6. No constructive Notice**

Any of the circumstances in relation to these conditions coming to the knowledge of any official of the Company shall not be the notice to or be held to bind or prejudicially affect the Company notwithstanding subsequent acceptance of any premium

#### **7. Notice of charge etc**

The Company shall not be bound to notice or be affected by any notice of any trust, charge, lien, assignment or other dealing with or relating to this policy but the receipt of the Insured or his legal personal representative shall in all cases be an effectual discharge to the company

#### **8. Special Provisions**

Any special provisions subject to which this policy has been entered into and endorsed in the policy or in any separate instrument shall be deemed to be part of this policy and shall have effect accordingly

#### **9. Overriding effect of Part II of the Schedule**

The terms and conditions contained herein and in Part II of the Schedule shall be deemed to form part of the policy and shall be read as if they are specifically incorporated herein; however, in case of any inconsistency of any term and condition with the scope of cover contained in Part II of the Schedule, then the term(s) and condition(s) contained herein shall be read mutatis mutandis with the scope of cover/terms and conditions contained in Part II of the Schedule and shall be deemed to be modified accordingly or superseded in case of inconsistency being irreconcilable

#### **10. Electronic Transactions**



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The Insured agrees to adhere to and comply with all such terms and conditions as the Company may prescribe from time to time, and hereby agrees and confirms that all transactions effected by or through facilities for conducting remote transactions including the Internet, World Wide Web, electronic data interchange, call centers, teleservice operations (whether voice, video, data or combination thereof) or by means of electronic, computer, automated machines network or through other means of telecommunication, established by or on behalf of the Company, for and in respect of the policy or its terms, or the Company's other products and services, shall constitute legally binding and valid transactions when done in adherence to and in compliance with the Company's terms and conditions for such facilities, as may be prescribed from time to time. The Insured agrees that the Company may exchange, share or part with any information to or with other ICICI Group Companies or any other person in connection with the Policy, as may be determined by the Company and shall not hold the Company liable for such use/application

### **11. Duties of the Insured on occurrence of loss**

On the occurrence of any loss, within the scope of cover under the policy the Insured shall:

- I. Forthwith file/submit a Claim Form in accordance with Claim Procedure Clause as provided in Part II of the Schedule.
- II. Allow the Surveyor or any agent ~~of the Company~~ to inspect the lost/damaged properties/premises/goods or any other material items, as per the Right to Inspect Clause as provided in this Part.
- III. Assist and not hinder or prevent the Company or any of its agents in pursuance of their duties under Rights of the Company On Happening Of Loss Or Damage Clause as provided in this Part.
- IV. Not abandon the insured property/item/premises, nor take any steps to rectify/remedy the damage before the same has been approved by the Company or any of its agents or the Surveyor.

If the Insured does not comply with the provisions of this Clause or other obligations cast upon the Insured under this policy, in terms of the other clauses referred to herein or in terms of the other clauses in any of the policy documents, all benefits under the policy shall be forfeited, at the option of the Company

### **12. Rights of the Company on happening of loss or damage**

On the happening of loss or damage, or circumstances that have given rise to a claim under this policy, the Company may:

1. enter and/or take possession of the insured property, where the loss or damage has happened
2. take possession of or require to be delivered to it any property of the Insured in the building or on the premises at the time of the loss or damage
3. keep possession of any such property and examine, sort, arrange, remove or other wise deal with the same; and,
4. sell any such property or dispose of the same for account of whom it may concern.



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The powers conferred by this condition shall be exercisable by the Company at any time until notice in writing is given by the Insured that he makes no claim under the policy, or if any claim is made, until such claim is finally determined or withdrawn. The Company shall not by any act done in the exercise or purported exercise of its powers hereunder incur any liability to the Insured or diminish its rights to rely upon any of the conditions of this policy in answer to any claim.

If the insured or any person on his behalf shall not comply with the requirement of the Company, or shall hinder or obstruct the Company in the exercise of the powers hereunder, all benefits under the policy shall be forfeited at the option of the Company

### **13. Right to inspect**

If required by the Company, an agent/representative of the Company including a loss assessor or a Surveyor appointed in that behalf shall in case of any loss or any circumstances that have given rise to the claim to the Insured be permitted at all reasonable times to examine into the circumstances of such loss. The Insured shall on being required so to do by the Company produce all books of accounts, receipts, documents relating to or containing entries relating to the loss or such circumstance in his possession and furnish copies of or extracts from such of them as may be required by the Company so far as they relate to such claims or will in any way assist the Company to ascertain in the correctness thereof or the liability of the Company under the policy

### **14. Position after a claim**

The Insured shall not be entitled to abandon any insured item/property whether the Company has taken possession of the same or not. As from the day of receipt of the claim amount by the Insured as determined by the Company to be fit and proper, the Sum Insured for the remainder of the period of Insurance shall stand reduced by the amount of the compensation

### **15. Subrogation**

In the event of payment under this policy, the Company shall be subrogated to all the Insured's rights or recovery thereof against any person or organisation, and the Insured shall execute and deliver instruments and papers necessary to secure such rights.

The Insured and any claimant under this policy shall at the expense of the Company do and concur in doing and permit to be done, all such acts and things as may be necessary or required by the Company, before or after Insured's indemnification, in enforcing or endorsing any rights or remedies, or of obtaining relief or indemnity, to which the Company shall be or would become entitled or subrogated





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#### **16. Contribution**

If at the time of the happening of any loss or damage covered by this policy, there shall be existing any other insurance of any nature whatsoever covering the same, whether effected by the Insured or not, then the Company shall not be liable to pay or contribute more than its ratable proportion of any loss or damage

#### **17. Fraudulent claims**

If any claim is in any respect fraudulent, or if any false statement, or declaration is made or used in support thereof, or if any fraudulent means or devices are used by the Insured or anyone acting on his behalf to obtain any benefit under this policy, or if a claim is made and rejected and no court action or suit is commenced within twelve months after such rejection or, in case of arbitration taking place as provided therein, within twelve (12) calendar months after the Arbitrator or Arbitrators have made their award, all benefits under this policy shall be forfeited

#### **18. Cancellation/termination**

The company can cancel the policy only on the grounds of established fraud, mis- representation, non-disclosure of material facts, fraud or non-co-operation, by giving 7 days notice in writing by Registered post/Acknowledgement Due post to the Insured at his last known address in which case the Company shall be liable to repay on demand a rateable proportion of the premium for the unexpired term from the date of the cancellation. The Insured may also give 7 days notice in writing, to the Company, for the cancellation of this policy, in which case the Company shall cancel the policy from the date of receipt of notice and retain the premium for the period this policy has been in force at the Company's short period scales as shown here below

Period (Not exceeding)	Rate
1 week	25% of the Annual rate
1 Month	25% of the Annual rate
2 Months	35% of the Annual rate
3 Months	50% of the Annual rate
4 Months	60% of the Annual rate
6 Months	75% of the Annual rate
8 Months	85% of the Annual rate
Exceeding 8 Months	Full Annual Premium

#### **19. Cause of Action/ Currency for payments**

No Claims shall be payable under this policy unless the cause of action arises in India, unless otherwise specifically provided in Part II of the Schedule to this policy. All claims shall be payable in India in Indian Rupees only



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## **20. Policy Disputes**

Any dispute concerning the interpretation of the terms, conditions, limitations and/or exclusions contained herein is understood and agreed to by both the Insured and the Company to be subject to Indian Law. Each party agrees to submit to the exclusive jurisdiction of the High Court of India and to comply with all requirements necessary to give such Court the jurisdiction. All matters arising hereunder shall be determined in accordance with the law and practice of such Court

## **21. Renewal notice**

Every renewal premium (which shall be paid and accepted in respect of this policy) shall be so paid and accepted upon the distinct understanding that no alteration has taken place in the facts contained in the proposal or declaration herein before mentioned and that nothing is known to the Insured that may result to enhance the risk of the company under the guarantee hereby given. No renewal receipt shall be valid unless it is on the printed form of the Company and signed by an authorized official of the Company

## **22. Notices**

Any notice, direction or instruction given under this policy shall be in writing and delivered by hand, speed/registered post or courier to

In case of the Insured, at the address specified in Part 1 of the Schedule.

In case of the Company:

ICICI Lombard General Insurance Company Limited

Corporate Office: ICICI LOMBARD HOUSE, 414 VEER SAVARKAR MARG, PRABHADEVI, MUMBAI-400025.

Notice and instructions will be deemed served 7 days after posting or immediately upon receipt in the case of hand delivery, facsimile or e-mail

## **23. Customer Service**

If at any time the Insured requires any clarification or assistance, the Insured may contact the offices of the Company at the address specified, during normal business hours

## 24 Grievances

For resolution of any query or grievance, Insured may contact the respective branch office of the Company or may call toll free no.1800-2666 or may approach us at the sub section “Grievance Redressal” on our website [www.icicilombard.com](http://www.icicilombard.com) (Customer Support section). However, if the resolution provided by us is not satisfactory you may approach Insurance Regulatory and Development Authority of India (IRDAI) through the Bima Bharosa Portal - <https://bimabharosa.irdai.gov.in/> or IRDAI Grievance Call Centre (IGCC) at their toll free no. 1800 4254 732 / 155255.

You may also approach Insurance Ombudsman, subject to vested jurisdiction, for the redressal of grievance. Details of Insurance Ombudsman offices are available at IRDAI website: [www.irdaindia.org](http://www.irdaindia.org), or on the Company’s website at [www.icicilombard.com](http://www.icicilombard.com).

The details of Insurance Ombudsman are available below:-

S no.	Name of office of insurance Ombudsman	Territorial Area of jurisdiction
1	AHMEDABAD Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Prakash Building, 6th floor, Tilak Marg, Relief Road, Ahmedabad – 380 001. Tel.: 079 - 25501201/02/05/06 Email: bimalokpal.ahmedabad@cioins.co.in	Gujarat, Dadra & Nagar Haveli, Daman and Diu.
2	BENGALURU Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Soudha Building,PID No. 57-27-N-19 Ground Floor, 19/19, 24th Main Road, JP Nagar, Ist Phase, Bengaluru – 560 078. Tel.: 080 - 26652048 / 26652049 Email: bimalokpal.bengaluru@cioins.co.in	Karnataka
3	BHOPAL Insurance Ombudsman Office of the Insurance Ombudsman,	Madhya Pradesh, Chattisgarh.

	1st floor,"Jeevan Shikha", 60-B,Hoshangabad Road, Opp. Gayatri Mandir, Bhopal – 462 011. Tel.: 0755 - 2769201 / 2769202 Email: bimalokpal.bhopal@cioins.co.in	
4	BHUBANESHWAR Insurance Ombudsman Office of the Insurance Ombudsman, 62, Forest park, Bhubaneswar – 751 009. Tel.: 0674 - 2596461 /2596455 Email:bimalokpal.bhubaneswar@cioins.co.in	Odisha.
5	CHANDIGARH Insurance Ombudsman Office Of The Insurance Ombudsman, Jeevan Deep Building SCO 20-27, Ground Floor Sector- 17 A, Chandigarh – 160 017. Tel.: 0172 - 4646394 / 2706468 Email: bimalokpal.chandigarh@cioins.co.in	Punjab, Haryana (excluding Gurugram, Faridabad, Sonapat and Bahadurgarh), Himachal Pradesh, Union Territory of Jammu & Kashmir, Ladakh & Chandigarh.
6	CHENNAI Insurance Ombudsman Office of the Insurance Ombudsman, Fatima Akhtar Court, 4th Floor, 453, Anna Salai, Teynampet, CHENNAI – 600 018. Tel.: 044 - 24333668 / 24333678 Email: bimalokpal.chennai@cioins.co.in	Tamil Nadu, Pondicherry Town and Karaikal (which are part of Pondicherry).
7	DELHI Insurance Ombudsman Office of the Insurance Ombudsman, 2/2 A, Universal Insurance Building, Asaf Ali Road, New Delhi – 110 002. Tel.: 011 – 23237539	Delhi & following District of Haryana – Gurugram, Faridabad, Sonapat and Bahadurgarh



	Email: bimalokpal.delhi@cioins.co.in	
8	ERNAKULAM Insurance Ombudsman Office of the Insurance Ombudsman, 2nd Floor, Pulinat Bldg., Opp. Cochin Shipyard, M. G. Road, Ernakulam - 682 015. Tel.: 0484 - 2358759 / 2359338 Fax: 0484 - 2359336 Email: bimalokpal.ernakulam@cioins.co.in	Kerala, Lakshadweep, Mahe-a part of Puducherry.
9	GUWAHATI Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Nivesh, 5th Floor, Nr. Panbazar over bridge, S.S. Road, Guwahati – 781001(ASSAM). Tel.: 0361 - 2632204 / 2602205 Email: bimalokpal.guwahati@cioins.co.in	Assam, Meghalaya, Manipur, Mizoram, Arunachal Pradesh, Nagaland and Tripura.
10	HYDERABAD Insurance Ombudsman Office of the Insurance Ombudsman, 6-2-46, 1st floor, "Moin Court", Lane Opp. Saleem Function Palace, A. C. Guards, Lakdi-Ka-Pool, Hyderabad - 500 004. Tel.: 040 - 23312122 Email: bimalokpal.hyderabad@cioins.co.in	Andhra Pradesh, Telangana, Yanam and Part of Territory of Puducherry.
11	JAIPUR Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Nidhi – II Bldg., Gr. Floor, Bhawani Singh Marg, Jaipur - 302 005. Tel.: 0141- 2740363/2740798	Rajasthan.

	Email: Bimalokpal.jaipur@cioins.co.in	
12	<p>KOLKATA</p> <p>Insurance Ombudsman</p> <p>Office of the Insurance Ombudsman, Hindustan Bldg. Annexe, 4th Floor, 4, C.R. Avenue, KOLKATA - 700 072. Tel.: 033 - 22124339 / 22124340 Fax : 033 - 22124341 Email: bimalokpal.kolkata@cioins.co.in</p>	<p>West Bengal, Sikkim, Andaman &amp; Nicobar Islands.</p>
13	<p>LUCKNOW</p> <p>Insurance Ombudsman</p> <p>Office of the Insurance Ombudsman, 6th Floor, Jeevan Bhawan, Phase-II, Nawal Kishore Road, Hazratganj, Lucknow - 226 001. Tel.: 0522 - 4002082 / 3500613 Email: bimalokpal.lucknow@cioins.co.in</p>	<p>Districts of Uttar Pradesh :</p> <p>Laitpur, Jhansi, Mahoba, Hamirpur, Banda, Chitrakoot, Allahabad, Mirzapur, Sonbhadra, Fatehpur, Pratapgarh, Jaunpur, Varanasi, Gazipur, Jalaun, Kanpur, Lucknow, Unnao, Sitapur, Lakhimpur, Bahraich, Barabanki, Raebareli, Sravasti, Gonda, Faizabad, Amethi, Kaushambi, Balrampur, Basti, Ambedkarnagar, Sultanpur, Maharajgang, Santkabirnagar, Azamgarh, Kushinagar, Gorkhpur, Deoria, Mau, Ghazipur, Chandauli, Ballia, Sidharathnagar.</p>
14	<p>MUMBAI</p> <p>Insurance Ombudsman</p> <p>Office of the Insurance Ombudsman, 3rd Floor, Jeevan Seva Annexe, S. V. Road, Santacruz (W), Mumbai - 400 054. Tel.: 022 - 69038800/27/29/31/32/33 Email: bimalokpal.mumbai@cioins.co.in</p>	<p>Goa, Mumbai Metropolitan Region Excluding (Navi Mumbai &amp; Thane).</p>
15	<p>NOIDA</p> <p>Insurance Ombudsman</p> <p>Office of the Insurance Ombudsman,</p>	<p>State of Uttaranchal and the following Districts of Uttar Pradesh: Agra, Aligarh, Bagpat, Bareilly,</p>

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	<p>Bhagwan Sahai Palace 4th Floor, Main Road, Naya Bans, Sector 15, Distt: Gautam Buddh Nagar, U.P-201301. Tel.: 0120-2514252 / 2514253 Email: bimalokpal.noida@cioins.co.in</p>	<p>Bijnor, Budaun, Bulandshehar, Etah, Kanoor, Mainpuri, Mathura, Meerut, Moradabad, Muzaffarnagar, Orayya, Pilibhit, Etawah, Farrukhabad, Firozbad, Gautambodhanagar, Ghaziabad, Hardoi, Shahjahanpur</p>
16	<p>PATNA Insurance Ombudsman Office of the Insurance Ombudsman, 2nd Floor, Lalit Bhawan, Bailey Road, Patna 800 001. Tel.: 0612-2547068 Email: bimalokpal.patna@cioins.co.in</p>	<p>Bihar, Jharkhand.</p>
17	<p>PUNE Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Darshan Bldg., 3rd Floor, C.T.S. No.s. 195 to 198, N.C. Kelkar Road, Narayan Peth, Pune – 411 030. Tel.: 020-24471175 Email: bimalokpal.pune@cioins.co.in</p>	<p>Maharashtra, Area of Navi Mumbai and Thane (excluding Mumbai Metropolitan Region).</p>
18	<p>THANE  Shri Umesh Sinha Insurance Ombudsman Office of the Insurance Ombudsman, 2nd Floor, Jeevan Chintamani Building, Vasantrao Naik Mahamarg, Thane (West) Thane - 400604 Email: <a href="mailto:bimalokpal.thane@cioins.co.in">bimalokpal.thane@cioins.co.in</a></p>	<p>Navi Mumbai, Thane District, Raigad District, Palghar District and <a href="#">wards of Mumbai</a>, M/East, M/West, N, S and T.</p>

The updated details of Insurance Ombudsman are available on:  
<https://www.cioins.co.in/Ombudsman>.

#### Arbitration:



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The parties to the contract may mutually agree and enter into a separate Arbitration Agreement to settle any and all disputes in relation to this policy. Arbitration shall be conducted under and in accordance with the provisions of the Arbitration and Conciliation Act, 1996. *(Applicable to commercial entities only)*

### **ICICI Lombard General Insurance Company Limited**

**Mailing Address:** 601 / 602, 6th Floor, Interface Building No. 16, New Link Road Malad (W), Mumbai - 400 064.

**Registered Office Address:** ICICI Lombard House, 414, Veer Savarkar Marg, Near Siddhi Vinayak Temple, Prabhadevi, Mumbai 400 025.

**Visit us at** [www.icicilombard.com](http://www.icicilombard.com) • **Mail us at** [customersupport@icicilombard.com](mailto:customersupport@icicilombard.com)

Toll Free No.: **1800 2666** • Chargeable No.: **+91 91 86552 22666** • Insurance is the subject matter of solicitation.

IRDA Reg. No. 115. • CIN: L67200MH2000PLC129408.

ICICI LOMBARD GENERAL INSURANCE COMPANY LIMITED

UIN: IRDAN115CP0014V01201920



**MARUTI SUZUKI INDIA LIMITED, HARYANA**  
**Plantation drive for campaign "Ek Ped Maa Ke Naam"**

**Portal Screenshot (MeriLife Portal)**

merilife.nic.in/partner/report

World Environment Day Reports Paresh Mani Sharma PU-484278

**Maruti Suzuki India Limited - 2025**  
Industry Partners

New Action Report

Load data for year: Select Search

Mode Of Implementation	Technological Intervention	Number of Participants				Uploaded Geotag Photo	Uploaded Video Clip
		Age 10-19 yrs	Age 20-25 Yrs	Age 25+ Yrs	Total		
Physical	No	0	0	30	30		Not Uploaded

**Photograph:**





सत्यमेव जयते

हरियाणा सरकार

**State Environment Impact Assessment Authority, Haryana,  
Bays No.55-58, Prayatan Bhawan, Sector-2 Panchkula.**

**Tel: 0172-2565232, 4043956**

**E-mail Id: [seiaa-21.env@hry.gov.in](mailto:seiaa-21.env@hry.gov.in)**

**Memo No: SEIAA (179)/HR/2024/252**

**Dated: 27/08/2024**

**To**

**M/s Maruti Suzuki India Limited,  
Old Palam Gurgaon Road, Gurugram,  
Haryana, 122015  
Email Id: [madan.bansode@maruti.co.in](mailto:madan.bansode@maruti.co.in)**

**Subject: Correction in Environmental Clearance granted to M/s Maruti Suzuki India Limited vide file no. SEAC/HR/2024/45 dated 28<sup>th</sup> May 2024 for proposed expansion of industrial shed for automobile manufacturing unit situated at Plot No. 831, Industrial Model Township (IMT), Kharkhoda, Sonapat.**

The Project was submitted to the SEIAA vide Proposal No. SIA/HR/INFRA2/457883/2024 dated 29.01.2024 for obtaining Grant of Environment Clearance under Category 8(b) within the scope and meaning of EIA Notification dated 14.09.2006 issued by MOEF & CC, GOI. The Project Proponent has deposited Scrutiny fee of Rs.2,00,000/- vide DD No. 509359 dated 16.08.2023

The project proponent was intimated that Environment Clearance (EC) to industrial shed of Automobile Manufacturing (Integrated Facilities) Unit situated at IMT Kharkhoda, Sonapat district, Haryana was granted on 28<sup>th</sup> May 2024.

However, upon reviewing the stipulated conditions, PP noticed a few discrepancies that require corrections. Various stipulated conditions of the letter are not matching with the Minutes of SEAC meeting dated 13.03.2024 and SEIAA meeting dated 09.05.2024 as referred above. These conditions are not related to their project and appear to be inaccurate, considering this specific requirements and environmental concerns associated with this project.

To ensure compliance with environmental regulations and to uphold their commitment to responsible environmental stewardship, the PP requested to review and a revision of the stipulated conditions as per SEAC and SEIAA MOM.

**FINDINGS AND DECISION OF THE AUTHORITY (SEIAA):**

The case was taken up during the 179<sup>th</sup> meeting of SEIAA held on 23.07.2024. Authority discussed the case. Earlier, the case was taken up during 172<sup>nd</sup> Meeting of SEIAA held on 09.05.2024.



Ltd. (as per the regular letter of allotment issued by HSIIDC Reference No. HSIIDC: RLA 2022MAR03484/5676 dated 31.03.2022) under Category 8 (b) within the scope and meaning of EIA Notification dated 14.09.2006 issued by the Ministry of Environment and Forest, Government of India along with specific conditions.

On perusal of the minutes of 172<sup>nd</sup> meeting of SEIAA to the project, it has been noticed that some specific conditions is not mentioned as per minutes of meeting dated 09.05.2024.

After deliberations, the Authority decided to **delete Specific EC conditions (Sr.No.1.3 to 1.35) mentioned in EC identification No. 24B3813HR5187061N dated 28.05.2024** and decided to issue a corrigendum to correct the following specific conditions according to the 172<sup>nd</sup> meeting of SEIAA and all other conditions will remains same:

**A. Specific Conditions:-**

1. Bio-Medical waste will be disposed through common Bio-medical treatment and disposal facility (CBWTF) authorized by HSPCB/CPCB.
2. E-Waste, plastic waste and battery waste will be disposed through authorized recycle of HSPCB/CPCB.
3. The PP shall take the necessary approval from PESO, if applicable.
4. The PP shall follow the compliance of Public Liability Insurance Act, 1991.
5. The PP shall carry the isolated storage of each chemical to be stored with the existing precautions as per the MSHIC Rules, 1989 and abide by all conditions of MSDS.
6. The Approval of the Competent Authority shall be obtained for structural safety of building code due to earthquakes, adequacy of fire fighting equipments etc. as per National Building Code including protection measures from lightening etc.
7. The PP shall ensure that total EMP Budget shall be spent on project during construction as well as during operational phase as per table given above. The EMP cost on Socio Economic activities shall be used before the commencement of the project & EMP recurring inside the project shall be implemented throughout the operation of the project.
8. The PP and consultant agree to display the First Aid measure, Fire Fighting Measure, Accidental Release measure, Exposure and control (Personal Measure) at the site.
9. The project proponent shall upload the status of compliance of the basic details (given in above tables), stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
10. Sewage shall be treated in the STP based on latest Technology with tertiary treatment i.e. Ultra Filtration. The Treated effluent from STP shall be recycled/ reused for flushing, DG cooling, Gardening and HVAC.
11. The PP shall comply with provisions of Occupational Safety health and working conditions Code 2019.
12. The Project Proponent would devise a monitoring plan to the satisfaction of the State Pollution Control Board so as to continuously monitor the treated waste water being used for flushing in terms of faecal coli forms and other pathogenic bacteria.
13. The Project Proponents would commission a third party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.

- environmental audits shall be conducted and maintained the records of audit. These audits shall be followed by Corrective action plan to correct the various measures identified during the audits (CAP).
16. Traffic management plan as submitted shall be implemented in letter and spirit. Apart, a detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 km radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habilitation being carried out or purpose to be carried out by the project or other agencies in this 05kms radius of the site in different scenarios of space and time.
  17. The PP shall provide the Anti-smog gun mounted on vehicle in the project for suppression of dust during construction phase and shall use the treated water, if feasible.
  18. The PP shall install the Eco-Friendly Green Transformer based on ester oil to reduce the carbon footprint. The PP shall shift to gas-based generator set when the gas is available. The PP shall install APCM for the DG set. The PP shall reduce the SO<sub>2</sub> load by 30% if HSD is used.
  19. The PP shall not carry any construction below the HT Line passing through the project, if any.
  20. The PP shall not carry any construction above or below the Revenue Rasta, if any.
  21. The PP shall obtain the permission regarding withdrawal of ground water from CGWA/State water Authority, Haryana before the start of the project and also obtained the CTO from HSPCB after the approval from CGWA.
  22. The PP shall not allow parking of the vehicles on the roads or revenue Rasta outside the project area.
  23. The PP shall not give occupation or possession before the water supply and sewage connection permitted by the competent authority.
  24. The PP shall develop the onsite and offsite emergency plan in consultation with the regulatory authority.
  25. The PP shall install Digital water level recorder for monitoring the water recharge and carry out quarterly maintenance and cleaning of RWH pits.
  26. The PP shall ensure the compliance of provisions of Plastic Waste Management (Amendment) Rules, 2022 relevant for the project.
  27. The PP may provide electric charging stations to facilitate electric vehicle commuters.
  28. PP shall submit timeline regarding implementation of green plan, RWH.
  29. The PP shall not allow establishment of any category A or B type industry in the project area.
  30. The PP shall carry out the quarterly awareness programs for the staff.
  31. Any change in stipulations of EC will lead to Environment Clearance void-ab-initio and PP will have to seek fresh Environment Clearance.
  32. The PP shall comply with provisions of Manufacturing storage and import of Hazardous chemical rules.
  33. No tree cutting has been proposed in the instant project. A minimum of 1 tree for every 80sqm of land should be planted and maintained. The Existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable **588,227.77 sq.m (@ 20%)** shall be provided for green area development.
  34. The PP shall install solar power capacity of **50 MW**.
  35. The PP shall adopt a pond **Rasar 1 (Pond ID 01-HR-SPT-KKD-0013-G-OPA-001)** for its **maintenance and rejuvenation**.

O/C

*Waseem*  
(Dr. Virender Kumar Dahiya IAS)  
Member Secretary,  
State Level Environment Impact  
Assessment Authority, Haryana, Panchkula



2. Chairman, State Environment Impact Assessment Authority, Bay No. 55-58, Prayatan Bhawan, Sector-2, Panchkula, Haryana
3. Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula.
4. Director, Environment & Climate Change Department, Haryana, Bay's No. 55-58, 1st floor, Paryatan Bhawan, Sector-2, Panchkula, Haryana
5. Director General, Town & Country Planning Haryana, Plot No. 3, Sector - 18A, Madhya Marg, Chandigarh- 160018.
6. Regional Office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh-160018.
7. Concerned File/ Office Copy.

o/c

*W. S. Dahiya*  
(Dr. Virender Kumar Dahiya IAS)  
Member Secretary,  
State Level Environment Impact  
Assessment Authority, Haryana, Panchkula

✓





**File No: SEAC/HR/2024/045**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(Issued by the State Environment Impact Assessment**  
**Authority(SEIAA), HARYANA)**

\*\*\*



Date 28/05/2024



To,

MARUTI SUZUKI INDIA LIMITED  
Old Palam Gurgaon Road , Gurugram, GURUGRAM, HARYANA, , 122015  
madan.bansode@maruti.co.in

**Subject:** EC for Proposed Expansion of Industrial Shed for Automobile Manufacturing (Integrated Facilities) Unit situated at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat, Haryana

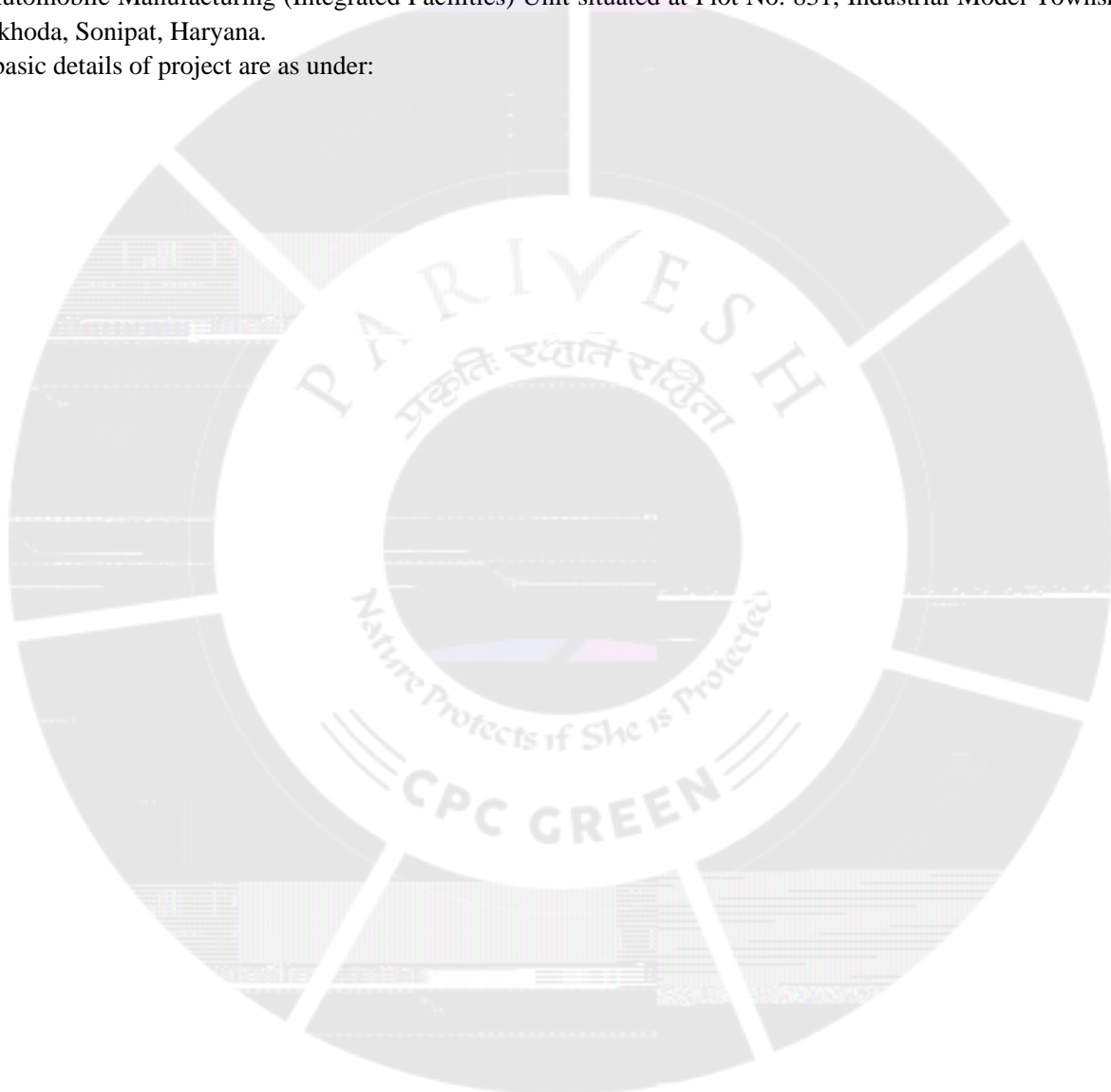
**Sir/Madam,**

This is in reference to your application submitted to SEIAA vide proposal number SIA/HR/INFRA2/457883/2024 dated 29/01/2024 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24B3813HR5187061N
(ii) File No.	SEAC/HR/2024/045
(iii) Clearance Type	Fresh EC
(iv) Category	B1
(v) Project/Activity Included Schedule No.	8(b) Townships/ Area Development Projects / Rehabilitation Centres Proposed expansion of Industrial shed for Automobile Manufacturing (Integrated facilities)
(vii) Name of Project	Unit situated at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat, Haryana, Pincode-131402
(viii) Name of Company/Organization	MARUTI SUZUKI INDIA LIMITED
(ix) Location of Project (District, State)	SONIPAT, HARYANA
(x) Issuing Authority	SEIAA
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. In This has reference to your Proposal No. SIA/HR/INFRA2/457883/2024 dated 29.01.2024 and subsequent letter dated 05.03.2024 for obtaining Environmental Clearance under category 8(b) of EIA Notification dated 14.09.2006 along with submission of **due Scrutiny fee (as applicable) of 2,00,000/- vide DD No. 509359 dated 16.08.2023 (in compliance of Haryana Government, Environment & Climate Change, Department Notification No. DE&CCH/3060 dated 14.10.2021).** The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., Form-1, Form1-A, Conceptual Plan, EIA/EMP Report on the basis of Approved ToR and additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MoEF& CC, GoI vide their Notification dated 21.02.2022, in its meeting held on 07.02.2024 and 13.03.2024 and recommended this project to SEIAA for Grant of Environment Clearance.
4. It is inter-alia, noted that the project involves the Environment Clearance for Proposed Expansion of Industrial Shed for Automobile Manufacturing (Integrated Facilities) Unit situated at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat, Haryana.
5. The basic details of project are as under:



Sr. No.	Particulars	Phase-1	Phase-2	Total
1.	Online Proposal no.	SIA/HR/INFRA2/457883/2024		
2.	Latitude	28°49'56.15" N		
3.	Longitude	76°55'42.79" E		
4.	Plot Area	30,33,122	-92,458.55	2940663.45 sqm
5.	Total FAR Proposed	13.28	22.80	36.08%
6.	Total Built Up area	390,600	670,446	1061046 sqm
7.	Total Green Area with Percentage	229,024.12	359203.65	588,227.77 sq. m. (i.e., 20% of plot area)
8.	Rain Water Harvesting Potential (Lagoon capacity)	3,13,100		3,13,100 cum
9.	Proposed STP Capacity	1,680	1,680	3360 KLD
10.	Proposed ETP Capacity	5,040	5,040	10080 KLD
11.	Total Parking	122,846.08	37,541.51	160,387.59 sqm
12.	Power Requirement	42	48	90 MW
13.	GG set Backup	6150	3700	9850 KVA (Gas Based Generator)
14.	Total Water Requirement	10,380	8,198	18101 KLD
15.	Fresh Water Requirement	5,562	4,560	10122 KLD
16.	Wastewater Generation to ETP	4,380	2,096	6,476 KLD
17.	Recycled Water	4,818	3,161	7,979 KLD
18.	Wastewater Generation to STP	1,642	1,046	2,688 KLD
19.	Treated Water from STP	1,314	837	2,151 KLD
20.	Treated Water from ETP	3,504	2,324	5,828 KLD
21.	Solid Waste Generated	306	1632	1938TPA
22.	Biodegradable Waste	122	653	775 TPA
23.	No. of Floors	3	3	3
24.	Expected Population	7,700	9,994	17,694
25.	Plastic Waste	1030	1030	2060 TPA
26.	E-waste Generation	12.5	12.5	25 TPA
27.	Battery Waste	50	50	100 TPA
28.	Bio-Medical waste	1.25	1.25	2.5 TPA
29.	Non-biodegradable solid waste	184	979	1,163 TPA
30.	Hazardous waste generation	9,221	9,221	18,442 TPA
31.	Other Waste	72,210	72,210	144,420 TPA
32.	Dwelling unit	3101		3101
33.	Total Cost of the project:	16,886.7 Cr	20,772.88 Cr	37659.58 Cr
34.	SPV Capacity	30	20	50 MWp

**Table 2: Land Utilization of the project**

Land use type/Phase wise details	Phase-1 (Line-A&B) (Sq. m.)	Phase-2 (Line-C&D) (Sq. m.)	After expansion (sq. m.)
Production shed including workshop	383,028.57	518,089.20	901,117.77
Storage area of fuel	13,621.42	-	13,621.42
Storage area of product- SND	626,211.11	-	626,211.11
Storage area of Hazardous waste	2,541.38	-	2,541.38
Utility Area	74,088.50	-	74,088.50
Green Area	229,024.12	359,203.65	588,227.77
Others (please specify)	476,740.31	258,115.19	734,855.50
Total land area	<b>1,805,255.41</b>	<b>1,135,408.04</b>	<b>2,940,663.45</b>



**Table 3: Production details (Phase-1 & Phase-2)**

Sr. No.	Name of the product/ to be produced	Capacity	Production
1.	Passenger Cars and Utility Vehicles	Numbers/Day	4,286
2.	Transmission Assembly	Numbers/Day	5,714
3.	Engine Assembly	Numbers/Day	4,286

**Table 4 – EMP Details****During Construction Phase:**

S. No.	Component	Capital Cost (Million Rs.)	Recurring Cost (Million Rs. /Annum)
1	Barricading of the site	89.27	-
2	Dust Mitigation Measures	0.71	25.55
3	Site Sanitation + Temporary toilets	0.35	17.91
4	Disinfection/Pest Control		0.71
5	Labour Health Check Up & First Aid facility	1.18	21.95
6	Labor Welfare	28.62	56.21
7	Wheel washing	2.66	0.04
8	Waste Storage Bins-Labour Camp/Site offices	0.01	-
9	Traffic Management Signages	0.12	-
10	Safety Training to workers	5.90	4.25
11	Environment Monitoring	0.89	-
<b>TOTAL</b>		<b>129.71</b>	<b>126.62</b>

**During Operational Phase:**

S. No.	Component	Capital Cost (Million Rs.)	Recurring Cost (Million Rs./Annum)
1	Effluent Treatment Plant	583.52	66.88
2	ZLD system	355.6	66.88
3	Sewage Treatment Plant	332.46	50.16
4	Solid waste storage bins + Composter unit	2.2	0.5
5	Green Area Development (Tree Plantation & Land Scaping)	302.6	19.2
6	Solar Power Plant (30 + 20 MWp)	3418.75	8.28
7	Pollution control devices	246.092	17.38
8	Bio-gas plant	1350	94
9	Handling & disposal of co-processing waste	106	97.261
10	Rainwater Harvesting Structures (Including Lagoons)	422.6	2.5
11	Environment monitoring	2.5	0.7
12	One-time financial contribution HPWWMA for the rejuvenation of pond as per below details. Name of pond: Rasar 1 Pond UID: 01HRSPTKKD0013GOPA001	~ 3.6	-
<b>Total</b>		<b>7,125.92</b>	<b>423.74</b>

Proposed CSR activities under section 135 of Companies Act, 2013

Development of classes in Kundal and Rampur village

Approx. 20 Million

6. In view of the recommendations made by State Expert Appraisal Committee (SEAC) in the said case and further consideration of the documents/details submitted by the Project Proponent; the Authority after discussions decided during **172<sup>nd</sup> Meeting held on 09.05.2024** to “**GRANT ENVIRONMENT CLEARANCE**” to M/s Maruti Suzuki India Ltd. (as per the regular letter of allotment issued by HSIIDC Reference No.HSIIDC:RLA2022MAR03484/5676 dated 31.03.2022) under **Category 8(b)** within the scope and meaning of EIA Notification dated 14.09.2006 issued by the Ministry of Environment and Forest, Government of India.

**Copy To**

1. Director (IA Division), MoEF& CC, GoI, Indira Paryavaran Bhavan, Zorbagh Road- New Delhi-110003.
2. Chairman, State Environment Impact Assessment Authority, Bay No. 55-58, Prayatan Bhawan, Sector-2, Panchkula, Haryana
3. Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula.
4. Director, Environment & Climate Change Department, Haryana, SCO 1-3, Sector-17 D, Chandigarh-160017
5. Director General, Town & Country Planning Haryana, Plot No. 3, Sector - 18A, Madhya Marg, Chandigarh- 160018.
6. Regional Office, Ministry of Environment, Forests & Climate Change, Govt. of India, Bay's No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh-160018.
7. Concerned File/ Office Copy

**Annexure 1****Specific EC Conditions for (Townships/ Area Development Projects / Rehabilitation Centres)****1. Additional Condition**

S. No	EC Conditions
1.1	<b>1. E-Waste, plastic waste and battery waste will be disposed through authorized recycle of HSPCB/CPCB.</b>
1.2	<b>Bio-Medical waste will be disposed through common Bio-medical treatment and disposal facility(CBWTF) authorized by HSPCB/CPCB.</b>
1.3	The project is recommended on concept basis as such in case of any change in planning, the PP will obtain fresh EC.
1.4	Sewage shall be treated in the STP on latest Technology to achieve standards ordered by NGT. The Treated effluent from STP shall be recycled /reused for flushing, DG cooling and Gardening
1.5	The PP should not mix the ETP effluent after treatment in the STP and ETP effluent shall be separately utilized for the purposes
1.6	The Project Proponent would devise a monitoring plan to the satisfaction of the State Pollution

S. No	EC Conditions
	Control Board so as to continuously monitor the treated waste water being used for flushing in terms of faecal coli forms and other pathogenic bacteria.
1.7	The PP shall ensure that total EMP Budget shall be spent on project during construction as well as during operational phase as per table given above. The EMP cost on Socio Economic activities shall be used before the commencement of the project & EMP recurring inside the project shall be implemented throughout the operation of the project. The PP shall establish Environment monitoring cell as per documents submitted.
1.8	The PP shall not carry out any construct above and below revenue rasta if passing through the project and ensure that permission of the competent authority shall be obtained before carry out any construction above or below the revenue rasta. The PP shall put notice board on the revenue rasta for the passer byes
1.9	The project proponent shall upload the status of compliance of the basic details (given in above tables), stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
1.10	The Project Proponents would commission a third party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.
1.11	Separate wet and dry bins must be provided in each unit and at ground level for facilitating segregation of waste. Solid Waste shall be segregated into wet garbage and inert materials. Wet Garbage shall be composted in Organic waste convertor. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The Inert waste from the project will be sent to solid waste dumping site through authorized vender.
1.12	Traffic management plan as submitted shall be implemented in letter and spirit. Apart, a detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is marinated and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or purpose to be carried out by the project or other agencies in this 05kms radius of the site in different scenarios of space and time
1.13	No tree cutting has been proposed in the instant project. A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The Existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping
1.14	The Project Proponent shall obtain all necessary clearance/permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.

S. No	EC Conditions
1.15	Consent to establish/operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of pollution) Act, 1981 and the Water (Prevention and control of pollution) Act, 1974.
1.16	The Approval of the Competent Authority shall be obtained for structural safety of building code due to earthquakes, adequacy of fire fighting equipments etc. as per National Building Code including protection measures from lightening etc.
1.17	The PP shall obtain the Fire NOC from the Competent Authority before taking the occupation of the building
1.18	The PP shall install the Eco Friendly Green Transformer based on ester oil to reduce the carbon footprint. The PP shall shift to gas based generator set when the gas is available. The PP shall install APCM for the DG set
1.19	The PP shall not mix ETP treated effluent with STP water
1.20	The PP Shall comply with SOP for reduction of Air and Noise pollution during construction and operation phase
1.21	The PP shall follow SOP regarding single use plastic free
1.22	The PP shall follow the SOP for reduction of carbon footprints
1.23	PP shall not mix ETP treated effluent with STP treated effluent and MEE should be installed to evaporate ETP treated water
1.24	The PP shall obtain the permission regarding withdrawal of ground water, if any from HWRA/CGWA before the start of the project and also obtained the CTO from HSPCB after the approval from HWRA/CGWA.
1.25	The PP shall carry out the quarterly awareness programs for the stakeholders of the project.
1.26	The PP shall install Digital water level recorder for monitoring the water recharge and carry out quarterly maintenance and cleaning of RWH pits
1.27	The PP shall ensure the compliance of provisions of Plastic Waste Management (Amendment) Rules, 2022 relevant for the project.
1.28	The PP may provide electric charging stations to facilitate electric vehicle commuters.
1.29	The PP shall take all preventive measures including water sprinkles to control dust during



S. No	EC Conditions
	construction and operational phase.
1.30	Any change in stipulations of EC will lead to Environment Clearance void-ab-initio and PP will have to seek fresh Environment Clearance.
1.31	The PP is required to plant 10 times trees at the project site and compensatory tree plantation will be done @1:10. No tree cutting has been proposed in the instant project. A minimum of 1 tree for every 80sqm of land should be planted and maintained. The Existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed 103413.87 m2 (30% of planned area) shall be provided for green area development
1.32	The PP shall provide solar power as per HAREDA norms
1.33	90 Rain water harvesting tank shall be provided for ground water recharging as per the CGWB norms.
1.34	The PP shall install required number of Anti Smog Guns at the project site as per the requirement of HSPCB.
1.35	The PP shall register themselves on <a href="https://dustapphspcb.comportal">https://dustapphspcb.comportal</a> as per the Direction No. 14 dated 11.06.2021 issued regarding dust mitigation by Commission for Air Quality Management in National Capital Region and Adjoining Areas.

**Standard EC Conditions for (Townships/ Area Development Projects / Rehabilitation Centres)**

**1. Statutory Compliance**

S. No	EC Conditions
1.1	The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
1.2	The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
1.3	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1980, in case of the diversion of forest land for non-forest purpose involved in the project.
1.4	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

S. No	EC Conditions
1.5	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.
1.6	The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.
1.7	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
1.8	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
1.9	The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the Plastics Waste Management Rules, 2016, shall be followed.
1.10	The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.

## 2. Air Quality Monitoring And Preservation

S. No	EC Conditions
2.1	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
2.2	A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.
2.3	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5) covering upwind and downwind directions during the construction period.
2.4	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
2.5	Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
2.6	Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust

S. No	EC Conditions
	pollution.
2.7	Wet jet shall be provided for grinding and stone cutting.
2.8	Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
2.9	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules 2016.
2.10	The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.
2.11	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
2.12	For indoor air quality the ventilation provisions as per National Building Code of India.

### 3. Water Quality Monitoring And Preservation

S. No	EC Conditions
3.1	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.
3.2	Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
3.3	Total fresh water use shall not exceed the proposed requirement as provided in the project details.
3.4	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
3.5	A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.
3.6	At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.

S. No	EC Conditions
3.7	Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
3.8	Use of water saving devices/fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.
3.9	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
3.10	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
3.11	The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.
3.12	A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for reuse. The ground water shall not be withdrawn without approval from the Competent Authority.
3.13	All recharge should be limited to shallow aquifer.
3.14	No ground water shall be used during construction phase of the project.
3.15	Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.
3.16	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.
3.17	Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.
3.18	No sewage or untreated effluent water would be discharged through storm water drains.
3.19	Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.



S. No	EC Conditions
3.20	Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
3.21	Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

#### 4. Noise Monitoring And Prevention

S. No	EC Conditions
4.1	Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.
4.2	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
4.3	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

#### 5. Energy Conservation Measures

S. No	EC Conditions
5.1	Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.
5.2	Outdoor and common area lighting shall be LED.
5.3	Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
5.4	Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.
5.5	Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.
5.6	Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20%

S. No	EC Conditions
	of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

## 6. Waste Management

S. No	EC Conditions
6.1	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.
6.2	Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
6.3	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.
6.4	Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.
6.5	All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.
6.6	Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
6.7	Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environment friendly materials.
6.8	Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.
6.9	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
6.10	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

## 7. Green Cover

S. No	EC Conditions
7.1	No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling

S. No	EC Conditions
	shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).
7.2	A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.
7.3	Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.
7.4	Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

## 8. Transport

S. No	EC Conditions
8.1	A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria. a. Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. b. Traffic calming measures. c. Proper design of entry and exit points. d. Parking norms as per local regulation.
8.2	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

## 9.

S. No	EC Conditions
9.1	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

## 10. Human Health Issues

S. No	EC Conditions
10.1	All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
10.2	For indoor air quality the ventilation provisions as per National Building Code of India.
10.3	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
10.4	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.
10.5	Occupational health surveillance of the workers shall be done on a regular basis.
10.6	A First Aid Room shall be provided in the project both during construction and operations of the project.

#### 11. Miscellaneous

S. No	EC Conditions
11.1	The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed.
11.2	ii. 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.
11.3	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.
11.4	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.
11.5	The company shall have a well laid down environmental policy duly approved 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 regard shall be submitted to the MoEF&CC as a part of six-monthly report.
11.6	A separate Environmental Cell both at the project and company head quarter level, with qualified



S. No	EC Conditions
	personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
11.7	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
11.8	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.
11.9	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.
11.10	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
11.11	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the Expert Appraisal Committee.
11.12	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).
11.13	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.
11.14	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
11.15	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
11.16	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.
11.17	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.
11.18	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.

## 12. Specific Conditions

S. No	EC Conditions
12.1	The project proponent shall develop R& D facilities to develop their own technologies for propylene and polypropylene processing.

### Additional EC Conditions

N/A



MSIL:BU-K:VEH:ENV-K:2025-26:019

26-Nov-2025

To  
Ministry of Environment, Forest, and Climate Change  
Integrated Northern Regional Office  
Bays No 24-25, Sector – 31 A  
Dakshin Marg  
Chandigarh - 160030

**Sub:** Half yearly report for the Compliance of the conditions given in the Environmental Clearance for proposed expansion of Industrial shed for Automobile Manufacturing (Integrated Facilities) Unit situated at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat, Haryana

**Ref:** Environment Clearance Letter from MoEFCC (SEIAA), Haryana vide File No. SEAC/HR/2024/045 & EC identification no. EC24B3813HR5187061N dated 28.05.2024 & Memo No: SEIAA(179)/HR/2024/252 dated 27<sup>th</sup> August 2024.

Dear Sir,

Enclosed please find herewith the half yearly report for the period of April'25 to September'25, related to environmental clearance issued for our proposed expansion of Industrial shed for Automobile Manufacturing (Integrated Facilities) Unit situated at Industrial Model Township (IMT) Kharkhoda, Sonipat, Haryana.

Thanking You.

Yours Faithfully



Vishal Rathore  
Assistant General Manager  
Maruti Suzuki India Limited, Kharkhoda

**Maruti Suzuki India Limited**  
Plot No. -831, IMT Kharkhoda  
Sonipat, Haryana

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CIN: L34103DL1981PLC011375

# **“Six Monthly Compliance Report”**

**April'25 to September'25**

**For the conditions stipulated in  
Environment Clearance issued for  
Proposed expansion of Industrial  
shed for Automobile Manufacturing  
(Integrated Facilities) Unit at IMT  
Kharkhoda, Sonipat, Haryana**



**Submitted by-**

**M/s Maruti Suzuki India Limited,  
Gurugram Plant, Palam Gurugram Road  
Gurugram-122015, Haryana**



**MARUTI SUZUKI INDIA LIMITED, KHARKHODA, HARYANA****Ref: Environment clearance from MOEF - EC Identification No. EC24B3813HR5187061N dated :28-May-2024 & Memo no.: SEIAA (179)/HR/2024/252 dated: 27-Aug-2024**

SN.	Stipulated Condition in Environment Clearance	Compliance Status
<b>Specific Conditions</b>		
1	E-Waste, plastic waste and battery waste will be disposed through authorized recycle of HSPCB/CPCB.	Noted.
2	Bio-Medical waste will be disposed through common Bio-medical treatment and disposal facility (CBWTF) authorized by HSPCB/CPCB.	Noted.
3	The PP shall take the necessary approval from PESO, if applicable	The PESO approval has been taken for storage of fuel and raw material. The same is attached to <i>Annexure-1</i> .
4	The PP shall follow the compliance of Public Liability Insurance Act, 1991	The copy of the PLI insurance is attached as <i>Annexure-2</i> .
5	The PP shall carry the isolated storage of each chemical to be stored with the existing precautions as per the MSHIC Rules, 1989 and abide by all conditions of MSDS	Noted.
6	The Approval of the Competent Authority shall be obtained for structural safety of building code due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.	To be complied after building completion.
7	The PP shall ensure that total EMP Budget shall be spent on project during construction as well as during operational phase as per table given above. The EMP cost on Socio Economic activities shall be used before the commencement of the project & EMP recurring inside the project shall be implemented throughout the operation of the project.	Noted.
8	The PP and consultant agree to display the First Aid measure, Fire Fighting Measure, Accidental Release measure, Exposure and control (Personal Measure) at the site.	First aid measures, firefighting measures and emergency response measures are displayed at all relevant sites.
9	The project proponent shall upload the status of compliance of the basic details (given in above tables), stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Noted.
10	Sewage shall be treated in the STP based on latest Technology with tertiary treatment i.e. Ultra Filtration. The Treated effluent from STP shall be recycled/ reused for flushing. DG cooling, Gardening and HVAC.	MSIL has installed captive sewage treatment plant (STP) within the premises with Membrane Bioreactor (MBR) technology. The treated effluent is meeting the prescribed parameters of HSPCB and is used for horticulture & toilet flushing purpose.

11	The PP shall comply with provisions of Occupational Safety health and working conditions Code 2019.	MSIL is complying with the provision of Factories Act 1948 which is applicable for factory premises. The Occupational Safety health and working conditions code 2019 is yet to be notified at state level. We will ensure to take all necessary measures of the law after the implementation of final notification.
12	The Project Proponent would devise a monitoring plan to the satisfaction of the State Pollution Control Board so as to continuously monitor the treated waste water being used for flushing in terms of faecal coli forms and other pathogenic bacteria.	The STP treated effluent shall meet the prescribed standard of the Haryana State Pollution Control Board (HSPCB) before being used for horticulture and toilet flushing.
13	The Project Proponents would commission a third party study on the implementation of conditions related to quality and quantity of recycle and reuse of treated water, efficiency of treatment systems, quality of treated water being supplied for flushing (specially the bacterial counts), comparative bacteriological studies from toilet seats using recycled treated waters and fresh waters for flushing, and quality of water being supplied through spray faucets attached to toilet seats.	The third-party study related to efficiency of treatment plants has been carried out. The same is attached as <i>Annexure-14</i> .
14	Separate wet and dry bins must be provided for facilitating segregation of waste. Solid Waste shall be segregated into wet garbage and inert materials. Wet Garbage shall be composted in Organic waste convertor. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The Inert waste from the project will be sent to solid waste dumping site through authorized vender.	Adequate area is allotted for solid waste management within the premises. The wet garbage will be stored and used in the captive bio gas plant, until then it is being sent to authorized vendors.
15	The PP shall implement the EMP and assess that the implemented EMP is adequate and periodic environmental audits shall be conducted and maintained the records of audit. These audits shall be followed by Corrective action plan to correct the various measures identified during the audits (CAP).	Being Complied.
16	Traffic management plan as submitted shall be implemented in letter and spirit. Apart, a detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 km radius of the project is marinated and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habilitation being carried out or purpose to be carried out by the project or other agencies in this 05kms radius of the site in different scenarios of space and time.	Traffic management plan shall be prepared & implemented by HSIIDC, Kharkhoda, Sonipat. Letter regarding the same submitted in HSIIDC office. Acknowledgement attached as <i>Annexure-12</i> .
17	The PP shall provide the Anti-smog gun mounted on vehicle in the project for suppression of dust during construction phase and shall use the treated water, if feasible.	Anti-smog guns as per the requirement of CAQM are provided at the construction sites of the project.

18	The PP shall install the Eco-Friendly Green Transformer based on ester oil to reduce the carbon footprint. The PP shall shift to gas-based generator set when the gas is available. The PP shall install APCM for the DG set. The PP shall reduce the SO2 load by 30% if HSD is used.	Gas based generators shall be used during operation phase. APCM such as installation of RECD and CPCB IV compliant generator sets are being used. All emission standards prescribed by the Commission for Air Quality Management (CAQM) and Environment (Protection) Act, 1986 are being followed.
19	The PP shall not carry any construction below the HT Line passing through the project, if any.	Complied.
20	The PP shall not carry any construction above or below the Revenue Rasta, if any.	Complied.
21	The PP shall obtain the permission regarding withdrawal of ground water from CGWA/State water Authority, Haryana before the start of the project and also obtained the CTO from HSPCB after the approval from CGWA.	Noted.
22	The PP shall not allow parking of the vehicles on the roads or revenue Rasta outside the project area.	Complied.
23	The PP shall not give occupation or possession before the water supply and sewage connection permitted by the competent authority	Water supply permission has been obtained from Haryana State Industrial & Infrastructure Development Corporation Ltd.
24	The PP shall develop the onsite and offsite emergency plan in consultation with the regulatory authority.	Noted.
25	The PP shall install Digital water level recorder for monitoring the water recharge and carry out quarterly maintenance and cleaning of RWH pits.	Noted.
26	The PP shall ensure the compliance of provisions of Plastic Waste Management (Amendment) Rules, 2022 relevant for the project.	Complied
27	The PP may provide electric charging stations to facilitate electric vehicle commuters.	Electric charging stations to be provided in visitor car parking.
28	PP shall submit timeline regarding implementation of green plan, RWH	The timeline and green area plan are already submitted to authority during the EC application.
29	The PP shall not allow establishment of any category A or B type industry in the project area.	Noted.
30	The PP shall carry out the quarterly awareness programs for the staff.	Being Complied.
31	Any change in stipulations of EC will lead to Environment Clearance void-ab-initio and PP will have to seek fresh Environment Clearance.	Noted

32	The PP shall comply with provisions of Manufacturing storage and import of Hazardous chemical rules	Being Complied.
33	No tree cutting has been proposed in the instant project. A minimum of 1 tree for every 80sqm of land should be planted and maintained. The Existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable 588,227.77 sq.m (@ 20%) shall be provided for green area development.	Green area is being developed as per the layout attached as <b>Annexure-3</b> .
34	The PP shall install solar power capacity of 50 MWp	Solar power plant is being installed in a phased manner.
35	The PP shall adopt a pond Rasar 1 (Pond ID 01-HR-SPT-KKD-0013-G-OPA-001) for its maintenance and rejuvenation.	The one-time fees for maintenance of pond Rasar 1 (Pond ID 01-HR-SPT-KKD-0013-G-OPA-001) has been submitted to the Haryana Pond & Waste Water Management Authority. Copy of Cover Letter regarding successful payment submitted to the said authority is attached as <b>Annexure-4</b> .
<b>Statutory Compliance</b>		
1	The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.	All necessary permissions from all relevant agencies have been taken.
2	The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of fire fighting equipment etc. as per National Building Code including protection measures from lightening etc.	Undertaking by the Design architect for structural safety and adequacy report for firefighting equipment have been obtained. The copy of the same are attached as <b>Annexure-5</b> .
3	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.	Not applicable, as the project is situated in the declared Industrial Estate of HSIIDC at IMT Kharkhoda.
4	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Noted
5	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 Haryana State Pollution Control Board/ Committee.	Consent to Establish and Consent to Operate under Air & Water Acts have been obtained on 17.07.2025 for Phase I.
6	The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.	MSIL is not proposing any ground water withdrawal from MSIL project at Kharkhoda, hence the permission from HWRA authority is not applicable.The consent to operate (CTO) has been obtained on 17.07.2025 for Phase I.
7	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.	Assurance letter from Hayana Vidhyut Prasaran Nigam Ltd. (HVPNL) has been obtained. The same has been attached for as <b>Annexure-6</b> .



8	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.	All necessary permissions from the relevant agencies have been obtained.
9	The provisions of the Solid Waste (Management) Rules, 2016, e-Waste (Management) Rules, 2016, the Plastics Waste (Management) Rules, 2016 shall be followed.	Being Complied.
10	The project proponent shall follow the ECBC Act/ECBC-Rules prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.	All applicable ECBC Act/ ECBC Rules are being complied.
<b>Air Quality Monitoring and Preservation</b>		
1	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.	All dust mitigation measures as per Notification GSR 94(E) dated 25.01.2018 of MoEF&CC are being complied with.
2	A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.	Dust mitigation measures as well as measures mentioned in the EMP are being followed to contain any exceedance in ambient air quality at site.
3	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5) covering upwind and downwind directions during the construction period.	During the construction phase, PM <sub>2.5</sub> and PM <sub>10</sub> sensors are installed at sites for continuous monitoring.
4	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of ultra low sulphur diesel shall be ensured for DG sets. The location of the DG sets may be decided with in consultation with State Pollution Control Board.	Gas generators (GG) sets are installed at site for operations. The stack height of GG sets is as per CPCB norms.
5	Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3 meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.	All dust mitigation measures as per MoEF&CC Notification GSR 94(E) dated 25.01.2018 of MoEF&CC are implemented at the construction site.
6	Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.	Complied.
7	Wet jet shall be provided for grinding and stone cutting.	Complied.
8	Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.	Complied.

9	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules 2016.	C & D waste is being sent to an authorized recycling facility.
10	The diesel generator sets to be used during construction phase shall be ultra low sulphur diesel type and shall conform to Environmental (Protection) prescribed for air and noise emission standards.	Diesel generator sets used during construction phase are complying with the emission norms as mentioned in the EP Act 1986 and noise standards.
11	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Ultra low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.	Gas based generators are installed at site for operations. The stack height of GG are as per CPCB norms.
12	For indoor air quality the ventilation provisions as per National Building Code of India.	Ventilation and fresh air supply is as per National Building Code of India.

#### Water Quality Monitoring and Preservation

1	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.	Noted and complied with.									
2	Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.	Noted.									
3	Total fresh water use shall not exceed the proposed requirement as provided in the project details.	Noted and complied with.									
4	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF& CC along with six monthly Monitoring reports.	<p>The quantity of fresh water usage and water recycling is being monitored regularly.</p> <table border="1"> <thead> <tr> <th>SN.</th><th>Parameter</th><th>Quantity (m<sup>3</sup>)</th></tr> </thead> <tbody> <tr> <td>1</td><td>Fresh Water</td><td>195,240</td></tr> <tr> <td>2</td><td>Water Recycled</td><td>162,938</td></tr> </tbody> </table>	SN.	Parameter	Quantity (m <sup>3</sup> )	1	Fresh Water	195,240	2	Water Recycled	162,938
SN.	Parameter	Quantity (m <sup>3</sup> )									
1	Fresh Water	195,240									
2	Water Recycled	162,938									
5	A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.	Water assurance letter is obtained from the HSIIDC, IMT Kharkhoda. A copy of the same is attached as <i>Annexure-7</i> .									
6	At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.	Complied.									

7	Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.	Dual plumbing for fresh water and recycled water supply is provided.									
8	Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.	Low flow water fixtures have been used for all relevant areas. A certificate for the same is attached as <i>Annexure-8</i> .									
9	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.	Dual plumbing for fresh water and recycled water supply is provided.									
10	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Curing agents have been/ shall be used during construction phase.									
11	The local bye-law provisions on rain water harvesting should be followed. If local bye law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain Water Harvesting pits shall be provided for ground water recharging as per the CGWB norms.	The rain water shall be collected in temporary storage site and discharged in the HSIIDC storm water drain as per the plan.									
12	A rain water harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of built up area and storage capacity of minimum one day of total fresh water requirement shall be provided. In areas where ground water recharge is not feasible, the rain water should be harvested and stored for use. The ground water shall not be withdrawn without approval from the Competent Authority.	Due to the shallow depth of underground water table, it is not feasible to recharge the rain water. The adequate storage capacity for rain water has been provided within the premises and discharged in the HSIIDC storm water drain as per the plan. No ground water abstraction is proposed for the unit and only HSIIDC supply water shall be used.									
13	All recharge should be limited to shallow aquifer.	No recharge well are proposed in the unit due to high groundwater level.									
14	No ground water shall be used during construction phase of the project.	Complied.									
15	Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.	Noted.									
16	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six monthly Monitoring reports.	<p>The quantity of fresh water usage and water recycling is being monitored regularly.</p> <table border="1"> <thead> <tr> <th>SN.</th><th>Parameter</th><th>Quantity (m<sup>3</sup>)</th></tr> </thead> <tbody> <tr> <td>1</td><td>Fresh Water</td><td>195,240</td></tr> <tr> <td>2</td><td>Water Recycled</td><td>162,938</td></tr> </tbody> </table>	SN.	Parameter	Quantity (m <sup>3</sup> )	1	Fresh Water	195,240	2	Water Recycled	162,938
SN.	Parameter	Quantity (m <sup>3</sup> )									
1	Fresh Water	195,240									
2	Water Recycled	162,938									
17	Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, AC make up water and gardening. As proposed, no treated water shall be disposed in to municipal drain.	Unit has STP plant within the premises. The STP treated water is being used for horticulture & toilet flushing purpose after meeting the prescribed limit.									

18	No sewage or untreated effluent water would be discharged through storm water drains.	Noted and complied with.
19	Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by Ministry of Environment, Forest and Climate Change. Natural treatment systems shall be promoted.	Unit has installed 70 m3/hr STP plant within the premises. The adequacy report is attached as <b>Annexure-14</b> . The STP treated water is being used for horticulture & toilet flushing purpose after meeting the prescribed limit.
20	Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.	Noted and complied with.
21	Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.	The sludge from Sewage treatment plant (STP) is being utilized as manure for the development of green area.

#### Noise Monitoring and Prevention

1	Ambient noise levels shall conform to residential area/commercial area both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB /SPCB.	Primary pollutants (PM <sub>2.5</sub> and PM <sub>10</sub> ) are monitored periodically during the construction phase. Necessary dust control measures are taken for the reduction of particulate matter.
2	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Ambient noise and work zone noise monitoring reports are attached as <b>Annexure-13</b> .
3	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.	Acoustic enclosures are provided in all Gas based gensets.

#### Energy Conservation Measures

1	Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.	All applicable ECBC Act/ ECBC Rules are being complied.
2	Outdoor and common area lighting shall be LED.	All lighting fixtures are LED based.
3	Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof R & U-values shall be as per ECBC specifications.	Concepts such as landscaping, building envelopes, appropriate fenestration etc. are used while designing the buildings for energy optimization.
4	Energy conservation measures like installation of CFLs/ LED for the lighting outside the building should be integral part of the project design and should be in place before project commissioning.	All exterior lightings are LED based and have been installed at site.



5	Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.	Solar power plant is being installed in phased manner.
6	Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.	The project is installing 50 MWp solar power plant in phased manner.
<b>Waste Management</b>		
1	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W generated from project shall be obtained.	Organic waste shall be used to feed inhouse bio-gas plant. Until then it is being sent to authorized vendor.
2	Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Construction waste is being sent to an authorized recycling facility.
3	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.	The solid waste is segregated and stored as per The Solid waste management rules 2016. Sufficient bins are provided within the plant premises.
4	Organic waste compost/Vermiculture pit/Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.	Organic waste shall be used to feed inhouse bio-gas plant. Until then it is being sent to the authorized vendor.
5	All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.	All non-biodegradable hazardous waste is being sent to authorized recyclers/Coprocessing.
6	Any hazardous waste generated during construction phase, shall be disposed of as per applicable rules and norms with necessary approvals of the State Pollution Control Board.	Complied.
7	Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials.	Being complied.
8	Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.	Being complied.
9	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.	The construction waste is being sent to the authorized recycling facility.

10	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.	The LED based lights are used within the plant premises. The same shall be disposed off via authorized recyclers.
<b>Green Cover</b>		
1	No tree can be felled/transplant unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).	The project is situated in an Industrial Estate developed by HSIIDC in IMT Kharkhoda.
2	A minimum of 1 tree (5' tall) for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping.	Green area is being developed as per the layout attached as <b>Annexure-3</b> .
3	Where the trees need to be cut with prior permission from the concerned local Authority, compensatory plantation in the ratio of 1:10 (i.e. planting of 10 trees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensured species (cut) to species (planted). Area for green belt development shall be provided as per the details provided in the project document.	The project is situated in an Industrial Estate developed by HSIIDC in IMT Kharkhoda.
4	Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.	Top soil was removed, stored and is being reused in landscape area development.
<b>Transport</b>		
1	A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria. a) Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. b) Traffic calming measures. c) Proper design of entry and exit points. d) Parking norms as per local regulation.	Traffic management plan shall be prepared & implemented by HSIIDC, Kharkhoda, Sonipat. Letter regarding same submitted in HSIIDC office. Acknowledgement attached as <b>Annexure-12</b> .
2	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.	All building material carrier trucks are PUC certified.

3	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.	Traffic management plan shall be prepared & implemented by HSIIDC, Kharkhoda, Sonipat. Letter regarding same submitted in HSIIDC office. Acknowledgement attached as <i>Annexure-12</i> .
<b>Human Health Issues</b>		
1	All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.	Complied.
2	For indoor air quality the ventilation provisions as per National Building Code of India.	Ventilation and fresh air supply is as per National Building Code of India.
3	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	The emergency preparedness plan is being implemented during the execution of the project.
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.	Facilities like canteen, mobile toilets, safe drinking water, medical health care have been provided onsite for construction labours.
5	Occupational health surveillance of the workers shall be done on a regular basis.	Regular occupational health checkups are being carried out.
6	A First Aid Room shall be provided in the project both during construction and operations of the project.	The First Aid Room have been provided during construction phase. The same are being provided in the operational phase as well.
<b>Miscellaneous</b>		
1	The project proponent shall prominently advertise it at least in two local news papers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEFCC/SEIAA website where it is displayed.	Advertisement has been made in two local newspapers; 1. Dainik Jagran 2. The Tribune Newspaper clips are attached as <i>Annexure-9</i> .
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 30days from the date of receipt.	The copies are already submitted to nearby gram panchayat, municipal corporation, pollution control board and district commissioner office. Receiving copies have been attached as <i>Annexure-10</i> .
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.	Being Complied.

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.	Being Complied.
5	The company shall have a well laid down environmental policy duly approved 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 regard shall be submitted to the MoEF&CC as a part of six-monthly report.	The Environmental Policy duly approved by the management is attached as <i>Annexure-11</i> .
6	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 report to the head of the organization.	The separate Environment cell has been setup.
7	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.	The Environment Management plan (EMP) are already submitted to the authority. The EMP budget expenditure details are attached as <i>Annexure-15</i> .
8	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.	Environment Statement (Form V) is being submitted to Haryana State Pollution Control Board (HSPCB) within the prescribed timelines.
9	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 information shall be submitted to MoEFCC and HSPCB during the six monthly compliance report.
10	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Noted.
11	The project proponent shall abide by all the commitments and recommendations made in the form-IA, Conceptual Plan and also that during their presentation to the Expert Appraisal Committee.	Noted and complied with.
12	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).	Noted.



13	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.	Noted.
14	The Ministry/SEIAA may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.
15	The Ministry/SEIAA reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted.
16	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.
17	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 Trans boundary 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.	Necessary approval shall be taken for the start of operations under the relevant law.
18	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.

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE  
NORHTERN REGIONAL OFFICE  
CHANDIGARH

**DATA SHEET**

1.	Project Type: River Valley/ Mining / Industry/Refinery/Transportation/Tourisms/ Thermal /Nuclear/Other (Specify)	Industrial shed for Automobile Manufacturing (integrated facilities) Unit
2.	Name of the Project:	Proposed expansion of Industrial shed for Automobile Manufacturing (Integrated facilities) Unit situated at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat, Haryana, Pincode-131402
3.	Clearance letter (s)/O.M No. & dates:	1. EC Identification No. :EC24B3813HR5187061N dated 28.05.2024. 2. EC corrigendum memo no. SEIAA(179)/(HR)/2024/252 dated 27.08.2024.
4.	Location: a) District (s) b) State (s) c) Latitudes/longitudes	District: Sonipat State: Haryana Latitude: 28°49'56.15" N Longitude: 76°55'42.79" E
5.	Address for correspondence: a) Address for Correspondence  b) Address of executive Project In-charge	Vishal Rathore Assistant General Manager, Environment Management Maruti Suzuki India Limited Kharkhoda, Haryana Email: <a href="mailto:Vishal.Rathore@maruti.co.in">Vishal.Rathore@maruti.co.in</a> Phone 0124 – 2346721 ~ 30 Extn: 5017  Kazunari Yamaguchi Director, Maruti Suzuki India Limited Sonipat, Haryana Email: <a href="mailto:Kazunari.Yamaguchi@maruti.co.in">Kazunari.Yamaguchi@maruti.co.in</a>
6.	Salient features: a) Of the project b) Of the environmental management plans	Salient features of the project and Environment Management plan details are enclosed in Annexure A.
7.	Breakup of the project area: a) Submergence area: Forest & Non-forest. b) Others	Not Applicable.  The project is located inside the already defined industrial land of IMT Kharkhoda.
8.	Break up of project affected population with enumeration of those losing houses	Not Applicable.

	<p>/dwelling units and agricultural land only both dwelling units and agricultural land and landless labourers/artisans.</p> <p>a) SC/ST/Adivasis</p> <p>b) Others</p> <p>(Please Indicate whether these figures are based on any scientific and systematic survey carried out only provisional figures. If a survey has been carried out , give details and year of survey)</p>	
9.	<p>Financial details:</p> <p>a) Project cost as originally planned and subsequent revised estimates and the year of price reference.</p> <p>b) Allocations made for environmental management plans with item wise and year wise breakup.</p> <p>c) Benefit cost ratio /internal Rate of Return and the year of assessment.</p> <p>d) Whether (c) includes the cost of environmental management as shown in b) above.</p> <p>e) Actual expenditure incurred on the project so far.</p> <p>f) Actual expenditure incurred on the environment management plans so far.</p>	<p>Project Cost: Rs. 37,659.58 Cr</p> <p>Given in compliance report.</p> <p>-</p> <p>-</p> <p>-</p> <p>Given in compliance report.</p>
10.	<p>Forest land requirement:</p> <p>a) The status of approval for diversion of forest land for non- forestry use.</p> <p>b) The status of clear felling.</p> <p>c) The status of compensatory afforestation if any.</p> <p>d) Comments on the viability &amp; sustainability of compensatory afforestation program in the light of actual field experience so far.</p>	Not Applicable
11.	The Status of clear felling in the non-forest areas (Such as submergence area of non-reservoir, approach road) if any, with quantitative information.	Not Applicable
12.	<p>Status of Construction:</p> <p>a) Date of Commencement (actual and /or planned)</p> <p>b) Date of completion (actual and /or planned)</p>	The construction of the project is likely to be completed in 60 months after date start of construction of the project.
13.	Reasons for the delay if the project is yet to start:	Not applicable.

**SALIENT FEATURES OF PROJECT:**

1. Name of the Project : Industrial shed for Automobile Manufacturing, (integrated facilities) Unit.
2. Capacity : Passenger Cars & Utility Vehicles = 4286 nos./ annum  
Transmission Assembly = 5714 nos./ annum  
Engine Assembly = 4286 nos./ annum
3. Location : Maruti Suzuki India Limited, IMT Manesar.
4. Total project cost : Rs. 37,659.58 Crores
5. Land Area : **2940663.45** sq m

**ENVIRONMENTAL MANAGEMENT PLAN*****Water Pollution control:***

- Entire wastewater will be treated and reused for landscaping.
- Waste oil generated during maintenance of construction equipment will be collected and provided to approve waste oil recyclers for recycling and reuse.
- Municipal and other wastes generated at the proposed project will be collected and disposed suitability as per standards practices and regulatory requirement.
- Suitable drainage network would be made to ensure proper draining of wastewater from the construction sites, so that such water do not form stagnant pools nor aggravate soil erosion.

***Air Pollution control:***

- Water sprinkling and transporting construction materials with tarpaulin coverage during the construction stage. During the sub-grade construction, sprinkling of water will be carried out on regular basis during the entire construction period especially in the winter and summer seasons. Special attention will be given in the sections where the alignment passes through sensitive areas such as schools, hospitals, and urban areas. As soon as construction is over the surplus earth will be utilized properly and in no case, loose earth will be allowed to pile up along the alignment.
- All the vehicles used during the construction stage to have valid PUC certificate.
- Integration with the local government awareness campaign programs on good practices of vehicle maintenance etc. to reduce the air emissions.

***Noise Pollution Control:***

- Ear plugs and Earmuffs shall be provided to the workers at construction site.
- All the construction sites will be provided with barricades.
- Big foliage trees shall be planted around the periphery of the construction site.
- Provision of silencers at the exit of noise source on the machinery.
- Vehicles shall be properly maintained and serviced.

***Ground Water:***

- Rain water harvesting lagoons have been constructed to take care of surface run off and recharge the aquifers.

***Green belt development:***

- Adequate green area is being developed with local area species having capacities to reduce SPM and noise levels.



# **PESO Licenses**



भारत सरकार  
Government of India  
वाणिज्य और उद्योग मंत्रालय  
Ministry of Commerce & Industry  
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसो)  
Petroleum & Explosives Safety Organisation (PESO)  
हाल संख्या 502 एवं 507, लेवल-5, ब्लॉक II, पुराना सी.जी.ओ. कॉम्प्लेक्स, एन.एच.4  
फरीदाबाद- 121001  
Hall No. 502 & 507, Level 5, Block B,  
Old CGO Complex, NH-4,  
Faridabad - 121001

E-mail : [jtccefaridabad@explosives.gov.in](mailto:jtccefaridabad@explosives.gov.in)

Phone/Fax No : 0129 - 2410734, 2410732

संख्या /No. : P/NC/HN/16/145 (P557736)

दिनांक /Dated : 01/07/2024

सेवा में /To,

M/s. MARUTI SUZUKI INDIA LIMITED,  
Plot no.831,  
IMT Kharkhoda,  
Taluka: Kharkhoda,  
District: SONIPAT,  
State: Haryana  
PIN: 131402

विषय /Sub Plot No, 831, IMT KHARKHODA, MARUTI SUZUKI CHOWK, kharkhoda, Taluka: Kharkhoda, District: SONIPAT, State: Haryana, PIN: 131402 में प्रस्तावित पेट्रोलियम  
: वर्ग A भंडारण शेड - अनुज्ञप्ति जारी करने के संबंध में।

Petroleum Class A Storage Shed at Plot No, 831, IMT KHARKHODA, MARUTI SUZUKI CHOWK, kharkhoda, Taluka: Kharkhoda, District: SONIPAT, State: Haryana, PIN: 131402 - Regarding Grant of licence

महोदय  
/Sir(s),

कृपया आपके पत्र क्रमांक OIN1698756 दिनांक 24/06/2024 का अवलोकन करें।

Please refer to your letter No. OIN1698756 dated 24/06/2024.

विषयान्तर्गत परिसर में निम्नलिखित पेट्रोलियम पदार्थों के वर्ग तथा मात्रा के भंडारण के लिए पेट्रोलियम नियम, 2002 के अधीन प्ररूप - XVI में जारी, दिनांक 31/12/2027 तक वैध अनुज्ञप्ति संख्या P/NC/HN/16/145 (P557736) दिनांक 01/07/2024 अग्रपिंड की जा रही है।

Licence No. P/NC/HN/16/145 (P557736) dated 01/07/2024 granted in Form XVI under the Petroleum Rules, 2002 and valid till 31/12/2027 for the storage of the following kind and quantities of Petroleum at the subject premises is forwarded herewith.

पेट्रोलियम का विवरण /Description of Petroleum	किलोलीटरों में अनुज्ञप्ति क्षमता /Quantity licenced in KL
पेट्रोलियम वर्ग क /Petroleum Class A	25.00 KL
पेट्रोलियम वर्ग ख /Petroleum Class B	NIL
पेट्रोलियम वर्ग ग /Petroleum Class C	NIL
कुल क्षमता /Total Capacity	25.00 KL

रैफ़िनेट तथा स्लॉप (अधिग्रहण, विक्रय, भंडारण और ऑटोमोबाइल में उपयोग की रोकथाम) आवश्यकता/प्रावधान का कृपया पालन करें।

Please follow the requirement/provision of "Solvent, Raffinate and Slop (Acquisition, Sale, Storage & Prevention of use in Automobiles)" Order 2000 notified by Government of India, Ministry of Petroleum and Natural Gas vide G.S.R. 519(E) dated 05/06/2000

फिर भी, यह अनुमोदन/अनुमति अन्य प्राधिकारियों से आवश्यक अनुमति/क्लीयरन्स प्राप्त करने से या यथा लागू अन्य विधियों से छूट नहीं देती है।

This approval/permission, however, does not absolve from obtaining necessary permission/clearance from other authorities or under other statutes as applicable.

भवदीय /Yours faithfully,

((कुंवर पाल सिंह)  
(Kunwar Pal Singh))  
उप विस्फोटक नियंत्रक  
Dy. Controller of Explosives  
कृते संयुक्त मुख्य विस्फोटक नियंत्रक  
For Jt. Chief Controller of Explosives  
फरीदाबाद/Faridabad

Copy forwarded to :-

1. The District Magistrate, SONIPAT(Haryana) with reference to his NOC No 1414 to 1416 Dated 25/10/2023

For Jt. Chief Controller of Explosives  
Faridabad

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट <http://peso.gov.in> देखें)  
(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

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भारत सरकार /Government of India  
वाणि और उ ाग मं ालय/Ministry of Commerce & Industry  
पेटोलियम तथा वि ा टोटक सुर. ा संगठन /Petroleum & Explosives Safety Organisation (PESO)  
हाल सं ा 502 एवं 507, लेवल-5, ा ाक II, पुराना सी.जी.ओ. कां . , एन.एच.4  
फरीदाबाद- 121001  
Hall No. 502 & 507, Level 5, Block B,  
Old CGO Complex, NH-4,  
Faridabad - 121001

ईमेल-E-mail : [jtccefaridabad@explosives.gov.in](mailto:jtccefaridabad@explosives.gov.in)

दूरभाष/Phone/Fax No : 0129 - 2410734, 2410732

दिDated : 14/10/2024

सं./No : G/NC/HN/07/409(G116243)

सेवा म/To,

M/s. MARUTI SUZUKI INDIA LIMITED,  
Plot no.831,,  
IMT Kharkhoda  
Kharkhoda,  
Sonipat,  
Taluka: Kharkhoda,  
District: SONIPAT  
State: Haryana  
Pin : 131402

विषय/Sub : Plot No, 831, IMT - Kharkhoda, Kharkhoda, Kharkhoda, Taluka: Kharkhoda, District: SONIPAT, State: Haryana, Pin : 131402. म. सिलडरों म. सी.एन.जी./सी.बी.जी. गैस का भरण- गैस सिलडर नियम, 2016 के ा प छ के अंतगत जारी अनु. सं. G/NC/HN/07/409(G116243) के नवीकरण के बारे म/ Renewal of Licence for CNG/CBG at Plot No, 831, IMT - Kharkhoda, Kharkhoda, Kharkhoda, Taluka: Kharkhoda, District: SONIPAT, State: Haryana, Pin : 131402. Licence No G/NC/HN/07/409(G116243) granted in Form G of Gas Cylinders Rules, 2016 - Renewal regarding.

महोदय/Sir(s),

कृपया आपके दि. 30/09/2024 के प. सं. OIN1782523 का संदभ. हण कर/Please refer to your application No.OIN1782523 dated 30/09/2024 .

इसके साथ सीएनजी/सीबीजी डि पसिंग की अनु. सं. G/NC/HN/07/409 दि.30/09/2026 तक विधिवत नवीकृत कर भेजी जा रही है/ Licence for CNG/CBG Dispensing G/NC/HN/07/409 sent here with duly renewed upto 30/09/2026 .

कृपया गैस सिलडर नियमों के नियम 55 म निधा.रत प्रक्रिया का कड़ाई से पालन कर तथा अनु ि के नवीनीकरण हेतु पूण द िवेज Jt. Chief Controller of Explosives, North Circle, FARIDABAD प्र ुत कर ताकि वह अनु ि की समाि की तारीख 30 सित र 2026 को या उससे पहले उनके कायालय म पहुँच जाएँ. कृपया नोट कर कि सिलडरों का आवधिक परी ण और जाँच इस कायालय ा रा प्रमाणित परी ण को ि पर ही किया जाएँ. / Please follow the procedure strictly as laid down in rule 55 of the Gas Cylinder Rules, 2016 and submit complete documents for renewal of the licence to the Jt. Chief Controller of Explosives, North Circle, FARIDABAD, so as to reach his office on or before the date of expiry i.e. 30<sup>th</sup> Sept. 2026 to avoid late fee. It may please be noted that periodically testing and examination of the cylinders should be done at a testing station duly recognized by this office for the purpose.

कृपया इस पत्र की ि ि की पावती द ा /Please acknowledge the receipt of the same licence.

भवदीय/Yours faithfully,

((कुंवर पाल सिंह)  
(Kunwar Pal Singh))  
उप वि ा टोटक नियं ाक  
Dy. Controller of Explosives  
कृते संयु ा मु ा वि ा टोटक नियं ाक  
For Jt. Chief Controller of Explosives  
फरीदाबाद/Faridabad

[अधिक जानकारी जैसे आवेदन की िति, शु क तथा अ्य विवरण के िए कृपया हमारी वेबसाइट <http://peso.gov.in> देख ा]  
(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

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प XV  
( प्रथम अनुसूची का अनु ेद 6 देखें )  
FORM XV  
(see Article 6 of the First Schedule)

अधिकापनों म.पेट्रोलियम के आयात और भंडारकरण के लिए अनु. .  
LICENCE TO IMPORT AND STORE PETROLEUM IN AN INSTALLATION

अनु . सं. (Licence No.) : P/NC/HN/15/2037(P559553)

फीस . पए (Fee Rs.) 5500/- per year

M/s. MARUTI SUZUKI INDIA LIMITED, PALAM GURGAON ROAD , Taluka: Gurgaon, District: GURGAON, State: Haryana, PIN: 122015 को केवल इसम.यथा विनिर्दि टु वग.और मा Iओं म.पेट्रोलियम 60.00 KL आयात करने के लिए और उसका, नीचे वर्णित और अनुमोदित नक्शा सं I P/NC/HN/15/2037(P559553) तारीख 05/07/2024 जो कि इससे उपाब हैं, में दिखाए गए स्थान पर भ ारकरण के लिए पेट्रोलियम अधिनियम, 1934 के उपबंधों या उसके अधीन बनाए गए नियमों तथा इस अनु ि की अतिरि शत के अधीन रहते हुए, यह अनु ि अनुद की जाती हैं ।

Licence is hereby granted to M/s. MARUTI SUZUKI INDIA LIMITED, PALAM GURGAON ROAD , Taluka: Gurgaon, District: GURGAON, State: Haryana, PIN: 122015 valid only for the importation and storage of 60.00 KL Petroleum of the class and quantities as herein specified and storage thereof in the place described below and shown on the approved plan No P/NC/HN/15/2037(P559553) dated 05/07/2024 attached hereto subject to the provisions of the Petroleum Act, 1934 and the rule made thereunder and to the further conditions of this Licence.

यह अनु ि 31st day of December 2033 तक वृत रहेगी ।  
The Licence shall remain in force till the 31st day of December 2033

पेट्रोलियम का विवरण /Description of Petroleum	अनु मा I (किलोलीटरों में) /Quantity licenced in KL
वर्ग क पुंज पेट्रोलियम /Petroleum Class A in bulk	60.00 KL
वर्ग क पुंज पेट्रोलियम से भि /Petroleum Class A, otherwise than in bulk	NIL
वर्ग ख पुंज पेट्रोलियम /Petroleum Class B in bulk	NIL
वर्ग ख पुंज पेट्रोलियम से भि /Petroleum Class B, otherwise than in bulk	NIL
वर्ग ग पुंज पेट्रोलियम /Petroleum Class C in bulk	NIL
वर्ग ग पुंज पेट्रोलियम से भि /Petroleum Class C,otherwise than in bulk	NIL
कुल क्षमता /Total Capacity	60.00 KL

July 5, 2024

For Jt. Chief Controller of Explosives  
NC, Faridabad

अनु. प.रसरों का विवरण और अवथान  
DESCRIPTION AND LOCATION OF THE LICENSED PREMISES

अनु परिसर जिसकी वि ास सीमाएं अ विशि यां संल अनुमोदित नक्शों में दिखाई गई हैं Khasra No: / Plot No- 831, -, Industrial Model Town, Sonipat, Taluka: Kharkhoda, District: SONIPAT, State: Haryana, PIN: 131402 स्थान पर अवस्थित है तथा उसमें नि लिखित 3 Under Ground tank(s) for CLASS A स लित हैं ।

The licensed premises, the layout , boundaries and other particulars of which are shown in the attached approved plan are situated at Khasra No: / Plot No- 831, -, Industrial Model Town, Sonipat, Taluka: Kharkhoda, District: SONIPAT, State: Haryana, PIN: 131402 and consists of 3 Under Ground tank(s) for CLASS A together with connected facilities.

**Note:-This is system generated document does not require signature.**





**भारत सरकार/Government of India**  
**वाणि और उ ाग मं ालय /Ministry of Commerce & Industry**  
**पेट्रोलियम तथा वि ाोटक सुर. ा संगठन (पेसो)/Petroleum & Explosives Safety Organisation (PESO)**  
**पाँचवा तल, ए- ाक, सी.जी.ओ.कॉम्प्लेक्स, ,**  
**सेमिनरी हिल्स, नागपुर**  
**5th Floor, A-Block, CGO Complex, Seminary Hills,**  
**Nagpur - 440006**

ई-मेल/E-mail : [explosives@explosives.gov.in](mailto:explosives@explosives.gov.in)  
 फोन / फ़ै. नंबर:/Phone/Fax No : **0712 -2510248,**  
**Fax-2510577**

. /No : S/HO/HN/03/677(S106903)

दिनांक :/Dated : **02/05/2024**

**पत्र / M E M O R A N D U M**

**Sub IMT Kharkhoda, Kharkhoda, Sonipat, Taluka: Kharkhoda, District: SONIPAT, State: Haryana,**  
**PIN: 131402 . थत सं थापन म. MARUTI SUZUKI INDIA LIMITED,IMT Kharkhoda, Kharkhoda, Sonipat, Taluka:**  
**Kharkhoda, District: SONIPAT, State: Haryana,**  
**PIN: 131402 ा 2 दाब पा / पा ें म. PROPANE, के भ ारकरण के लिए . थर एवं गतिशील दाब पा (अ ालित) नियम, 2016 के**  
**अधीन अनु . ाकृती के संबंध म.**  
**/Storage of the compressed gas PROPANE, in 2 Number(s) of pressure vessels by MARUTI SUZUKI INDIA LIMITED,**  
**IMT Kharkhoda, Kharkhoda, Sonipat, Taluka: Kharkhoda, District: SONIPAT, State: Haryana,**  
**PIN: 131402 -Grant of licence under SMPV(U)Rules,2016.**

**थिर एवं गतिशील दाब पा (अ ालित) नियम, 2016 के रूप - एलएस-1क में दिनांक 30 सितंबर 2028 तक वैध मेसस MARUTI SUZUKI INDIA LIMITED,IMT Kharkhoda, Kharkhoda, Sonipat, Taluka: Kharkhoda, District: SONIPAT, State: Haryana,**

**PIN: 131402 को नि ाखित संपीडित गैस के ार एवं मा ा के विषयाग त सं थापन हेतु जारी अनु ि सं ा S/HO/HN/03/677 दिनांक May 2, 2024 की दो ातियाँthe Jt. Chief Controller of Explosives, North Circle, Faridabad को अ.ेषित की जा रही ह.।**

**Two Copies of Licence No. S/HO/HN/03/677 dated May 2, 2024 in Form LS-1A/B of SMPV(U) Rules,2016 granted to MARUTI SUZUKI INDIA LIMITED,IMT Kharkhoda, Kharkhoda, Sonipat, Taluka: Kharkhoda, District: SONIPAT, State: Haryana,**

**PIN: 131402,for the subject for storage of following kinds and quantities of compressed gas valid upto 30<sup>th</sup> Sepetember 2028 , are forwarded to the Jt. Chief Controller of Explosives, North Circle, Faridabad. A copy of the set of certificates and list of competent persons are enclosed herewith.**

Vessel No./वैसल नंबर	Name of Gas/गैस का नाम	State of Gas/गैस की ाथति	Water Capacity in cubic meter/जल . मता (घ.मी.)	Max. working Pre.(kg/cm <sup>2</sup> )/अधिकतम वकिग ेशर	Quantity Granted in kgs(Liquified gas)/किलोग्रॅम में जारी माा (लिक्विफाईड गैसेस)
STPL-442/23	PROPANE	Liquified	72.00	21	30164
STPL-443/23	PROPANE	Liquified	72.00	21	30164
<b>Total Water capacity</b>			<b>144.00</b>		

उनसे अनुरोध हैं कि विषयांतगत परिसर का निरीक्षण करें और यदि वह इस बात से संतुष्ट हैं कि अनु ा में दी गई सभी शत का तथा नियमों के सभी ावधानों का पालन हो रहा हैं तो वे इस कायालय को सूचित करते हुए अनु ा की मूल ति पृष्ठांकित कर सीधे अनु ाधारी को सौंप दे । यदि वे अनु ा को पृष्ठांकित न करने का निणय लेते हैं तो तुरंत ऐसा करने का कारण बताते हुए तीन महीनो के भीतर अनु ा इस कायालय को लौटा दें । / He is requested to inspect the premises and if he is satisfied that the storage installation conforms to the approved plan and all the conditions of licence are complied with, he may endorse the licence and forward it to the licensee under intimation to this office. If however, he decides not to endorse the licence, he may return the same to this office with reasons for not endorsing, **not later than three months.**

Yours faithfully,

संल : यथोपरि/Encl:As above

(( ा शांत यादव)  
**(PRASHANT YADAV)**

उप वि० ढेटक नियं०क  
Dy. Controller of Explosives  
कृते मु० वि० ढेटक नियं०क  
For Chief Controller of Explosives  
नागपुर/Nagpur

To :

**the Jt. Chief Controller of Explosives, North Circle, Faridabad**

**Copy forwarded to :-**

1. M/s. MARUTI SUZUKI INDIA LIMITED, Plot no.831,,IMT KharkhodaKharkhoda, Sonipat, Taluka: Kharkhoda, District: SONIPAT State: HaryanaPin : 131402.with Refernce to their letter No. OIN1646301 dated 01/04/2024. The facilities shall not be taken into use until written permission is obtained from the respective office of the Organization.The provisions of the Rule 55 of the above said Rules shall be followed for further renewal of the licence beyond 30/09/2028.The renewal application along with fees,Orignal licence and other documents shall reach in the office of Jt. Chief Controller of Explosives, North Circle, FARIDABAD, so as to reach his office on or before the dated of expiry i.e 30/09/2028.

**For Chief Controller of Explosives**  
**HQ, Nagpur**  
कृते मु० वि० ढेटक नियं०क  
नागपुर

(For more information regarding status,fees and other details please visit our website <http://peso.gov.in>)

**Note:-This is system generated document does not require physical signature.**

**Insurance Policy**  
**under Public Liability**  
**Insurance Act**

CONTRACT OF INSURANCE

INSURED NAME: MARUTI SUZUKI INDIA LIMITED



INSURER: IFFCO TOKIO General Insurance Company Limited

Policy Type - Public Liability- Act

Policy Period - ( 01/04/2024 to 31/03/2025 )

Servicing Branch :	Japanese
Policy Issuing Office :	IFFCO TOKIO GEN INSU. CO. LTD. PLOT NO-03 IFFCO TOWER,, 4th FLOOR,SECTOR-29 GURGAON GURGAON , HARYANA - 122001 , GSTIN - 06AAACI7573H1ZG
Issuing Office GSTIN :	06AAACI7573H1ZG
Corporate Office :	IFFCO TOKIO GEN INSU. CO. LTD.4th - 5th Floor, IFFCO TowersPlot No 3, Sector 29, GURGAON (HARYANA) - 122001
Policy No :	41089482
Unique Invoice No :	41089482
Invoice Date :	30/04/2024
SAC :	997139
Intermediary Details :	M/S MARUTI INSURANCE BROKING P



**POLICY SCHEDULE CUM TAX INVOICE**

Insured	MARUTI SUZUKI INDIA LIMITED		
GSTIN	06AAACM0829Q1Z8		
Address	Old Palam,		
	Gurgaon Road		
	Gurgaon		
	India		
	Pin Code	122001	
Place of Supply	HARYANA		
CKYC Number	NA		
Contact No	*****024		
Email	he****@iffcotokio.co.in		
Business Description	Automobile Manufacturing		
Policy Period	01/04/2024- 31/03/2025		
Co Insurance Details		NA	
Limit of Liability	Cover		
	50,000,000 per occurrence and 150,000,000 in the aggregate		
Deductible	NA		
Territorial Limits	INDIA		
Jurisdiction	INDIA		
Turnover Details	INR 1,523,215,000,000		
Policy Type	Occurrence Based		
Premium	Premium Excluding Taxes: INR 30,500.00 CESS (0%): INR 0.00 GST - SGST (9%): INR 2,745.00 - UGST (0%): INR 0.00 - CGST (9%): INR 2,745.00 - IGST (0%): INR 0.00 ERF Amount: INR 30,500.00 Total Premium / Invoice Value : INR 66,490.00		
GST Related Declarations	Whether GST is Payable on Reverse Charge Basis- No		
	We hereby declare that though our aggregate turnover in any preceding financial year from 2017-18 onwards is more than the aggregate turnover notified under sub-rule (4) of rule 48, we are not required to prepare an invoice in terms of the provisions of the said sub-rule.		
Other Terms and Conditions	All Other terms & conditions as per Policy Wordings attached.		

**Disclaimer:**

The issuance of this Insurance Policy is subject to satisfactory verification of KYC documentation of the Client/ Policyholder as per IRDAI Master Circular dated 1st August 2022 on AML/ CFT. In case, if any discrepancy is found in KYC Verification of the Client/ Policyholder, it is agreed by the Client/ Policyholder to complete/ rectify the discrepancy found in the KYC documents/information for the generation of CKYC Number, failing which the policy will be considered ineffective/suspended/ cancelled and no claim will be payable under this Insurance Policy.

Toll Free: 1-800-103-5499; SMS "claim" to 56161  
SAC Code: 9971  
Regd. Office: IFFCO SADAN, C1 Distt Centre, Saket, New Delhi -110017  
Corporate Identification Number (CIN) U74899DL2000PLC107621, IRDA Reg. No. 106  
Consolidated Stamp Duty Deposited as per the order of Government of National Capital Territory of Delhi

For IFFCO-Tokio General Insurance Company Limited



**Authorised Signatory**

Regd. Office : IFFCO Sadan  
C-1 Dist. Centre, Saket,  
New Delhi-110017  
CIN: U74899DL2000PLC107621

**POLICY FORM**  
(PUBLIC LIABILITY INSURANCE – ACT ONLY POLICY)

**1. OPERATIVE CLAUSE**

Whereas the Insured Owner, named in the Schedule hereto and carrying on business described in the said Schedule, has applied to IFFCO-TOKIO General Insurance Co. Ltd. (hereinafter called the Company) for the indemnity hereinafter contained and has made a written proposal and declaration which shall be the basis of this contract and is deemed to be incorporated herein and has paid the premium and statutory contribution towards the Environment Relief Fund as per the provisions of the Public Liability Insurance Act and the rules framed thereunder.

**NOW THIS POLICY WITNESSETH** that subject to the terms, exceptions and conditions contained herein or endorsed hereon, the company will indemnify the insured owner against the statutory liability arising out of accidents occurring during the currency of the policy due to handling hazardous substances as provided for in the said act and the rules framed thereunder.

**2. DEFINITIONS**

- a) "Act" unless otherwise specifically mentioned shall mean the Public Liability Insurance Act, 1991.
- b) "Accident" means an accident involving a fortuitous or sudden or unintentional occurrence while handling any hazardous substance resulting in continuous, intermittent or repeated exposure to death of, or injury to any person or damage to any property but does not include an accident by reason only of war or radio-activity.
- c) "Handling" in relation to any hazardous substance, means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance.
- d) "Hazardous Substance" means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act, 1986, and exceeding such quantity as may be specified, by notification, by the Central Government.
- e) "Owner" means a person who owns, or has control over handling any hazardous substance at the time of accident and includes:-
  - (i) in the case of a firm, any of its partners;
  - (ii) in the case of an association, any of its members, and
  - (iii) in the case of a company, any of its directors, managers, secretaries or other officers who is directly in-charge of and is responsible to the company for the conduct of the business of the company.
- (f) "Turnover" shall mean –
  - i) Manufacturing units – Annual Gross Sales including all levies and taxes.
  - ii) Godown/warehouse owners – Annual rental receipts.
  - iii) Transport Operators – Annual freight receipts
  - iv) Others – Annual gross receipts

**3. EXCLUSIONS**

This Policy does not cover liability:

- (1) arising out of willful or intentional non-compliance of any Statutory Provisions.
- (2) in respect of fines, penalties, punitive and/or exemplary damages.
- (3) arising under any other legislation except in so far as is provided for in Section 8 Sub-Section (1) and (2) of the Act.
- (4) arising out of damage to property owned, leased or hired or under hire purchase or on loan to the Insured or otherwise in the Insured's control, care or custody.
- (5) directly or indirectly occasioned by, happening through or in consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection or military or usurped power.
- (6) directly or indirectly caused by or contributed to by
  - a) ionizing radiations or contamination by radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel.
  - b) the radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof.

#### 4. CONDITIONS

- (1) The Insured Owner shall give written notice to the Company as soon as reasonably practicable of any claim made against the Insured Owner or any specific event or circumstance that may give rise to a claim. The Insured shall immediately give to the Company copies of notice of application(s) forwarded by the Collector and all such additional information and or assistance that the Company may require.
- (2) No admission, offer, promise or payment shall be made or given by or on behalf of the Insured owner under this policy without the written consent of the Company.
- (3) The Company shall not be liable for any claims for relief made after five years from the date of occurrence of the accident.
- (4) The Insured Owner shall keep record of annual turnover, and at the time of renewal of insurance declare such turnover and all other details as may be required by the Company. The Company shall at all reasonable times have full rights to call for and examine such records.
- (5) If at the time of happening of any accident, resulting in a claim under this policy, there be any other insurance covering the same liability, then the Company shall not be liable to pay or contributes more than its ratable proportion of such liability.
- (6) This Policy may be cancelled by the Insured Owner by giving 30 days notice in writing to the Company in which event the Company will retain premium at short period scale subject to there not having occurred an accident during the policy period which may give rise to a claim(s), failing which no refund of premium shall be allowable.
- (7) This Policy may also be cancelled by the Insurer by giving 30 days notice in writing to the Insured Owner in which event the Company shall be liable to repay on demand a rateable proportion of the premium for the unexpired term from the date of cancellation.
- (8) If the Company shall disclaim liability to the Insured Owner for any claim hereunder and such claim shall not within 12 calendar months from the date of such disclaimer have been made the subject matter of a suit in a competent court of law, then the claim for all practicable purposes shall be deemed to have been abandoned and shall not thereafter be recoverable hereunder or be made the subject matter of any suit.
- (9) The Company shall not be liable to make any payment in respect of any claim if such claim shall be in any manner fraudulent or supported by any person on behalf of the Insured and/or if the insurance has been continued in consequence of any material mis-statement or non-disclosure of any material information by or on behalf of the Insured. In such a case, if the Company pays any amount to the claimant due to any statutory provisions, such amount shall be recoverable from the Insured.
- (10) The Policy and the Schedule shall be read together as one contract and any word or expression to which a specific meaning has been assigned in the Act and the Rules framed thereunder or this Policy shall bear such specific meaning.
- (11) Any dispute regarding interpretation of the terms, conditions and exceptions of this Policy shall be determined in accordance with the law and practice of a court of competent jurisdiction within India.

#### GRIEVANCE OR COMPLAINT

In case of any grievance, **We** can be contacted at:

Website: <https://www.iffcotokio.co.in/customer-services/grievance-redressal>  
Toll free: 1800-103-5499  
E-mail: [support@iffcotokio.co.in](mailto:support@iffcotokio.co.in)  
Courier: Chief Grievance Officer  
IFFCO-Tokio General Insurance Co Ltd  
IFFCO Tower, Plot no. 3  
Sector -29, Gurgaon – 122001

For updated details of grievance officer, kindly refer the link  
<https://www.iffcotokio.co.in/customer-services/grievance-redressal>.

**Grievance may also be lodged at IRDAI Integrated Grievance Management System**  
- <https://bimabharosa.irdai.gov.in/>





UIN: IRDAN115CPLB0008V01202425

**PUBLIC LIABILITY INSURANCE**  
**(UNDER PUBLIC LIABILITY INSURANCE ACT 1991)**

**PREAMBLE**

ICICI Lombard General Insurance Company Limited ("the Company"), having received a Proposal and the premium from the proposer named in the Schedule referred to herein below, and the said Proposal and Declaration together with any statement, report or other document leading to the issue of this Policy and referred to therein having been accepted and agreed to by the Company and the Proposer as the basis of this contract do, by this Policy agree, in consideration of and subject to the due receipt of the subsequent premiums, as set out in the Schedule with all its Parts, and further, subject to the terms and conditions contained in this Policy, as set out in the Schedule with all its Parts that on proof to the satisfaction of the Company of the compensation having become payable as set out in Part I of the Schedule to the title of the said person or persons claiming payment or upon the happening of an event upon which one or more benefits become payable under this Policy, the Sum Insured/ appropriate benefit will be paid by the Company.

PART I OF SCHEDULE		Policy No. 4007/389736619/00/000	
1	Name of the insured	MARUTI SUZUKI INDIA LIMITED	
2	Mailing Address of the insured	SECTOR 18 PALAM GURGAON ROAD INDIA HARYANA GURGAON PIN - 122015	
3	Trade or Business of the insured	Automobile manufacturing	
4	Address of Premises insured	All premises owned and operated by Insured in India	
5	Paid Up Capital	1,570,000,000/-	
6	Policy period	From: April 01, 2025	To: March 31, 2026
		Time: 00:00 hrs	23:59 hrs
7	Turnover	18,270,000,000,000/-	
8	Limit of Indemnity	1:2	
	Aggregate One Year (AOY)	5,000,000,000/-	
	Any One Accident (AOA)	2,500,000,000/-	
9	Compulsory Excess	Nil	



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1 0	Total Premium  ERF Contribution  Total Payable	2,450,000/-  2,450,000/-  5,341,000/-
1 1	Co-insurance details	NA
1 2	Special conditions	
1 3	Intermediary Details	Intermediary Name 1 - MARUTI INSURANCE BROKING PVT LTD Code- 201499374460  Intermediary Name 2 - MARSH INDIA INSURANCE BROKERS PRIVATE LIMITED Code- 201466988254
1 4	GSTIN Reg. No  ILGIC GSTIN Address	
<p style="text-align: right;">Authorised signatory</p> <p>Description of services : General Insurance Business HSN/SAC : 9971</p>		



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## PART II OF SCHEDULE

### 1. Definitions

For the purpose of this policy, the following terms shall have the meaning as set forth hereunder:

- i. "Act" unless otherwise specifically mentioned shall mean the Public Liability Insurance Act 1991 as amended from time to time.
- ii. "Accident" means an accident involving a fortuitous, sudden or unintentional occurrence while handling any hazardous substance resulting in continuous, intermittent or repeated exposure to death of, or injury to any person or damage to any property but does not include an accident by reason only of war or radioactivity.
- iii. "Handling" in relation to any hazardous substance means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance.
- iv. "Hazardous Substance" and group means any substance or preparation which is defined as hazardous substance under the Public Liability Insurance Act, 1991 and the Rules framed there under
- v. "Owner" or "Insured" means a person who owns, or has control over handling of any hazardous substance at the time of accident and includes:
  - a. in the case of a firm, any of its partners
  - b. in the case of an association, any of its members, and
  - c. in the case of a company, any of its directors, managers, secretaries or other officers who is directly in charge of, and is responsible to the company for the conduct of the business of the company
- vi. "Turnover" shall mean
  - a. In case of Manufacturing Units - Entire annual gross sales turnover including all levies and taxes of manufacturing units handling hazardous substance as defined in the Public Liability Insurance Act, 1991. For the purpose of this insurance, the term "Units" shall mean all operations being carried out in the manufacturing complex in one location.
  - b. In case of Godowns/ Warehouse Owners – Total annual rental receipts of premises handling hazardous substance as defined in the Public Liability Insurance Act, 1991.
  - c. In case of Transport Operators – Total annual freight receipts
  - d. In all other cases – Total annual gross receipts

### 2. Scope of Cover

The Company hereby agrees, subject to the terms, conditions and exclusions herein contained or endorsed or otherwise expressed herein, to indemnify the Insured or Owner as defined above for the purpose of this policy against the statutory liability arising out of Accidents occurring during the currency of the Policy due to handling of hazardous substances as provided for in the Act as



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defined above, and the Rules framed there under.

### 3. Exclusions

The Company shall not be liable:

- i. For any willful or intentional non-compliance of any statutory requirements;
- ii. In respect of fines, penalties, punitive and /or exemplary damages;
- iii. Under any law or legislation except in so far as provided for in Section 8 (1) & 8 (2) of the Act;
- iv. In respect of damage to property owned, leased or hired or under hire purchase or on loan to the Insured or otherwise in the Insured Owner's control, care or custody;
- v. For any liability directly or indirectly occasioned by, happening through or in consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not) civil war, rebellion, revolution, insurrection or military or usurped power;
- vi. For any liability directly or indirectly caused by or contributed to by:
  - a. Ionizing radiation or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel.
  - b. The radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
- vii. For matter outside the scope of Public Liability Insurance Act, 1991.
- viii. In respect of losses/liability arising outside India.

### 4. Basis of Assessment of Claims

- i. The basis of assessment of claim shall be the award given by the appropriate authority under the Act.
- ii. **Claim Procedures:**

The procedure for lodging the claim shall be as under:

- c. **Claim Intimation:** Connect with us via: Toll-free no.: 1800 2666,  
Email ID: [customersupport@icicilombard.com](mailto:customersupport@icicilombard.com), on our website:  
<https://coclaims.icicilombard.com/claimstracker/CommercialClaims/ccplandingpage.aspx>

Register the claim and submit claim related documents along with claim form. You will receive a claim reference number as your reference point for future correspondence

b. On the occurrence of any Accident, whether or not the Insured receives any notice of an alleged claim / complaint, the Insured shall duly inform the Company in the manner prescribed in the 'Incident Reporting Form', detailing the Accident.

- d. The Insured shall, upon receipt of any notice of an alleged claim / complaint from



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appropriate authority, forthwith furnish the same to the Company in the manner detailed in the 'Claim Application Form'. The insured shall also furnish the copies of such documents, as prescribed by the rules, which are submitted and forwarded by the appropriate authority and/or any proposed responses, if any, by the Insured to the appropriate authorities.

- e. Upon the affixing of any legal liability upon the Insured in terms of an award of the appropriate authority, the Insured shall forthwith submit a duly filled 'Claim Settlement Form', detailing the liability accrued and the Defence Costs, if any together with any other information that the Company may require or as specified in the 'Claim Settlement Form'.
- f. The Insured shall also at all times at his own expense produce, procure and give to the Company all such further particulars, plans, specifications, books, vouchers, invoices, duplicates or copies thereof, documents, investigation reports (internal/external), proofs, evidence and information with respect to the claim (verified by statutory declaration, if so required) and the origin and cause of the loss and the circumstances under which the loss or damage occurred, and any matter touching the liability or the amount of the liability of the Company as may be reasonably required by or on behalf of the Company together with a declaration on oath or in other legal form of the truth of the claim and of any matters connected therewith.
- g. Subject to applicable law, rule, regulation or notification in this behalf, the Company hereby reserves the right as provided hereafter:

No claim in respect of loss equal to or exceeding twenty thousand rupees in value on the policy shall be admitted for payment or settled by the Company unless the Company has been given a report on the occurrence of the loss and extent of the loss, from a person who holds a license to act as a Surveyor or loss assessor, under the Insurance Act, 1938, and appointed as per the prescriptions issued by the Authority.

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Provided that nothing hereinabove shall be deemed to take away or abridge the right of the Company to pay or to settle any claim at any amount different from the amount assessed by the Surveyor or loss assessor.

- a. The Insured shall furnish the forms duly completed together with:
  - i. all material documents, as specified therein or as requested by the Company or otherwise;
  - ii. particulars of all other insurances, if any

No claim under this policy shall be payable unless the terms of this condition have been complied with.

- h. **Turnaround Time (TAT):** Assessment sheet /Survey report will be furnished within 15 days of receipt of claim form along with claim documents. Claim will be decided within 7 days of the claim intimation / assessment sheet / survey report, as applicable



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## **5. Policy Related Terms And Conditions**

1. No admission, offer, promise or payment shall be made or given by or on behalf of the Insured under this policy without the written consent of the Company.
2. The Insured shall keep a record of their Turnover. The Company shall at all times have full rights to call for and examine such records.
3. In case the Company pays any amount to the claimant due to any statutory provision, such amount shall be recoverable from the Insured, if such amount need not have been paid but for the said statutory provision

## **PART III OF THE SCHEDULE**

### **Standard Terms and Conditions**

#### **1. Incontestability and Duty of Disclosure**

The policy shall be null and void and no benefit shall be payable in the event of untrue or incorrect statements, misrepresentation, incorrect description or non-disclosure in any material particular in the proposal form, personal statement, declaration and connected documents, or any material information having been withheld, or a claim being fraudulent or any fraudulent means or devices being used by the Insured or any one acting on his behalf to obtain any benefit under this policy

#### **2. Reasonable Care**

The Insured shall take all reasonable steps to safeguard the interests of the Insured against accidental loss, or damage that may give rise to the claim

#### **3. Observance of terms and conditions**

The due observance and fulfillment of the terms, conditions and endorsement of this policy in so far as they relate to anything to be done or complied with by the Insured, shall be a condition precedent to any liability of the Company to make any payment under this policy

#### **4. Material change**



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The Insured shall immediately notify the Company by fax and in writing of any material change in the risk and cause at his own expense such additional precautions to be taken as circumstances may require to ensure safe operation of the Insured items or trade or business practices thereby containing the circumstances that may give rise to the claim and the Company may, adjust the scope of cover and / or premium, if necessary, accordingly

#### **5. Records to be maintained**

The Insured shall keep an accurate record containing all relevant particulars and shall allow the Company to inspect such record. The Insured shall within one month after the expiry of each period of insurance furnish such information as the Company may require

#### **6. No constructive Notice**

Any of the circumstances in relation to these conditions coming to the knowledge of any official of the Company shall not be the notice to or be held to bind or prejudicially affect the Company notwithstanding subsequent acceptance of any premium

#### **7. Notice of charge etc**

The Company shall not be bound to notice or be affected by any notice of any trust, charge, lien, assignment or other dealing with or relating to this policy but the receipt of the Insured or his legal personal representative shall in all cases be an effectual discharge to the company

#### **8. Special Provisions**

Any special provisions subject to which this policy has been entered into and endorsed in the policy or in any separate instrument shall be deemed to be part of this policy and shall have effect accordingly

#### **9. Overriding effect of Part II of the Schedule**

The terms and conditions contained herein and in Part II of the Schedule shall be deemed to form part of the policy and shall be read as if they are specifically incorporated herein; however, in case of any inconsistency of any term and condition with the scope of cover contained in Part II of the Schedule, then the term(s) and condition(s) contained herein shall be read mutatis mutandis with the scope of cover/terms and conditions contained in Part II of the Schedule and shall be deemed to be modified accordingly or superseded in case of inconsistency being irreconcilable

#### **10. Electronic Transactions**



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The Insured agrees to adhere to and comply with all such terms and conditions as the Company may prescribe from time to time, and hereby agrees and confirms that all transactions effected by or through facilities for conducting remote transactions including the Internet, World Wide Web, electronic data interchange, call centers, teleservice operations (whether voice, video, data or combination thereof) or by means of electronic, computer, automated machines network or through other means of telecommunication, established by or on behalf of the Company, for and in respect of the policy or its terms, or the Company's other products and services, shall constitute legally binding and valid transactions when done in adherence to and in compliance with the Company's terms and conditions for such facilities, as may be prescribed from time to time. The Insured agrees that the Company may exchange, share or part with any information to or with other ICICI Group Companies or any other person in connection with the Policy, as may be determined by the Company and shall not hold the Company liable for such use/application

### **11. Duties of the Insured on occurrence of loss**

On the occurrence of any loss, within the scope of cover under the policy the Insured shall:

- I. Forthwith file/submit a Claim Form in accordance with Claim Procedure Clause as provided in Part II of the Schedule.
- II. Allow the Surveyor or any agent ~~of the Company~~ to inspect the lost/damaged properties/premises/goods or any other material items, as per the Right to Inspect Clause as provided in this Part.
- III. Assist and not hinder or prevent the Company or any of its agents in pursuance of their duties under Rights of the Company On Happening Of Loss Or Damage Clause as provided in this Part.
- IV. Not abandon the insured property/item/premises, nor take any steps to rectify/remedy the damage before the same has been approved by the Company or any of its agents or the Surveyor.

If the Insured does not comply with the provisions of this Clause or other obligations cast upon the Insured under this policy, in terms of the other clauses referred to herein or in terms of the other clauses in any of the policy documents, all benefits under the policy shall be forfeited, at the option of the Company

### **12. Rights of the Company on happening of loss or damage**

On the happening of loss or damage, or circumstances that have given rise to a claim under this policy, the Company may:

1. enter and/or take possession of the insured property, where the loss or damage has happened
2. take possession of or require to be delivered to it any property of the Insured in the building or on the premises at the time of the loss or damage
3. keep possession of any such property and examine, sort, arrange, remove or other wise deal with the same; and,
4. sell any such property or dispose of the same for account of whom it may concern.





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The powers conferred by this condition shall be exercisable by the Company at any time until notice in writing is given by the Insured that he makes no claim under the policy, or if any claim is made, until such claim is finally determined or withdrawn. The Company shall not by any act done in the exercise or purported exercise of its powers hereunder incur any liability to the Insured or diminish its rights to rely upon any of the conditions of this policy in answer to any claim.

If the insured or any person on his behalf shall not comply with the requirement of the Company, or shall hinder or obstruct the Company in the exercise of the powers hereunder, all benefits under the policy shall be forfeited at the option of the Company

### **13. Right to inspect**

If required by the Company, an agent/representative of the Company including a loss assessor or a Surveyor appointed in that behalf shall in case of any loss or any circumstances that have given rise to the claim to the Insured be permitted at all reasonable times to examine into the circumstances of such loss. The Insured shall on being required so to do by the Company produce all books of accounts, receipts, documents relating to or containing entries relating to the loss or such circumstance in his possession and furnish copies of or extracts from such of them as may be required by the Company so far as they relate to such claims or will in any way assist the Company to ascertain in the correctness thereof or the liability of the Company under the policy

### **14. Position after a claim**

The Insured shall not be entitled to abandon any insured item/property whether the Company has taken possession of the same or not. As from the day of receipt of the claim amount by the Insured as determined by the Company to be fit and proper, the Sum Insured for the remainder of the period of Insurance shall stand reduced by the amount of the compensation

### **15. Subrogation**

In the event of payment under this policy, the Company shall be subrogated to all the Insured's rights or recovery thereof against any person or organisation, and the Insured shall execute and deliver instruments and papers necessary to secure such rights.

The Insured and any claimant under this policy shall at the expense of the Company do and concur in doing and permit to be done, all such acts and things as may be necessary or required by the Company, before or after Insured's indemnification, in enforcing or endorsing any rights or remedies, or of obtaining relief or indemnity, to which the Company shall be or would become entitled or subrogated



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#### **16. Contribution**

If at the time of the happening of any loss or damage covered by this policy, there shall be existing any other insurance of any nature whatsoever covering the same, whether effected by the Insured or not, then the Company shall not be liable to pay or contribute more than its ratable proportion of any loss or damage

#### **17. Fraudulent claims**

If any claim is in any respect fraudulent, or if any false statement, or declaration is made or used in support thereof, or if any fraudulent means or devices are used by the Insured or anyone acting on his behalf to obtain any benefit under this policy, or if a claim is made and rejected and no court action or suit is commenced within twelve months after such rejection or, in case of arbitration taking place as provided therein, within twelve (12) calendar months after the Arbitrator or Arbitrators have made their award, all benefits under this policy shall be forfeited

#### **18. Cancellation/termination**

The company can cancel the policy only on the grounds of established fraud, mis- representation, non-disclosure of material facts, fraud or non-co-operation, by giving 7 days notice in writing by Registered post/Acknowledgement Due post to the Insured at his last known address in which case the Company shall be liable to repay on demand a rateable proportion of the premium for the unexpired term from the date of the cancellation. The Insured may also give 7 days notice in writing, to the Company, for the cancellation of this policy, in which case the Company shall cancel the policy from the date of receipt of notice and retain the premium for the period this policy has been in force at the Company's short period scales as shown here below

Period (Not exceeding)	Rate
1 week	25% of the Annual rate
1 Month	25% of the Annual rate
2 Months	35% of the Annual rate
3 Months	50% of the Annual rate
4 Months	60% of the Annual rate
6 Months	75% of the Annual rate
8 Months	85% of the Annual rate
Exceeding 8 Months	Full Annual Premium

#### **19. Cause of Action/ Currency for payments**

No Claims shall be payable under this policy unless the cause of action arises in India, unless otherwise specifically provided in Part II of the Schedule to this policy. All claims shall be payable in India in Indian Rupees only



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## **20. Policy Disputes**

Any dispute concerning the interpretation of the terms, conditions, limitations and/or exclusions contained herein is understood and agreed to by both the Insured and the Company to be subject to Indian Law. Each party agrees to submit to the exclusive jurisdiction of the High Court of India and to comply with all requirements necessary to give such Court the jurisdiction. All matters arising hereunder shall be determined in accordance with the law and practice of such Court

## **21. Renewal notice**

Every renewal premium (which shall be paid and accepted in respect of this policy) shall be so paid and accepted upon the distinct understanding that no alteration has taken place in the facts contained in the proposal or declaration herein before mentioned and that nothing is known to the Insured that may result to enhance the risk of the company under the guarantee hereby given. No renewal receipt shall be valid unless it is on the printed form of the Company and signed by an authorized official of the Company

## **22. Notices**

Any notice, direction or instruction given under this policy shall be in writing and delivered by hand, speed/registered post or courier to

In case of the Insured, at the address specified in Part 1 of the Schedule.

In case of the Company:

ICICI Lombard General Insurance Company Limited

Corporate Office: ICICI LOMBARD HOUSE, 414 VEER SAVARKAR MARG, PRABHADEVI, MUMBAI-400025.

Notice and instructions will be deemed served 7 days after posting or immediately upon receipt in the case of hand delivery, facsimile or e-mail

## **23. Customer Service**

If at any time the Insured requires any clarification or assistance, the Insured may contact the offices of the Company at the address specified, during normal business hours



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## 24 Grievances

For resolution of any query or grievance, Insured may contact the respective branch office of the Company or may call toll free no.1800-2666 or may approach us at the sub section “Grievance Redressal” on our website [www.icicilombard.com](http://www.icicilombard.com) (Customer Support section). However, if the resolution provided by us is not satisfactory you may approach Insurance Regulatory and Development Authority of India (IRDAI) through the Bima Bharosa Portal - <https://bimabharosa.irdai.gov.in/> or IRDAI Grievance Call Centre (IGCC) at their toll free no. 1800 4254 732 / 155255.

You may also approach Insurance Ombudsman, subject to vested jurisdiction, for the redressal of grievance. Details of Insurance Ombudsman offices are available at IRDAI website: [www.irdaindia.org](http://www.irdaindia.org), or on the Company’s website at [www.icicilombard.com](http://www.icicilombard.com).

The details of Insurance Ombudsman are available below:-

S no.	Name of office of insurance Ombudsman	Territorial Area of jurisdiction
1	AHMEDABAD Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Prakash Building, 6th floor, Tilak Marg, Relief Road, Ahmedabad – 380 001. Tel.: 079 - 25501201/02/05/06 Email: bimalokpal.ahmedabad@cioins.co.in	Gujarat, Dadra & Nagar Haveli, Daman and Diu.
2	BENGALURU Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Soudha Building,PID No. 57-27-N-19 Ground Floor, 19/19, 24th Main Road, JP Nagar, Ist Phase, Bengaluru – 560 078. Tel.: 080 - 26652048 / 26652049 Email: bimalokpal.bengaluru@cioins.co.in	Karnataka
3	BHOPAL Insurance Ombudsman Office of the Insurance Ombudsman,	Madhya Pradesh, Chattisgarh.



	1st floor,"Jeevan Shikha", 60-B,Hoshangabad Road, Opp. Gayatri Mandir, Bhopal – 462 011. Tel.: 0755 - 2769201 / 2769202 Email: bimalokpal.bhopal@cioins.co.in	
4	BHUBANESHWAR Insurance Ombudsman Office of the Insurance Ombudsman, 62, Forest park, Bhubaneswar – 751 009. Tel.: 0674 - 2596461 /2596455 Email:bimalokpal.bhubaneswar@cioins.co.in	Odisha.
5	CHANDIGARH Insurance Ombudsman Office Of The Insurance Ombudsman, Jeevan Deep Building SCO 20-27, Ground Floor Sector- 17 A, Chandigarh – 160 017. Tel.: 0172 - 4646394 / 2706468 Email: bimalokpal.chandigarh@cioins.co.in	Punjab, Haryana (excluding Gurugram, Faridabad, Sonapat and Bahadurgarh), Himachal Pradesh, Union Territory of Jammu & Kashmir, Ladakh & Chandigarh.
6	CHENNAI Insurance Ombudsman Office of the Insurance Ombudsman, Fatima Akhtar Court, 4th Floor, 453, Anna Salai, Teynampet, CHENNAI – 600 018. Tel.: 044 - 24333668 / 24333678 Email: bimalokpal.chennai@cioins.co.in	Tamil Nadu, Pondicherry Town and Karaikal (which are part of Pondicherry).
7	DELHI Insurance Ombudsman Office of the Insurance Ombudsman, 2/2 A, Universal Insurance Building, Asaf Ali Road, New Delhi – 110 002. Tel.: 011 – 23237539	Delhi & following District of Haryana – Gurugram, Faridabad, Sonapat and Bahadurgarh

	Email: bimalokpal.delhi@cioins.co.in	
8	ERNAKULAM Insurance Ombudsman Office of the Insurance Ombudsman, 2nd Floor, Pulinat Bldg., Opp. Cochin Shipyard, M. G. Road, Ernakulam - 682 015. Tel.: 0484 - 2358759 / 2359338 Fax: 0484 - 2359336 Email: bimalokpal.ernakulam@cioins.co.in	Kerala, Lakshadweep, Mahe-a part of Puducherry.
9	GUWAHATI Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Nivesh, 5th Floor, Nr. Panbazar over bridge, S.S. Road, Guwahati – 781001(ASSAM). Tel.: 0361 - 2632204 / 2602205 Email: bimalokpal.guwahati@cioins.co.in	Assam, Meghalaya, Manipur, Mizoram, Arunachal Pradesh, Nagaland and Tripura.
10	HYDERABAD Insurance Ombudsman Office of the Insurance Ombudsman, 6-2-46, 1st floor, "Moin Court", Lane Opp. Saleem Function Palace, A. C. Guards, Lakdi-Ka-Pool, Hyderabad - 500 004. Tel.: 040 - 23312122 Email: bimalokpal.hyderabad@cioins.co.in	Andhra Pradesh, Telangana, Yanam and Part of Territory of Puducherry.
11	JAIPUR Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Nidhi – II Bldg., Gr. Floor, Bhawani Singh Marg, Jaipur - 302 005. Tel.: 0141- 2740363/2740798	Rajasthan.

	Email: Bimalokpal.jaipur@cioins.co.in	
12	<p>KOLKATA</p> <p>Insurance Ombudsman</p> <p>Office of the Insurance Ombudsman, Hindustan Bldg. Annexe, 4th Floor, 4, C.R. Avenue, KOLKATA - 700 072. Tel.: 033 - 22124339 / 22124340 Fax : 033 - 22124341 Email: bimalokpal.kolkata@cioins.co.in</p>	<p>West Bengal, Sikkim, Andaman &amp; Nicobar Islands.</p>
13	<p>LUCKNOW</p> <p>Insurance Ombudsman</p> <p>Office of the Insurance Ombudsman, 6th Floor, Jeevan Bhawan, Phase-II, Nawal Kishore Road, Hazratganj, Lucknow - 226 001. Tel.: 0522 - 4002082 / 3500613 Email: bimalokpal.lucknow@cioins.co.in</p>	<p>Districts of Uttar Pradesh :</p> <p>Laitpur, Jhansi, Mahoba, Hamirpur, Banda, Chitrakoot, Allahabad, Mirzapur, Sonbhadra, Fatehpur, Pratapgarh, Jaunpur, Varanasi, Gazipur, Jalaun, Kanpur, Lucknow, Unnao, Sitapur, Lakhimpur, Bahraich, Barabanki, Raebareli, Sravasti, Gonda, Faizabad, Amethi, Kaushambi, Balrampur, Basti, Ambedkarnagar, Sultanpur, Maharajgang, Santkabirnagar, Azamgarh, Kushinagar, Gorkhpur, Deoria, Mau, Ghazipur, Chandauli, Ballia, Sidharathnagar.</p>
14	<p>MUMBAI</p> <p>Insurance Ombudsman</p> <p>Office of the Insurance Ombudsman, 3rd Floor, Jeevan Seva Annexe, S. V. Road, Santacruz (W), Mumbai - 400 054. Tel.: 022 - 69038800/27/29/31/32/33 Email: bimalokpal.mumbai@cioins.co.in</p>	<p>Goa, Mumbai Metropolitan Region Excluding (Navi Mumbai &amp; Thane).</p>
15	<p>NOIDA</p> <p>Insurance Ombudsman</p> <p>Office of the Insurance Ombudsman,</p>	<p>State of Uttaranchal and the following Districts of Uttar Pradesh: Agra, Aligarh, Bagpat, Bareilly,</p>

UIN: IRDAN115CPLB0008V01202425

	<p>Bhagwan Sahai Palace 4th Floor, Main Road, Naya Bans, Sector 15, Distt: Gautam Buddh Nagar, U.P-201301. Tel.: 0120-2514252 / 2514253 Email: bimalokpal.noida@cioins.co.in</p>	<p>Bijnor, Budaun, Bulandshehar, Etah, Kanoor, Mainpuri, Mathura, Meerut, Moradabad, Muzaffarnagar, Oraiyya, Pilibhit, Etawah, Farrukhabad, Firozbad, Gautambodhanagar, Ghaziabad, Hardoi, Shahjahanpur</p>
16	<p>PATNA Insurance Ombudsman Office of the Insurance Ombudsman, 2nd Floor, Lalit Bhawan, Bailey Road, Patna 800 001. Tel.: 0612-2547068 Email: bimalokpal.patna@cioins.co.in</p>	<p>Bihar, Jharkhand.</p>
17	<p>PUNE Insurance Ombudsman Office of the Insurance Ombudsman, Jeevan Darshan Bldg., 3rd Floor, C.T.S. No.s. 195 to 198, N.C. Kelkar Road, Narayan Peth, Pune – 411 030. Tel.: 020-24471175 Email: bimalokpal.pune@cioins.co.in</p>	<p>Maharashtra, Area of Navi Mumbai and Thane (excluding Mumbai Metropolitan Region).</p>
18	<p>THANE  Shri Umesh Sinha Insurance Ombudsman Office of the Insurance Ombudsman, 2nd Floor, Jeevan Chintamani Building, Vasantrao Naik Mahamarg, Thane (West) Thane - 400604 Email: <a href="mailto:bimalokpal.thane@cioins.co.in">bimalokpal.thane@cioins.co.in</a></p>	<p>Navi Mumbai, Thane District, Raigad District, Palghar District and <a href="#">wards of Mumbai</a>, M/East, M/West, N, S and T.</p>

The updated details of Insurance Ombudsman are available on:  
<https://www.cioins.co.in/Ombudsman>.

#### Arbitration:





UIN: IRDAN115CPLB0008V01202425

The parties to the contract may mutually agree and enter into a separate Arbitration Agreement to settle any and all disputes in relation to this policy. Arbitration shall be conducted under and in accordance with the provisions of the Arbitration and Conciliation Act, 1996. *(Applicable to commercial entities only)*

### **ICICI Lombard General Insurance Company Limited**

**Mailing Address:** 601 / 602, 6th Floor, Interface Building No. 16, New Link Road Malad (W), Mumbai - 400 064.

**Registered Office Address:** ICICI Lombard House, 414, Veer Savarkar Marg, Near Siddhi Vinayak Temple, Prabhadevi, Mumbai 400 025.

**Visit us at** [www.icicilombard.com](http://www.icicilombard.com) • **Mail us at** [customersupport@icicilombard.com](mailto:customersupport@icicilombard.com)

Toll Free No.: **1800 2666** • Chargeable No.: **+91 91 86552 22666** • Insurance is the subject matter of solicitation.

IRDA Reg. No. 115. • CIN: L67200MH2000PLC129408.

ICICI LOMBARD GENERAL INSURANCE COMPANY LIMITED

UIN: IRDAN115CP0014V01201920

CONTRACT OF INSURANCE

INSURED NAME: MARUTI SUZUKI INDIA LIMITED



INSURER: IFFCO TOKIO General Insurance Company Limited

Policy Type - Public Liability Industrial

Policy Period - ( 01/04/2024 to 31/03/2025 )

Servicing Branch :	Japanese
Policy Issuing Office :	IFFCO TOKIO GEN INSU. CO. LTD. PLOT NO-03 IFFCO TOWER,, 4th FLOOR,SECTOR-29 GURGAON GURGAON , HARYANA - 122001 , GSTIN - 06AAACI7573H1ZG
Issuing Office GSTIN :	06AAACI7573H1ZG
Corporate Office :	IFFCO TOKIO GEN INSU. CO. LTD.4th - 5th Floor, IFFCO TowersPlot No 3, Sector 29, GURGAON (HARYANA) - 122001
Unique Invoice No :	41089481
Policy No :	41089481
Tax Invoice Date :	30/04/2024
SAC :	997139
Intermediary Details :	M/S MARUTI INSURANCE BROKING P

**POLICY SCHEDULE CUM TAX INVOICE**

Insured	MARUTI SUZUKI INDIA LIMITED	
GSTIN	06AAACM0829Q1Z8	
Address	Old Palam,	
	Gurgaon Road	
	Gurgaon	
	India	
	Pin Code	122001
Place of Supply	HARYANA	
CKYC Number	NA	
Contact No	*****024	
Email	he****@iffcotokio.co.in	
Business Description	Automobile Manufacturing	
Policy Period	01/04/2024- 31/03/2025	
Co Insurance Details	NA	
Limit of Liability	Cover	
	Limit of Liability	INR 450,000,000 per occurrence and in the aggregate
Deductibles	<b>Premises &amp; Associated Liabilities</b>	
	0.5 % of the limit of indemnity per any one accident subject to a maximum of Rs. 3,00,000	
Territorial Limits	India Only	
Jurisdiction	India Only	
Turnover Details	INR 1,523,215,000,000	
Policy Type	Claims Made - Right to defend	
Retroactive Date	01/04/23, As per policy inception/as per expiring – subject to submission of proof and continuous renewal	
Premium	Premium Excluding Taxes: INR 40,500.00 CESS (0%): INR 0.00 GST - SGST (9%): INR 3,645.00 - UGST (0%): INR 0.00 - CGST (9%): INR 3,645.00 - IGST (0%): INR 0.00 Total Premium / Invoice Value : INR 47,790.00	
GST Related Declarations	<b>Whether GST is Payable on Reverse Charge Basis- No</b>	
	<b>We hereby declare that though our aggregate turnover in any preceding financial year from 2017-18 onwards is more than the aggregate turnover notified under sub-rule (4) of rule 48, we are not required to prepare an invoice in terms of the provisions of the said sub-rule.</b>	
	<b>Extensions</b>  1. Act of God Perils  2. Care Custody Endorsement sub-limited to INR 45,000,000 in the aggregate  3. Claim Series Endorsement	

4. Cross Liability
5. Designated Premises Endorsement
6. Fire Damage sub-limited to INR 1,000,000 for each & every loss
7. Food And Beverages
8. IT Clarification Clause
9. Knowledge Of Occurrence
10. Lift Liability Extension
11. Medical Expenses Sub-Limit sub-limited to INR 50,000 per person and INR 45,000,000 in the aggregate
12. Non Owned And Hired Automobile Liability sub-limited to INR 45,000,000 in the aggregate
13. Waiver of Transfer of Rights wherever required by contract

#### Exclusions

1. Airlines, Aircraft and Airside operations of Airports including refuelling, control tower liability and construction and repair work within the Airport perimeter. For the purpose of this exclusion "airside" refers to area on the tarmac next to the aircrafts and the "runways" where the aircraft ply
2. Aqua Sports, Hazardous Sports
3. Automobile Liability Exclusion
4. Aviation Exclusion
5. Communicable Disease Exclusion
6. Contractors engaged in wrecking, demolition, maintenance of dams and sub aqueous work
7. Cyber Exclusion CGL
8. Directors & Officers Exclusion
9. Electric, Gas & Water Utilities where Brownout/Blackout failure to supply is not excluded
10. EMF Exclusion
11. IT clarification clause
12. Manufacturers and/or production and/or storage of fireworks, fuses, ammunitions, catridges and explosives
13. Manufacturing/Formulation activities in US/Canada
14. Mining Risks other than "Drift" and/or "Open-cast"
15. Ocean marine Liability including ship owner's liability
16. Offshore related risks - Oil Rigs and Oil Platforms
17. Ownership, operation or use of Aircraft and air cushioned vehicles including construction, repair or installation work on aircrafts
18. Ownership, operation or use of railways, tramways and chair lifts
19. Ownership, operation or use of Vessels including their navigation
20. Pandemic Exclusion
21. Prior / pending litigation
22. Professional Liability
23. Public Liability of Indian Railways as Railway operator
24. Railways Exclusion
25. Underground and Underwater mines and collieries and all underground services in connection therewith, quarries, tunnelling

Other Terms and Conditions



**Disclaimer:**

The issuance of this Insurance Policy is subject to satisfactory verification of KYC documentation of the Client/ Policyholder as per IRDAI Master Circular dated 1st August 2022 on AML/ CFT. In case, if any discrepancy is found in KYC Verification of the Client/ Policyholder, it is agreed by the Client/ Policyholder to complete/ rectify the discrepancy found in the KYC documents/information for the generation of CKYC Number, failing which the policy will be considered ineffective/suspended/ cancelled and no claim will be payable under this Insurance Policy.

Toll Free: 1-800-103-5499; SMS "claim" to 56161  
SAC Code: 9971  
Regd. Office: IFFCO SADAN, C1 Distt Centre, Saket, New Delhi -110017  
Corporate Identification Number (CIN) U74899DL2000PLC107621, IRDA Reg. No. 106  
Consolidated Stamp Duty Deposited as per the order of Government of National Capital Territory of Delhi

For IFFCO-Tokio General Insurance Company Limited



**Authorised Signatory**

Regd. Office : IFFCO Sadan  
C-1 Dist. Centre, Saket,  
New Delhi-110017  
CIN: U74899DL2000PLC107621

## PUBLIC LIABILITY POLICY

### 1. OPERATIVE CLAUSE:

WHEREAS the Insured named in the Schedule hereto and carrying on the business described in the said Schedule has applied to IFFCO-TOKIO General Insurance co. Ltd. (hereinafter called the company) for the indemnity hereinafter contained and has made a written proposal and declaration which shall be the basis of this contract and is deemed to be incorporated herein and has paid the premium as consideration for or on account of such indemnity.

NOW THIS POLICY WITNESSETH that subject to the terms exceptions and conditions contained herein or endorsed hereon the Company will indemnify the Insured against their legal liability (other than liability under the Public Liability Insurance Act, 1991 or any other Statute that may come into force after the issue of this policy) to pay compensation including Claimant's costs, fees and expenses anywhere in India, in accordance with Indian Law.

### 2. INDEMNITY:

The Indemnity only applies to claims arising out of accidents occurring in the Insured Premises during the period of insurance first made in writing against the Insured during the policy period and the Insured is indemnified in accordance with the Operative Clause for and/or arising out of Injury and/or Damage but only against claims arising out of or in connection with the business specified in the Schedule and not against claims arising out of or in connection with:-

(a) Pollution howsoever caused unless specifically covered

(b) Any product.

For the purpose of determining the indemnity granted

(a) 'Injury' means death, bodily injury, illness or disease of or to any person,

(b) 'Damage' means actual and/or physical damage to tangible property;

(c) 'Pollution' means pollution or contamination of the atmosphere or of any water, land or other tangible property;

(d) 'Product' means any tangible property after it has left the custody or control of the Insured, which has been designed, specified, formulated, manufactured, constructed, installed, sold, supplied, distributed, treated, serviced, altered or repaired by or on behalf of the Insured but shall not mean food and beverages supplied by or on behalf of the Insured primarily to the Insured's employees as a staff benefit.

(e) 'Policy Period' means the period commencing from effective date and hour as shown in the Policy Schedule and terminating at midnight on the expiry date as shown in the Policy Schedule.

(f) 'Period of Insurance' means the period commencing from the retroactive date and terminating on the expiry date as shown in the Policy Schedule.

(g) 'Accident' means a fortuitous event or circumstance which is sudden, unexpected and unintentional including resultant continuous, intermittent or repeated exposure arising out of the same fortuitous event or circumstance.

(h) 'Premises' shall be deemed to include pipelines running outside the premises for discharge of treated effluents at a disposal point situated within a distance one kilometer from the premises.

### 3. (a) NOTIFICATION EXTENSION CLAUSE:

Should the Insured notify the Company during the Policy period in accordance with General Condition 9.1 of any specific event or circumstance which the Company accepts may give rise to a claim or claims which form the subject of indemnity by this policy, then the acceptance of such notification means that the Company will deal with such claim or claims as if they had first been made against the Insured during the Policy period. The extension under this Clause will be subject to the maximum time limit laid down under the Indian Limitation Act in force from time to time.

### (b) EXTENDED CLAIM REPORTING CLAUSE:

In the event of non-renewal or cancellation of this Policy either by the Company or by the Insured, the Company will allow a time limit not exceeding 90 days from the date of expiry or cancellation of the policy provided no insurance is in force during this extended reporting period for the same interest, for notification of claims for accidents which had taken place during the period of insurance but could not be made during the policy period, provided, however, all claims made during the extended reporting period shall be handled as if they were made on the last day of the expiring Policy period and are subject to the limits of indemnity and the terms, conditions and exceptions of the policy.

### 4. INDEMNITY TO OTHERS:

The indemnity granted extends to;

4.1 officials of the Insured in their business capacity arising out of the performance of their business or in their private capacity arising out of their temporary engagement of the Insured's employees;

4.2 the Officers, Committees and members of the Insured's canteen, social, sports, medical, fire fighting and welfare organisations in their

respective capacities as such;

4.3 the personal representatives of the estate of any person who would otherwise be indemnified by this Policy but only in respect of liability incurred by such person.

Provided always that all such persons or parties shall observe, fulfill and be subject to the terms, conditions and exclusions of this Policy as though they were the Insured.

## 5. CROSS LIABILITIES:

Each person or party indemnified is separately indemnified in respect of claims made against any of them by any other person or party (other than the named Insured) subject to Company's total liability not exceeding the limits of indemnity stated in the Schedule of the Policy.

## 6. DEFENCE COSTS:

The Company will pay all costs, fees and expenses incurred with their prior consent in the investigation, defence or settlement of any claim made against the Insured and the costs of representation at any inquest, inquiry or other proceedings in respect of matters which have a direct relevance to any claim made or which might be made against the Insured, provided such claim or claims are the subject of indemnity by the Policy whether liability ultimately attaches to the policy or not. Such costs, fees and expenses are called 'Defence Costs'.

## 7. INDEMNITY LIMITS:

Company's total liability to pay compensation, Claimant's costs, fees and expenses and defence costs shall not exceed the Indemnity limit stated in the Schedule. Indemnity Limit applies to any one claim or series of claims arising from one originating cause. Indemnity Limit shall represent the total amount of Company's Liability during the Policy period.

### 7.1 CLAIMS SERIES CLAUSES:

For the purpose of this policy where a series of and/or several bodily injuries and/or property damages are attributable directly or indirectly to the same cause, all such bodily injuries and/or property damages shall be added together and all such bodily injuries and/or property damages shall be treated as one claim and such claim shall be deemed to have been made at the point in time when the first of the claims was made in writing. There shall, however, be no coverage for claims made arising from one specific cause which are made later than 3 years after the first claim of the series.

### 7.2 COMPULSORY EXCESS:

The Insured shall bear a Compulsory Excess of ½ % of the limit of indemnity per any one accident subject to a maximum of Rs. 3,00,000/-. This Compulsory Excess shall be applicable to both (a) death/bodily injury and (b) property damage, inclusive of defence costs arising out of any one accident. The Company's liability shall attach for the claim in excess of such Compulsory Excess (and Voluntary Excess, if any, opted by the Insured).

### 7.3 VOLUNTARY EXCESS:

In the event of the Insured opting, the policy shall be subject to a voluntary excess as mentioned in the schedule. This voluntary excess shall be applicable to both (a) death/bodily injury claims and (b) property damage claims inclusive of defence costs arising out of any one accident. The Company's Liability shall attach for the claims in excess of such compulsory and voluntary excess.

## 8. EXCLUSIONS

This Policy does not cover liability

8.1 assumed by the Insured by agreement and which would not have attached in the absence of such agreement.

8.2 arising out of earthquake, earth-tremor, volcanic eruption, flood, storm, tempest, typhoon, hurricane, tornado, cyclone or other similar convulsions of nature and atmospheric disturbance.

8.3 arising out of deliberate, willful or intentional non-compliance of any statutory provision.

8.4 arising out of loss of pure financial nature such as loss of goodwill, loss of market etc.

8.5 (a) arising out of all personal injuries such as libel, slander, false arrest, wrongful eviction, wrongful detention, defamation etc. and mental injury, anguish, or shock resulting therefrom;

(b) infringement of plans, copy-right, patent, trade name, trade mark, registered design;

8.6 arising out of fines, penalties, punitive or exemplary damages or any other damages resulting from the multiplication of compensatory damages.

8.7 directly or indirectly occasioned by, happening through or in consequence of war, invasion, act of foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection or military or usurped power.

8.8 directly or indirectly caused by or contributed to by

(a) ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel;

(b) the radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;

This Policy does not cover liability for claims arising out of;

8.9 the ownership, possession or use by or on behalf of the Insured of any motor vehicle or trailer for which compulsory insurance is required by legislation other than the following:

(a) claims caused by the use of any tool or plant forming part of or attached to or used in connection with any motor vehicle or trailer;

(b) claims arising beyond the limits of any carriageway or thoroughfare caused by the loading or unloading of any motor vehicle or trailer;

(c) claims for damage to any bridge, weighbridge, road or anything beneath caused by the weight of any motor vehicle or trailer or of the load carried therein;

(d) claims arising out of any motor vehicle or trailer temporarily in the Insured's custody or control for the purpose of parking.

8.10 transportation of materials and/or hazardous/dangerous substances outside Insured's premises unless specifically covered.

8.11 the ownership, possession or use by or on behalf of the Insured of any aircraft, watercraft or hovercraft.

8.12 damage to property owned, leased or hired or under hire-purchase or on loan to the Insured or otherwise in the Insured's care custody or control other than the

(a) premises (or the contents thereof) temporarily occupied by the Insured for work thereon or other property temporarily in the Insured's possession for work thereon (but no indemnity is granted for damage to that part of the property on which the Insured is working and which arises out of such work).

(b) employees' and visitors' clothing and personal effects.

(c) premises tenanted by the Insured to the extent that the Insured would be held legally liable in the absence of any specific agreement.

8.13 Injury and/or damage occurring prior to the Retroactive Date in the Schedule.

Provided always that in the event of any injury or damage arising from continuous or continual inhalation, ingestion or application of any substance following the covered accident and where the Insured and Company cannot agree when the injury or damage occurred, then

(a) Injury shall be deemed to have occurred when the claimant first consulted a qualified medical practitioner in respect of such injury;

(b) Damage shall be deemed to have occurred when it first became evident to the claimant even if the cause was unknown.

8.14 the deliberate, conscious or intentional disregard of the Insured's technical or administrative management of the need to take all reasonable steps to prevent claims.

8.15 injury to any person under a contract of employment or apprenticeship with the Insured when such Injury arises out of the execution of such contract.

8.16 Any accident(s) in respect of which Relief would be under the Public Liability Insurance Act, 1991 or any other Statute that may come into force after the issue of this policy.

8.17 liability more specifically insured elsewhere.

## 9. GENERAL CONDITIONS

9.1 The Insured shall give written notice to the Company as soon as reasonably practicable of any claim made against the Insured (or any specific event or circumstance that may give rise to a claim being made against the Insured) and which forms the subject of indemnity under this policy and shall give all such additional information as the Company may require. Every claim, writ, summons or process and all documents relating to the event shall be forwarded to the Company immediately they are received by the Insured.

9.2 No admission, offer, promise or payment shall be made or given by or on behalf of the Insured without the written consent of the Company.

9.3 The Company will have the right, but in no case the obligation, to take over and conduct in the name of the insured the defence of any claim and will have full discretion in the conduct of any proceedings and in the settlement of any claim and having taken over the defence of any claim may relinquish the same. All amounts expended by the Company in the defence settlement or payment of any claim will reduce the limits of indemnity specified in the Schedule of the Policy.

In the event the Company, in its sole discretion, chooses to exercise its right pursuant to this condition, no action taken by the Company in the exercise of such right will serve to modify or expand in any manner, the Company's liability or obligations under this policy beyond what the Company's liability or obligations would have been had it not exercised its rights under this condition.

9.4 The Insured shall give all such information and assistance as the Company may reasonably require.



9.5 The Insured shall give notice as soon as reasonably practicable of any fact, event or circumstance which materially changes the information supplied to the Company at the time when this policy was effected, and the Company may amend the terms of this Policy according to the materiality of such change.

9.6 The Company may at any time pay to the Insured in connection with any claim or series of claims under this Policy to which an Indemnity Limit applies the amount of such Limit (after deduction of any sums already paid) or any lesser amount for which such claims can be settled and upon such payment being made the Company shall relinquish the conduct and control of and be under no further liability in connection with such claims.

9.7 The Policy and the Schedule shall be read together as one contract and any word or expression to which a specific meaning has been attached in any part of this Policy or the Schedule shall bear such specific meaning wherever it may appear. The terms, conditions and exclusions of this Policy (and any phrase or word contained therein) shall be interpreted in accordance with Indian Law.

9.8 The Insured shall keep accurate records of annual turnover which term shall include all leviable duties and at the time of renewal of Insurances declare such details as the Company may require. The Company shall at all reasonable time have free access to inspect such records.

9.9 If at the time of happening of any event resulting into a liability under this Policy, there be any other Public Liability Insurance or Insurances effected by the Insured or by any other person covering the same liability, then the Company shall not be liable to pay or contribute more than its rateable proportion of such liability.

9.9A This Policy does not cover liability which at the time of happening of any event resulting into such liability, be insured by or would, but for the existence of this policy, by insured by, any other Policy (but not a Public Liability Policy) or Policies, except in respect of any excess beyond the amount which could have been payable under such Policy/Policies, had this Insurance not been effected.

9.10 The Company may cancel this Policy by giving thirty days' notice in writing of such cancellation to the Insured's last known address and in such an event the Company will return a pro-rata portion of the premium (subject to a minimum retention of 25 per cent of the annual premium) for the unexpired part of the Insurance.

The Policy may also be cancelled by the Insured by giving thirty days' notice in writing to the Company, in which event the Company will retain premium at short-period scale provided there is no claim under the Policy during the period of Insurance.

In case of any claim under the Policy no refund of premium shall be allowed.

9.11 In the event of liability arising under the policy or the payment of claim under the policy, the Limit of Indemnity per any one year under the Policy shall get reduced by the extent of quantum of liability to be paid or actual payment of such claim. Under no circumstances, it shall be permissible to reinstate the limit of indemnity to the original level, even on payment of extra premiums.

9.12 It is also hereby further expressly agreed and declared that if the Company shall disclaim liability to the Insured for any claim hereunder and such claim shall not within 12 calendar months from the date of such disclaimer have been made the subject matter of a suit in a court of law then the claim shall for all purposes be deemed to have been abandoned and shall not thereafter be recoverable hereunder.

9.13 The Company shall not be liable to make any payment under this Policy in respect of any claim if such claim shall be in any manner fraudulent or supported by any statement or device whether by Insured or by any person on behalf of the Insured and/or if the insurance has been continued in consequence of any material mis-statement or the non-disclosure of any material information by or on behalf of the Insured.

9.14 No claim shall be payable under this policy unless the cause of action arises in India and the liability to pay claim is established against the insured in an Indian court. It is further agreed and understood that only Indian Law shall be applicable to any such action.

## 9.15 POLICY DISPUTE CLAUSE

Any dispute concerning the interpretation of the terms, conditions, limitations and/or exclusions contained herein is understood and agreed to by both the Insured and the Company to be subject to Indian Law. Each party agrees to submit to the jurisdiction of any court of competent jurisdiction within India and to comply with all requirements necessary to give such court of jurisdiction. All matters arising hereunder shall be determined in accordance with the law and practice of such Court.

## GRIEVANCE OR COMPLAINT

In case of any grievance, **We** can be contacted at:

Website: <https://www.iffcotokio.co.in/customer-services/grievance-redressal>  
Toll free: 1800-103-5499  
E-mail: [support@iffcotokio.co.in](mailto:support@iffcotokio.co.in)  
Courier: Chief Grievance Officer  
IFFCO-Tokio General Insurance Co Ltd  
IFFCO Tower, Plot no. 3  
Sector -29, Gurgaon – 122001

For updated details of grievance officer, kindly refer the link  
<https://www.iffcotokio.co.in/customer-services/grievance-redressal>.

Grievance may also be lodged at IRDAI Integrated Grievance Management System  
- <https://bimabharosa.irdai.gov.in/>



## Endorsement

### Act Of God

Notwithstanding anything contained to the contrary, it is hereby declared and agreed that with effect from inception of this policy all claims arising from or attributable to Act of God perils causing Third party bodily injury and property damage within the named premises of the insured covered under this policy and for which the insured is held liable shall be admissible under the policy. The named perils under Act of God perils shall be as below :

Earthquake, earth-tremor, volcanic eruption, flood, storm, tempest, typhoon, hurricane, tornado, cyclone or other similar convulsions of nature and atmospheric disturbance

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

### Goods Kept In Care, Control & Custody

Notwithstanding anything herein contained to the contrary, it is hereby agreed and declared that the Insurance under this policy shall extend to include your legal liability for loss/damage to property of residents/bonafide guests whilst they are under your care, control and custody in the premises referred to in the Schedule subject to limit of indemnity not exceeding the amount mentioned against Item No.13 of the schedule which shall form part of the overall limit of indemnity as mentioned in Item No. 5 of the Schedule of the policy.

It is expressly agreed and understood that the cover granted under this endorsement shall not apply to legal liability arising out of loss or damage to valuables of residents/bonafide guests unless they are kept in the strong room/cloak room maintained by you for safe keeping and you maintain proper records showing the items deposited therein by each resident/bonafide guest. In no case the policy covers loss of monies, securities, documents (including credit cards) and plans.

Also provided always that all other terms, conditions, provisions and exceptions of the policy shall apply to this extension as if they have been incorporated herein.

### Claim Series Endorsement

Notwithstanding anything contained to the contrary, it is hereby declared and agreed that with effect from inception of this policy claims series clause stands included in the policy.

A Claims Series Event as defined below shall be deemed to be one claim and date of loss shall be the date when the first claim of the Claims Series Event is made in writing against the Insured.

A Claims Series Event shall be defined as a series of two or more claims arising from one specific common cause which is attributable, e.g.

- to the same fault in design, manufacture, instructions for use or labelling of products
- or to the supply of the same products and/or services or to products and/or service showing the same defect.

There shall, however, be no coverage for claims arising from one specific cause which are made later than 3 years after the first claim of the series.

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

### Cross Liability

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception of this policy each person or party indemnified is separately indemnified in respect of claims made against any of them by any other person or party (other than the named Insured) subject to Company's total liability not exceeding the overall limits of indemnity stated in Item No. 5 of the Schedule of the Policy

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

### Designated Premises Endorsement

Notwithstanding anything contained to the contrary, it is hereby declared and agreed that with effect from inception of this policy only claims arising out of clients named business operation at locations mentioned in the Schedule shall be admissible under the policy.

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

Manufacturing, testing & other Facilities (Existing) :

Location No.1 - MSIL Gurgaon Plant, Palam-Gurgaon Road, Gurgaon - 122015. Location No.2 - MSIL Manesar Plant, Plot No.1 Ph-3 A, IMT Manesar 122051. Location No.3 - MSIL Plot No. 1, Sector 33 B and C IMT Rohtak - 123701. Location No.4 - MSIL Powertrain plant, Plot 1, Phase 3 A, IMT Manesar, Gurgaon - 122051. Location No.5 - MSIL Casting plant, Plot 26B, Phase 3 IMT Manesar, Gurgaon - 122051. Location No.6 - MSIL SPZ, Near Railway Yard, Opp. PUB Building, Adani Port Road, Navinal Iceland, Mundra Kutch - 370421. Location No.7 - MSIL SND, Block No.334,335 Village Hansalpur, Near Bacharaji, Taluka Mandal, District Ahmedabad Gujarat - 382130 Location No.8 - Maruti Suzuki Stockyard, Kanchenjunga Integrated Park, Fatapukur, Siliguri - Jalpaiguri Road, District - Jalpaiguri West Bengal. Location No.9 - MSSD Naraina, Maruti Sales and Service (Delhi), C-119, Naraina Industrial Area Phase - I, Delhi - 110028. Location No.10 - Mumbai PDI, Mumbai Port Trust, Frere Basin Shed No.-1 Clarke Bunder, New Mazgaon Dock Ltd. Mazgaon, Mumbai, Maharashtra - 400010. Location No.11 - Kolkata RO, Plot NO. - IID/15, Action area IID, New Town, Rajarhat, Kolkata, West Bengal - 700156. Location No.12 - Jaipur RO, Plot No. J-4, Setor-8, Belt - B, New Sanganer Road, Mansarovar, Tehsil : Amber, District : Jaipur, Rajasthan - 302020. Location No.13 - HO Delhi, Plot No. 1, Shopping Mall, Nelson Mandela Marg,

Vasant Kunj, Delhi - 110070. Location No.14 - Nagpur stockyard, Plot No. J-6, M.I.D.C Industrial Area, Butibori, Nagpur, Maharashtra - 441122 Location No.15 - Bangalore stockyard, Plot No. 1&2, Sompura KIADB Indl Area, NH-4, Yedahalli village, Nelamangala Taluk, Tumkur Road, Bengaluru Rural, Karnataka - 562111. Location No.16 - Indore RO, Plot No. 5/RC, Scheme No. 134, Village - Khajarana, Dist. - Indore, Madhya Pradesh - 452010 Location No.17 - MSIL, B-21, B-24/1, Road No. 16, Wagle Industrial Estate, Thane (W) Location No.18 - MSIL, Plot no. Gen 25 and Gen-25B/1, TTC Industrial area Pawane, Navi Mumbai, Thane (Industrial) Location No.19 - MSIL, Plot no. Gen 25 and Gen-25B/2, TTC Industrial area Pawane, Navi Mumbai, Thane (Commercial) Location No.20 - Maruti Suzuki Training Academy, Sector - 28, Village - Chakarpur, Gurugram - 122002 Location No.21 - MSIL, 98/A/2 B.T. Road, Kolkata, West Bengal - 700090 Location No.22 - M/s Maruti Suzuki India Limited, Municipal Holding no. 123, Jessore Road (South), District - North 24 Parganas, West Bengal - 700133 Location No.23 - M/s Maruti Suzuki India Limited, Unit No. 1-5, Prime Avenue A, CHF, S.V. Road, Vile Parle (West), Mumbai - 400056 Location No.24 - M/s Maruti Suzuki India Limited, Near Muttli Bus Stand, Kalpetta, Muttli North Kalpetta, Wayanad, Kerela - 673122 Location No.25 - M/s Maruti Suzuki India Limited, BLOCK No.334, 335- OLD 158, 293, Village Hansalpur, Near Becharaji, Taluka Mandal, Ahmedabad, Gujarat, 382130 Location No. 26 - M/s Maruti Suzuki India Limited, Plot no. 39, Sy. No. 58, Kothanur village, K.R. Puram Hobli, Bangalore East Taluk, Bangalore - 560077 Location No. 27 - M/s MSIL Kharkhoda Plant, Plot No. 831, IMT Kharkhoda, Sonipat, Haryana - 131402 Location No. 28 - M/s Maruti Suzuki India Limited, Plot No. 58/4, Site 4, Sahibabad Industrial Area, Ghaziabad, UP 201010 Location No. 29 - M/s Maruti Suzuki India Limited, Plot No. C224, Site 1, Bulandshahr Road Industrial Area, Ghaziabad, UP 201009 Location No. 30 - M/s Maruti Suzuki India Limited, Plot No. 2, Ecotech 12, Gautam Budh Nagar, Greater Noida, UP 201306

#### New Additions for proposed renewal PLI 2024-25:

Location No.1 - M/s Maruti Suzuki India Limited, Plot No C-4, Gokul Nagar, Gokulpur, Jaipur, Rajasthan, - 302012 Location No. 2 - M/s Maruti Suzuki India Limited, B-2, Sector 58, Noida, Gauttam Buddha Nagar, 201301, NOIDA (U.P.) - 201301 Location No 3 - M/s Maruti Suzuki India Limited, Khasra No.-713, 714, 716, Village Acheja Delhi Road, Village Acheja, Delhi Road Hapur, Hapur (U.P.) - 245101 Location No 4 - M/s Maruti Suzuki India Limited, Khatha No.827/648/13, Uttarahalli Village, Ward No.184, Uttarahalli Hobli, Bangalore South Taluk, Bangalore - 560061 Location No 5 - M/s Maruti Suzuki India Limited, Survey No. 357(Export Warehouse), Opposite Maruti Gate No. 2, Village - Hansalpur Becharji, Taluka - Mandal, District - Ahmedabad - 382130

#### Expansion In the Existing Location

Location - M/s Maruti Suzuki India Limited, Bangalore stockyard (Expansion), Plot No. 1&2, Sompura KIADB Indl. Area, NH-4, Yedahalli village, Nelamangala Taluk, Tumkur Road, Bengaluru Rural, Karnataka - 562111 - \* Since the expansion area is located in the existing stockyard of RPDC, hence addition of the location is not required

#### Fire Damage

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception of this policy, **We** will pay expenses as described below for **property damage** caused by a **Fire** accident:

- (1) On premises You own or rent;
- (2) On ways next to premises You own or rent; or
- (3) Because of Your operations;

provided that:

- (1) The accident takes place in the coverage territory and is reported during the Period of Insurance;
- (2) The expenses are incurred and reported to Us within thirty days of the date of the accident;
- and
- (3) The injured person submits to examination, at Our expense, by physicians of Our choice as often as We reasonably require

subject to limit of indemnity not exceeding the amount mentioned against Item No.13 of the schedule which shall form part of the overall limit of indemnity as mentioned in Item No. 5 of the Schedule of the policy.

We will make these payments regardless of fault. These payments will however not include the following expenses for damage to any property :

- a. of any Insured.
- b. of a person hired to do work for or on behalf of any Insured or a tenant of any Insured.
- c. of a person injured on that part of premises You own or rent that the person normally occupies.
- d. to any property whose value immediately prior to loss was not in proportion
- e. to money, securities, manuscripts, deeds, bonds, bills of exchange, promissory notes, stocks or share certificates, stamps and travellers cheques and business documents
- f. Included within the products-completed operations hazard.
- g. Excluded under Coverage A.
- h. Due to war, whether or not declared, or any act or condition incident to war. War includes civil war, insurrection, invasion, act of foreign enemy, civil commotion, factional civil commotion, terrorism, military or usurped power, rebellion or revolution.

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### Food & Beverage Endorsement

Notwithstanding anything herein contained to the contrary, it is hereby agreed and declared that the insurance under this policy shall extend to include your legal liability for death and/or bodily injury and/or loss of or damage to or loss of use of property arising out of poisoning by foreign or deleterious matter in food, beverages and/or any other edible items supplied by you, provided always that you shall take every possible precaution to prevent supply of any food/beverages/edible items which are not in good condition or free from contamination or fit for human consumption

subject to limit of indemnity not exceeding the amount mentioned against Item No.13 in the schedule and which shall form part of the overall limit as mentioned in Item No.5 of the schedule of the policy.

Also provided always that all other terms, conditions, provisions and exceptions of the policy shall apply to this extension as if they have been incorporated herein.

### Information Technology Clarification Clause

Property damage covered under this Agreement shall mean physical damage to the Substance of property.

Physical damage to the substance of property shall not include damage to data or software, in particular any detrimental change in data, software or computer programs that is caused by a deletion, a corruption or a deformation of the original structure.

Consequently the following are excluded from this Agreement:

- Loss of or damage to data or software, in particular any detrimental change in data, software or computer programs that is caused by deletion, a corruption or a deformation of the original structure, and any business interruption, losses resulting from such loss or damage. Notwithstanding this exclusion, loss of or damage to data or software, which is the direct consequence of insured physical damage to the substance of property, shall be covered.
- Loss or damage resulting from impairment in the function, availability, range of use or accessibility of data, software or computer programs, and any business interruption losses resulting from such loss or damage.

### Knowledge Of Occurrence

Notwithstanding anything herein contained to the contrary, it is hereby agreed and declared that the insured shall deem to have knowledge of claims, events, circumstances, accident, offence or a suit only if the "Control group" comprising of persons declared by the insured have knowledge of the same or the same have been brought to their attention

This "Control group" shall be declared and recorded in the policy via an endorsement and shall only comprise of persons who are in active and permanent employment of the client. It is also a condition precedent to this extension that the "Control Group" shall have at least 1 participant member each from the Human resource Department, the Administrative Department and Line Control department (not below the rank of a Senior Manager or equivalent).

Even if the claims, events, circumstances, accident, offence or a suit is brought to knowledge of any one member of the "Control Group", it will be deemed to be in Knowledge of the entire "Control Group"

The of claims, events, circumstances, accident, offence or a suit may be deemed to be in knowledge of the "Control Group" if any of its members is notified of the same via an E-Mail, Facsimile, Courier, Registered post and SMS or any other internal mode of communication of external forms of mode of communication via newspaper, TV, radio etc.

The "Control Group" shall come together for a meeting once every quarter to seek updates on any claims, events, circumstances, accident, offence or a suit which would ordinarily fall under cover of this insurance

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

### Lift Liability Extension

Notwithstanding anything herein contained to the contrary, it is hereby agreed and declared that the Insurance under this policy shall extend to include your legal liability for death or bodily injury or loss of or damage to or loss of use of property arising out of accidents caused by the use of lifts subject to the conditions that:

- i) the premises/places are kept in state of good repair/maintenance.
- ii) properly trained personnel take care of operation of such facilities
- iii) the materials used are proper and free of defects

subject to limit of indemnity not exceeding the amount mentioned against Item No.13 of the schedule which shall form part of the overall limit of indemnity as mentioned in Item No. 5 of the Schedule of the policy.

Also provided always that all other terms, conditions, provisions and exceptions of the policy shall apply to this extension as if they have been incorporated herein.

### Medical Payments

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception of this policy, **We** will pay expenses as described below for **bodily injury** caused by an accident:

- (1) On premises You own or rent;
- (2) On ways next to premises You own or rent; or
- (3) Because of Your operations;



provided that:

- (1) The accident takes place in the coverage territory and is reported during the Period of Insurance;
- (2) The expenses are incurred and reported to Us within thirty days of the date of the accident;
- and
- (3) The injured person submits to examination, at Our expense, by physicians of Our choice as often as We reasonably require

subject to limit of indemnity not exceeding the amount mentioned against Item No.22 of the schedule which shall form part of the overall limit of indemnity as mentioned in Item No. 15 of the Schedule of the policy.

We will make these payments regardless of fault. These payments will not exceed the applicable limit of insurance. We will pay reasonable expenses for:

- a. First aid administered at the time of an accident;
- b. Necessary medical, surgical, x-ray and dental services, including prosthetic devices; and
- c. Necessary ambulance, hospital, professional nursing and funeral services.

We will not pay expenses for bodily injury:

- To any Insured.
- To a person hired to do work for or on behalf of any Insured or a tenant of any Insured.
- To a person injured on that part of premises You own or rent that the person normally occupies.
- To a person, whether or not an employee of any Insured, if benefits for the bodily injury are payable or must be provided under a workers' compensation or disability benefits law or a similar law.
- To a person injured while taking part in athletics.
- Included within the products-completed operations hazard.
- Excluded under Coverage A.
- Due to war, whether or not declared, or any act or condition incident to war. War includes civil war,

insurrection, invasion, act of foreign enemy, civil commotion, factional civil commotion, terrorism, military or usurped power, rebellion or revolution.

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Non Owned & Hired Automobile Liability**

Notwithstanding anything contained to the contrary, it is hereby declared and agreed that with effect from inception of this policy claims arising out of Non Owned & Hired Automobile as detailed below are covered under the policy subject to limit of indemnity not exceeding the amount mentioned against Item No.13 of the schedule which shall form part of the overall limit of indemnity as mentioned in Item No. 05 of the Schedule of the policy. Subject to all the terms and conditions of this Insurance, we will pay damages that the insured becomes legally obligated to pay by reason of liability imposed by law for bodily injury or property damage caused by an occurrence to which this coverage applies and arising out of the ownership, maintenance or use, including loading and unloading, of any hired motor vehicle or non- owned motor vehicle.

This coverage applies only to such bodily injury or property damage that occurs during the policy period.

A. Damages for bodily injury Include damages claimed by a person or Organization for care, loss of services or death resulting at any time from the Bodily Injury.

B. We may at any time, at our discretion, pay the applicable Limit of Insurance that remains available.

The most we will pay hereunder is fixed as set forth in the Limits Of Insurance section of this insurance contract.

C. Our obligations hereunder end when we have used up the applicable Limits of Insurance.

D. Other than as provided under the Investigation, Defense And Settlements and Supplementary Payments sections of this insurance contract, we have no other obligation or liability to pay sums or perform acts or services under this coverage.

E. In those jurisdictions having laws providing for direct action against insurers, if a claim or suit is brought directly against us, we shall defend such claim or suit and the insured shall reimburse us up to the Deductible shown in the Hired or Non-Owned Motor Vehicle Schedule as if such claim or suit were brought against the insured.

F. With respect to a hired motor vehicle or a non-owned motor vehicle, this insurance shall be excess insurance over any other valid and collectible insurance available to the Insured.

G. It is a condition precedent to liability that a Comprehensive Motor Insurance Policy (including cover for passenger liability) is in force at the time of the loss and the coverage provided by this extension is in excess of coverage under the motor insurance policy. This will only be in case where as per the territory law a TP Motor Liability is mandatory; in this particular case this extension will act as a secondary layer. In all other cases standard excess will apply and policy with respond to the claim.

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Waiver of Transfer of Rights**

Notwithstanding anything contained herein to the contrary, it is hereby declared and agreed that w.e.f. inception the insurers hereby waive Transfer of Rights of Recovery Against Others to Us (subrogation) against the \*Client and its parent, subsidiary and affiliated companies, its and their officers, directors and employees, co-ventures, but only to the extent and scope of liability assumed by IFFCO Tokio General Insurance Co. Ltd. under its Contract with the \*Client, as detailed below:

"If the insured has rights to recover all or part of any payment We have made under this Coverage Part, those rights are transferred to Us. The insured must do nothing after loss to impair them. At Our request, the Insured will bring suit or transfer those rights to Us and help Us enforce them"

The above shall however continue to apply in the following cases:

1. Cross Liability Cases (Insured vs. insured)
2. For recovery of Defense cost paid by Us in cases where the final outcome is decided against the insured by Court, tribunal or any other final adjudication or by admission

3. Any criminal act, breach of law
4. Any civil fines or penalties, exemplary damages

\*Client's name to be specifically provided. The coverage is subject to: 1. only when it is a requirement of the written contract 2. prior approval obtained by the Underwriter Except as otherwise provided in this endorsement, all terms, provisions and conditions of this Certificate shall have full force and effect.

#### **Airlines, Aircraft and Airside operations of Airports including refuelling, control tower liability and construction and repair work within the Airport perimeter**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Airlines, Aircraft and Airside operations of Airports including refuelling, control tower liability and construction and repair work within the Airport perimeter.

For the purpose of this exclusion "airside" refers to area on the tarmac next to the aircrafts and the "runways" where the aircraft ply

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Aqua Sports and Hazardous Sports Exclusion**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of engagement of third party in any aqua sport or hazardous sports including but not limited to Rafting, Bungy Jumping, Para Gliding, Hot Air Balloon, Zip lines and the likes

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Automobile Liability Exclusion**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Owned Automobile Liability, covered under Motor Insurance as per Motor Vehicles Act 1988 in India or equivalent in any other jurisdiction.

Jurisdictions wherein such an Act does not exist, the policy will exclude any loss or claim arising out of, based upon or attributable to any Owned Automobile Liability.

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Airlines Exclusion**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception of this policy any claim arising out of Airlines, Aircraft and Airside operations of airports, including refueling, control tower liability and construction and repair work within the airport perimeter

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Communicable Disease Exclusion Clause:**

1. Notwithstanding any provision, clause or term to the contrary, this policy excludes any loss, cost, damage, liability, claim, fines, penalty or expense or any other amount of whatsoever nature, whether directly or indirectly and/or in whole or in part, related to, caused by, contributed to by, resulting from, as a result of, as a consequence of, attributable to, arising out of, arising under, in connection with, or in any way involving (this includes all other terms commonly used and/or understood to reflect or describe nexus and/or connection from one thing to another whether direct or indirect):

1.1 a Communicable Disease and/or the fear or threat (whether actual or perceived) of a Communicable Disease and/or the actual or alleged transmission of a Communicable Disease regardless of any other cause or event contributing and/ or occurring concurrently or in any sequence thereto, and

1.2 a pandemic or epidemic, as declared by the World Health Organisation or any governmental authority.

2. As used herein, Communicable Disease means: any infectious, contagious or communicable substance or agent and/or any infectious, contagious or communicable disease which can be caused and/or transmitted by means of substance or agent where:

2.1 the disease includes, but is not limited to an illness, sickness, condition or an interruption or disorder of bodily functions, systems or organs, and

2.2 the substance or agent includes, but is not limited to, a virus, bacterium, parasite, other organism or other micro-organism (whether asymptomatic or not); including any variation or mutation thereof, whether deemed living or not, and

2.3 the method of transmission, whether direct or indirect, includes but not limited to, airborne transmission, bodily fluid transmission, transmission through contact with human fluids, waste or the like, transmission from or to any surface or object, solid, liquid or gas or between organisms including between humans, animals, or from any animal to any human or from any human to any animal, and

2.4 the disease, substance or agent is such:

2.4.1 that causes or threatens damage or can cause or threaten damage to human health or human welfare, or

2.4.2 that causes or threatens damage to or can cause or threaten damage to, deterioration to, contamination of, loss of value of, loss of marketability of or loss of use or usefulness of, tangible or intangible property.

For avoidance of doubt, Communicable Disease includes but is not limited to Coronavirus Disease 2019 (Covid -19) and any variation or mutation thereof.

3. For further avoidance of doubt, any contingent or other business interruption loss, cost, damage, loss of income, loss of use, increased cost of working and/or extra expense arising out of or attributable to:

3.1 any partial or complete closure of and/or slowdown in, including but not limited to any closure by or under the advisories of public, military, government or civil authorities, or any denial of access to insured premises, or customer and or supplier premises (including service / utility providers), or

3.2 change in consumer behaviour, or

3.3 an absence of infected employees or employees suspected of being infected shall not be covered by this policy.

4. For still further avoidance of doubt, loss, cost, damage, liability, claim, fines, penalty or expense or any other amount excluded hereby, includes but is not limited to any cost to identify, clean-up, detoxify, disinfect, decontaminate, mitigate, remove, evacuate, repair, replace, monitor, sanitize or test: (1) for a Communicable Disease or (2) any tangible or intangible property covered by this policy that is affected by such Communicable Disease.

5. It is clarified that (1) no other prior, concurrent or subsequent provision, clause, term or exception of this policy (including (but not limited to) any prior, concurrent or subsequent endorsement and/or any provision, clause, term, buy back or exception that operates, or is intended to operate, to extend the coverage of, or protections provided by, this contract by whatever name called like any coverage extension, additional coverage, global extension, exception to any exclusion); (2) any change in the law, clause or similar provision; (3) any follow the fortunes clause or similar provision; and/or (4) no change in the law or any regulation (to the extent permitted by applicable law), shall operate to provide any insurance, coverage or protection under this policy that would otherwise be excluded through the exclusion set forth in this clause.

6. If the Insurer alleges that by reason of this clause, any amount is not covered by this policy, the burden of proving the contrary shall rest with the Insured.

#### **Contractors Engaged In Wrecking, Demolition, Maintenance of Dams and Sub Aqueous Work**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Contractors engaged in wrecking, demolition, maintenance of dams and sub aqueous work

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Cyber Exclusion CGL**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Cyber risk.

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Director's and Officer's Liability Exclusion**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, the Insurer shall not cover loss in connection with any Claim under the policy arising out of, based upon or attributable to any Claim made against the Insured in their capacity as a director, officer, trustee or partner of the Insured in respect of the performance or non- performance of their duties as a director, officer, trustee or partner of the Insured.

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Electric, Gas & Water Utilities where Brownout/Blackout failure to supply is not excluded**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Brownout/Blackout failure to supply

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Electro Magnetic Fields (EMF) Exclusion**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to any Electro Magnetic Fields (EMF) liability

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

#### **Information Technology Clarification Clause**

Property damage covered under this Agreement shall mean physical damage to the Substance of property

Physical damage to the substance of property shall not include damage to data or software, in particular any detrimental change in data, software or computer programs that is caused by a deletion, a corruption or a deformation of the original structure.

Consequently the following are excluded from this Agreement:

- Loss of or damage to data or software, in particular any detrimental change in data, software or computer programs that is caused by deletion, a corruption or a deformation of the original structure, and any business interruption, losses resulting from such loss or damage. Notwithstanding this exclusion, loss of or damage to data or software, which is the direct consequence of insured physical damage to the substance of property, shall be covered.
- Loss or damage resulting from impairment in the function, availability, range of use of accessibility of data, software or computer programs, and any business interruption losses resulting from such loss or damage.

#### **Manufacturers and/or Production and/or Storage of Fireworks, Fuses, Ammunitions, catridges and explosives**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to manufacturing and/or production and/or storage of fireworks, fuses, ammunitions, cartridges and explosives

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Manufacturing Utility in USA/Canada Exclusion**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to any manufacturing utilities in USA/Canada

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Mining Risks other than "Drift" and/or "Open-cast">**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Mining Risks other than "Drift" and/or "Open-cast"

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Ocean marine Liability Including Ship owner's Liability**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Ocean Marine Liability including ship owner's liability

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Offshore Liability**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising from Offshore related risk unless incidental whilst indemnification based on "Jones Act". For the purpose of this exclusion – offshore risk means oil risks and oil exploration platforms

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Ownership, Operation or Use of Aircraft and Air Cushioned Vehicles Including Construction, Repair or Installation Work on Aircrafts**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Ownership, operation or use of Aircraft and air cushioned vehicles including construction, repair or installation work on aircrafts

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Ownership, Operation or Use of Railways, Tramways and Chair Lifts**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Ownership, operation or use of railways, tramways and chair lifts

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Ownership, Operation or Use of Vessels Including Their Navigation**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Ownership, operation or use of Vessels including their navigation

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Pandemic Exclusion Clause:**

Notwithstanding any provision, this policy excludes any first party and/or third party actual or alleged loss, injury, sickness, disease, death, medical payment, defence cost, cost, damage, liability, claim, fines, penalty, compensation, expenses or any amount of whatsoever nature, whether directly or indirectly and/or in whole or in part, arising out of (this includes all other terms commonly used and/or understood to reflect or describe, direct or indirect nexus and/or connection between one thing and another), intentional or unintentional violation of:-

- a. The provisions of Disaster Management Act, 2005 as amended from time to time.
- b. The provisions of The Epidemic Diseases Act 1897 as amended from time to time.
- c. The provisions of any act dealing with public health and/or public safety.
- d. The rules, regulations, orders, guidelines, policies, notification etc issued from time to time under any of the above acts.

**Prior and Pending Litigation Date Exclusion**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to the *Company* or any person insured under this policy for prior and pending litigations

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Professional Indemnity Exclusion**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to the Company or any person insured under this policy carrying out, or failing to carry out, professional services

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Public Liability of Indian Railways as Railway operator**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Public Liability of Indian Railways as Railway operator

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Liability of Railways**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising directly from Liability of Railways.

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

**Underground and Underwater Mines and Collieries and All Underground Services in Connection therewith, Quarries, Tunneling**

Notwithstanding any thing contained to the contrary, it is hereby declared and agreed that with effect from inception, this policy excludes any loss or claim arising out of, based upon or attributable to Underground and Underwater mines and collieries and all underground services in connection therewith, quarries, tunneling

Subject otherwise to the terms, condition, exclusions of the policy, upon which this endorsement has been issued.

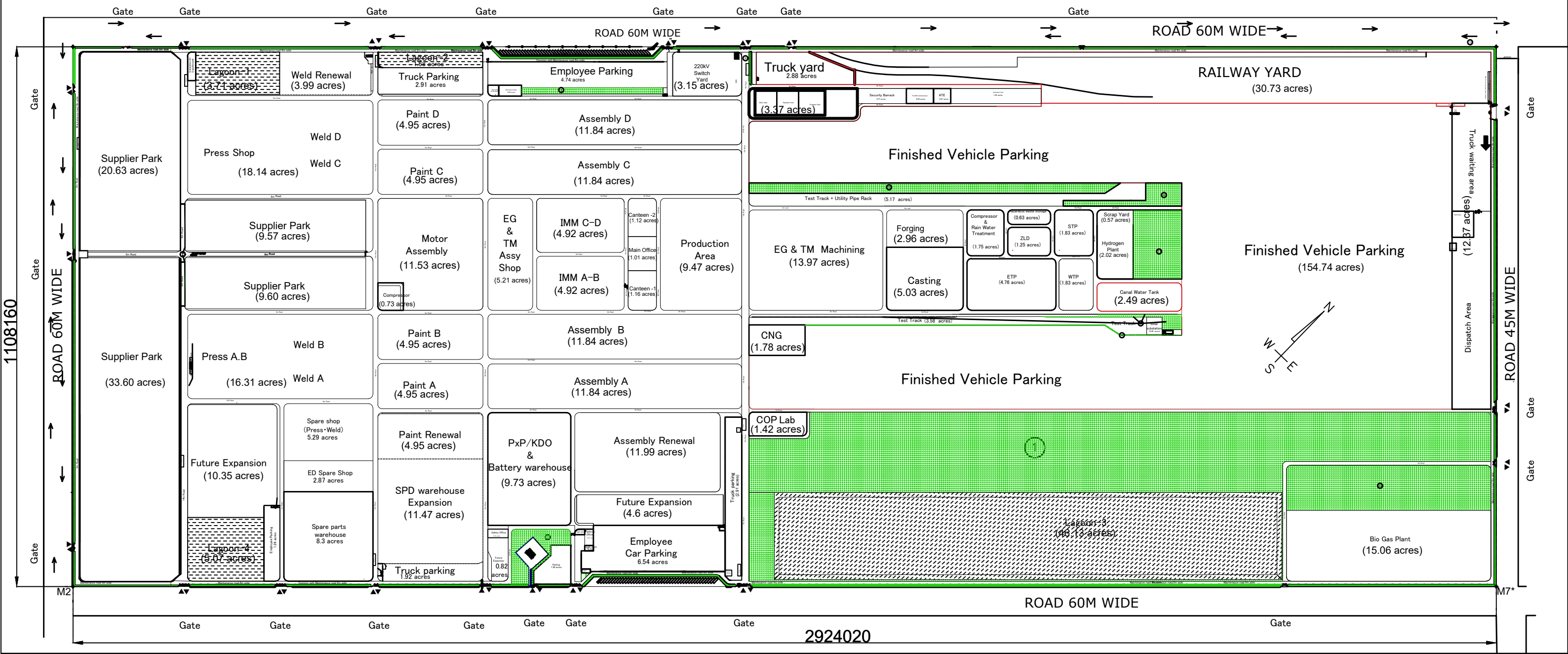


# **Green Area Layout**

## **Plan**

MSIL KHARKHODA PLANT LAYOUT FOR EC (with area break up) –  
20% Green Area

28-Feb'24  
CONFIDENTIAL



**Pond Authority**  
**Payment submission**  
**letter**

MSIL:CUIP:ESEC:ENV:2024-25:128

4<sup>th</sup> Nov 2024

To  
Haryana Pond & Waste Water Management Authority (HPWWMA),  
3<sup>rd</sup> Floor, DHL Square Building, HSIIDC IT Park,  
Sector-22, Panchkula - 134112

**Kind Attn.:** Technical Advisor, HPWWMA Panchkula

**Sub:** Regarding one-time cost of Maintenance & Rejuvenation of Pond named RASAR 1 in village Gopalpur, District Sonapat.

**Ref:**

1. Letter No. HPA/ENGG/0098/2022/3865 dated 11<sup>th</sup> Sep'2024.
2. MSIL:CUIP: ESEC:ENV:24-25:092 dated 3<sup>rd</sup> Sep'2024.

Dear Sir,

At the outset, we would like to thank you for raising demand note for one time Maintenance & Rejuvenation cost of Pond named RASAR 1 in village Gopalpur, District Sonapat.

With reference to the above communication e-mail dated 13/09/2024 at 11:18 PM, we would hereby informed you that Maruti Suzuki India Limited have paid the said amount of 66.15 (Sixty-six lakhs fifteen thousand only) through online mode via RTGS Dr-IBKL0002084 dated 30<sup>th</sup> Oct'2024 (Annexure 1). The said payment was credited in the account as per details provided in demand note.

Considering the above, we would like your esteemed office kindly acknowledge the payment.

Thanking You,

Yours truly,

For Maruti Suzuki India Limited,

 **Paresh Mani Sharma**  
**DGM (Environment)**  
**Maruti Suzuki India Limited**

Paresh Mani Sharma

Deputy General Manager (Environment)

Email: [PareshMani.Sharma@maruti.co.in](mailto:PareshMani.Sharma@maruti.co.in)

Encl.: As above.

**MARUTI SUZUKI INDIA LIMITED**

**Head Office:**

Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India.  
Tel: 011- 46781000, Fax: 011-46150275/46150276  
E-mail id: [contact@maruti.co.in](mailto:contact@maruti.co.in), [www.marutisuzuki.com](http://www.marutisuzuki.com)

**Gurgaon Plant:**

Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India.  
Tel: 0124-2346721, Fax: 0124-2341304

**Manesar Plant:**

Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199

Annexure – 1

Payment details

RTGS Dr-IBKL0002084-THEHARYANAPONDANDWASTEWATERMANAGEM-NETBANK, MUM-HDFCR52024103057387670	(6,615,000.00)	30/10/2024	HDFCR52024103057387670	NETBANK, MUMBAI
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# **Structural Stability**

## **Undertaking**

## Form BRS-II

(See Code 2.2(2))

## Certificate for structure conforming under self-certification

M/s Maruti Suzuki India Ltd, Plot No-831, HSIIDC IMT Kharkhoda, Sonipat, Haryana-131402

Name of the owner :- M/s Maruti Suzuki India Ltd.

Complete address of the Owner – Maruti Suzuki India Ltd, Old Palam, Gurgaon Road, Gurgaon, Haryana-122015.

It is hereby certified that the plans submitted in Form BRS-I for the building detailed above are in conformity with the Haryana Building Code-2017 and the approved zoning plan of the plot. The structure has been designed in accordance with the provision of National Building Code for structures resistance to earthquakes and other natural hazards. The local soil conditions, its load bearing capacity and the underground water table etc have been kept in view while designing the same.

Dated 22/11/22

  
ISHWAR DAYAL AGARWAL  
General Manager (Civil Projects-Infrastructure)  
MARUTI SUZUKI INDIA LTD.  
Gurgaon (Haryana)

Signature of Owner \ Authorised  
Signatory

**Mr. Ishwar Dayal Agarwal**

Email :

IshwarDayal.Agarwal@maruti.co.in

Mobile no. 9999103034

  
SANGEETA JAIN  
Architect  
CA/90/13234

Signature of Architect

**Ms. Sangeeta Jain**

E-Mail :

jsangeeta322@gmail.com

Mobile no. 9910691761


Signature of Structural Engineer

**For, Tata Consulting Engineers Ltd,**

**Mr. Rahul Tingre**

**[ BE Civil – CE : M1552591 ]**

Email : rbtingre@tce.co.in

Mobile no. 9175933217

# **Assurance Letter**

## **Electricity**





## HARYANA VIDYUT PRASARAN NIGAM LIMITED

REGD. OFFICE: - Shakti Bhawan, Sector-6, Panchkula

Corporate Identity Number: U40101HR1997SGC033683

O/o Chief Engineer/PD&C, HVPNL, Panchkula-134109

Website: [www.hvsn.gov.in](http://www.hvsn.gov.in)

E-mail – [cepdc@hvsn.org.in](mailto:cepdc@hvsn.org.in)

To

Superintending Engineer/Monitoring,  
UHBVN, Panchkula.

Memo. No. R-1930/Ch-29 /HAP-240

Dated: 01.02.2023

**Subject: Approval for connectivity for feeding 75.001 MVA load of M/s Maruti Suzuki India Limited, IMT Kharkhoda on 220 KV level through 220 KV D/C line from 220KV sub-station Pocket-A, IMT Kharkhoda, Sonipat.**

This is in reference to your office memo no Ch-11/SE-Mon./Case file no.1690/SNP/2022-23 dated 07.11.2022 conveying the proposal duly approved by UHBVN for providing connectivity for feeding 75.001MVA load to M/s Maruti Suzuki India Limited, IMT Kharkhoda on 220KV level through 220KV D/C line from 220KV S/Stn., Pocket-A, IMT Kharkhoda, Sonipat.

The proposal has been considered by WTD's HVPNL and approved as under:

Sr. No.	Description	Code
1.	To provide 220kV level connectivity to M/s MSIL, IMT Kharkhoda, Sonipat for creation of 220kV substation in their premises at their cost by self execution of work to feed their sanctioned load of 75.001MVA from 220 kV GIS S/Stn Pocket-A, IMT Kharkhoda in FY 2024-25.	-
2.	Creation of the 220 kV D/C line from 220kV GIS S/Stn Pocket-A, IMT Kharkhoda to M/s MSIL plant with 0.4 sq inch ACSR Zebra conductor (approx. length of 3.0 Km) as a deposit work of M/s MSIL for feeding the load of 75.001 MVA of M/s MSIL in FY 2024-25 matching with commissioning of 220kV sub-station GIS Pocket-A, IMT Kharkhoda.	2D4118*
3.	Creation of 2 no. 220kV line bays at 220kV GIS S/Stn Pocket-A, IMT Kharkhoda by HVPNL as a deposit work of M/s MSIL for accommodating the transmission line mentioned at sr. no. 2 above in FY 2024-25 matching with commissioning of 220kV sub-station GIS Pocket-A , IMT Kharkhoda.	2D4119*
4.	To include the works mentioned at Sr. No. 2 & 3 in the list of works of HVPNL in the financial year 2024-25 after ensuring financial tie up and HERC approval.	-

**Note:**

- All provisions of SE (Monitoring), UHBVN, Panchkula conveyed vide memo no Ch-11/SE-Mon./Case file no.1690/SNP/2022-23 dated 07.11.2022 shall be complied by M/s Maruti Suzuki India Limited before granting connectivity from 220kV GIS sub-station Pocket-A, IMT Kharkhoda by TS Wing Panipat.
- M/s Maruti Suzuki India Limited, IMT Kharkhoda, Sonipat will adhere guidelines in respect of self-execution of work for creation of 220kV switchyard in their premises as per the guidelines issued vide Deputy Secretary (OP) Memo no. Ch-17/DSO/214/L-2 dated 25.04.2012.
- The charges involved for releasing the connection will be payable by M/s Maruti Suzuki India Limited as per Haryana electricity Regulatory Commission (duty to supply electricity, Power to recover expenditure incurred in providing supply and power to require security) regulations, 2016 dated July 11, 2016 amended from time to time.
- M/s Maruti Suzuki India Limited shall submit an undertaking with UHBVN and HVPNL to the fact that any cost chargeable from them (if worked out later on), shall be paid by them within 15 days from the date of issue on such demand by UHBVN and HVPNL.
- M/s Maruti Suzuki India Limited to enter into tripartite agreement with HVPNL & UHBVN for construction of sub-station by them & deposit all applicable supervision/deposit cost charges before execution of work.

P.T.O.

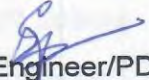


- f. M/s Maruti Suzuki India Limited shall provide metering arrangement at sending end and receiving end (optional) as per HERC Regulation of metering and in line with specifications & design requirements of UHBVNL & HVPNL.

Chief Engineer (SO & Commercial), HVPNL, Panchkula to ensure the compliance of all Nigam's regulations/formalities including required metering equipments.

- g. The consumer shall seek all mandatory approvals necessitated prior & post execution of work from respective authorities of HVPNL, UHBVNL, Civic bodies, other agencies and office of Chief Electrical Inspector, Haryana. The necessary required clearances from HSIIDC/UHBVN/HVPNL/HERC shall be arranged and taken by M/s Maruti Suzuki India Limited.
- h. TS Wing/HVPNL shall ensure compliance of provision contained in Deputy Secretary/Operation, HVPNL office memo no. Ch-24/DSO-214/L-154/Vol-II dated 12.05.2017.
- i. The instructions issued by FA/HQs, HVPNL, Panchkula on "GST incidence on the transaction of the sum received from external agencies for execution of Deposit Work" vide Memo No. GST20-21/05 dated 22.05.2020 may also be adhered.

The above WTDs HVPNL approval is conveyed by Company Secretary, HVPNL, Panchkula office U.O. No. 8227/WTDs 27.01.2023(10A) dated 30.01.2023.

  
Chief Engineer/PD&C,  
HVPNL, Panchkula.

Copy to:

1. Chief Engineer/TS, HVPNL, Hisar.
2. Chief Engineer /P&M, HVPNL, Panchkula.
3. Chief Engineer/SO & Commercial, HVPNL, Panchkula.
4. Chief Engineer/ PD&C, UHBVNL, Panchkula.
5. Chief Engineer /Operation, UHBVNL, Panchkula.
6. Superintending Engineer /Contracts, HVPNL, Panchkula.
7. Superintending Engineer/ NCR Planning, HVPNL, Gurugram.
8. Superintending Engineer/ Planning, HVPNL, Panchkula.
9. Superintending Engineer/Design, HVPNL, Panchkula.
10. Superintending Engineer /Civil Design, HVPNL, Panchkula.
11. Superintending Engineer /TS, HVPNL, Rohtak.
12. Superintending Engineer /Purchase, HVPNL, Panchkula.
13. Superintending Engineer /Operation, UHBVNL, Sonipat.
14. Superintending Engineer /P&D, UHBVNL, Panchkula.
15. Company Secretary, HVPNL, Panchkula.
16. S.P.S. to MD, HVPNL, Panchkula for kind information of Managing Director, HVPNL please.
17. S.P.S. to MD, UHBVNL, Panchkula for kind information of MD, UHBVNL please.
18. S.P.S. to Director (Finance), HVPNL, Panchkula for information of Director (Finance) please.
19. S.P.S. to Director (Projects), HVPNL, Panchkula for information of Director (Projects) please.
20. S.P.S. to Director (Technical), HVPNL, Panchkula for information of Director (Tech.) please.
21. S.P.S. to Director (Projects), UHBVNL, Panchkula for information of Director (Projects) please.
22. S.P.S. to Director (Technical), UHBVNL, Panchkula for information of Director (Technical) please.
23. Deputy Secretary /Projects, HVPNL, Panchkula.
24. Executive Engineer/TS, HVPNL, Panipat.
25. Executive Engineer /System Study, HVPNL, Panchkula.
26. Executive Engineer /Planning, HVPNL, Panchkula.



# Assurance Letter

## Water



# HSIIDC

Industrial Model Township

Kharkhoda

Ph. No.: 0130-2550100

E-mail : ia.kharkhoda@hsiidc.org.in

No. HSIIDC:Engg.:KH: 870

Dated : 4-1-2024

M/s Maruti Suzuki India Limited  
Plot No. 1, Nelson Mandela, Road, Vasant Kunj, New Delhi, India,  
Pincode-110070

**Subject: - Assurance for fresh water supply of 11000 KLD during operation phase proposed Industrial shed for Automobile Manufacturing (Integrated facilities) Unit situated at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat, Haryana, Pincode-131402 by M/s Maruti Suzuki India Limited.**

Dear Sir,

This has reference to your letter no: MSIL/EMU/EMUP-N/126 dated 28.12.2023 on the subject cited matter

In this connection, it is intimated that required quantity of 11000 KLD water will be supplied by the HSIIDC to M/s MSIL as and when the infrastructure services of water supply will be completed at IMT Kharkhoda. The water connection can be taken by M/s MSIL from the water supply line of HSIIDC after receiving occupation certificate for the said project.

Thanking you,

Your's faithfully

For Hr. State Indl. & Infr. Dev. Corpn. Ltd.

Asstt. General Manager (Engg.)  
IMT Kharkhoda

हरियाणा राज्य औद्योगिक एवं संरचना विकास निगम लिमिटेड

Haryana State Industrial and Infrastructure Development Corporation Limited

Regd. Office : C13-14, Sector-6, Panchkula - 131409, Tel. 0172-2590481-83, E-mail: contactus@hsiidc.org.in,

Website : www.hsiidc.org.in, hsiidcsewa.org.in CIN: U29199HR1967SGC034545

# **Low-Flow Fixtures**

# **Certificate**

GRHA Council is a joint initiative of Ministry of New and Renewable Energy, Government of India and The Energy and Resources Institute (TERI) to implement GRHA (Green Rating for Integrated Habitat Assessment), India's National Rating System for Sustainable Habitats.  
[www.grhaIndia.org](http://www.grhaIndia.org)



# **Advertisement in** **News Papers**

**Maruti Suzuki India Limited, Kharkhoda, Sonipat, Haryana**  
**Advertisement in News papers**

Advertisement 1: The Tribune (Date-31.05.2024/Friday)

**PUBLIC NOTICE**

**MARUTI  SUZUKI**

**MARUTI SUZUKI INDIA LIMITED**

**Regd. Office: 1, Nelson Mandela Road, Vasant Kunj,  
New Delhi, India, Pincode — 110070**

State Level Environment Impact Assessment Authority (SEIAA), Haryana has accorded environment clearance for the Proposed expansion of Industrial Shed for Automobile Manufacturing (Integrated facilities) Unit Situated at Plot No. 831, IMT Kharkhoda, Sonipat, Haryana, Pincode – 131402 to M/s Maruti Suzuki India Limited.

The copy of clearance letter is available on the website of MoEFCC - <https://parivesh.nic.in/>

**Date: 31.05.2024**

**Maruti Suzuki India Limited**

Advertisement 2: Dainik Jagran (Date-31.05.2024/Friday)

**सार्वजनिक सूचना**

**MARUTI  SUZUKI**

**Maruti Suzuki India Limited**

**Regd. Office: 1, Nelson Mandela Road, Vasant Kunj,  
New Delhi, India, Pin code-110070**

राज्य स्तरीय पर्यावरण समाधान निर्धारण प्राधिकरण (एसईआईए), हरियाणा ने एम/एस मारुति सुजुकी इंडिया लिमिटेड को प्लॉट नंबर 831, आईएमटी खरखोदा, सोनीपत, हरियाणा, पिन कोड-131402 पर स्थित आटोमोबाइल विनिर्माण (एकीकृत सुविधाएं) इकाई के लिए औद्योगिक शेड के प्रस्तावित विस्तार के लिए पर्यावरणीय अनापत्ति दे दी है।

अनापत्ति पत्र की प्रति MoEFCC की वेबसाइट- <https://parivesh.nic.in/> पर उपलब्ध है।

**दिनांक : 31.05.2024**

**मारुति सुजुकी इंडिया लिमिटेड।**

**Intimation of EC**  
**Grant to concerned**  
**Authorities**

MSIL:CUIP:ESEC:ENV:24-25:090

03-September-2024

To,  
The Deputy Commissioner,  
Sonipat, Haryana.

**Sub.:** Request for display of environment clearance letter granted to M/s Maruti Suzuki India Limited.

**Ref.:**

1. Environment Clearance (EC) vide EC Identification no. EC24B3813HR5187061N dated 28.05.2024.
2. EC corrigendum Memo No: SEIAA (179)/HR/2024/252 dated 27.08.2024.

Dear Sir,

With reference to the subject matter, Maruti Suzuki India Limited (MSIL) has obtained Environment Clearance (EC Identification no. EC24B3813HR5187061N dated 28.05.2024) and subsequently received corrigendum (EC corrigendum Memo No: SEIAA (179)/HR/2024/252 dated 27.08.2024) for the Kharkhoda Plant for Automobile Manufacturing (Integrated Facilities) Unit situated at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat district of Haryana.

As per the conditions, we are hereby submitting the copy of EC to your esteemed office for display at the prominent places for 30 days.

Please acknowledge the letter after receiving the EC copy.

Thanking you,  
Yours sincerely,

For M/s Maruti Suzuki India Limited,

Paresh Mani Sharma

Deputy General Manager-Environment

Email: [Pareshmani.sharma@maruti.co.in](mailto:Pareshmani.sharma@maruti.co.in)

Encl: As above

For Deputy Commissioner  
Sonipat

MARUTI SUZUKI INDIA LIMITED

Head Office:

Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India.

Tel: 011- 48781000, Fax: 011-46150275/46150276  
E-mail id: [contact@maruti.co.in](mailto:contact@maruti.co.in), [www.marutisuzuki.com](http://www.marutisuzuki.com)

Gurgaon Plant:

Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India.

Tel: 0124-2346721, Fax: 0124-2341304

Manesar Plant:

Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.

Tel: 0124-4884000, Fax: 0124-4884199

MSIL:CUIP:ESEC:ENV:24-25:095

04-September-2024

To,  
The Estate Manager,  
Haryana State Industrial & Infrastructure Development Corporation Ltd- Kharkhoda  
Sonipat, Haryana.

**Sub.:** Request for display of environment clearance letter granted to M/s Maruti Suzuki India Limited.

**Ref.:**

1. Environment Clearance (EC) vide EC Identification no. EC24B3813HR5187061N dated 28.05.2024.
2. EC corrigendum Memo No: SEIAA (179)/HR/2024/252 dated 27.08.2024.

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As per the conditions, we are hereby submitting the copy of the EC to your esteemed office for display at the prominent places for 30 days.

Please acknowledge the letter after receiving the EC copy.

Thanking you,  
Yours sincerely,

For M/s Maruti Suzuki India Limited,



Paresh Mani Sharma

Deputy General Manager-Environment

Email: [Pareshmani.sharma@maruti.co.in](mailto:Pareshmani.sharma@maruti.co.in)

Encl: As above



#### MARUTI SUZUKI INDIA LIMITED

**Head Office:**

Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
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Tel: 011-46781000, Fax: 011-46150275/46150276  
E-mail id: [contact@maruti.co.in](mailto:contact@maruti.co.in), [www.marutisuzuki.com](http://www.marutisuzuki.com)

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Tel: 0124-2346721, Fax: 0124-2341304

**Manesar Plant:**

Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199



MSIL:CUIP:ESEC:ENV:24-25:087

03-September-2024

To,  
The Head,  
Gram Panchayat, Gopalpur,  
Sonipat,  
Haryana.

**Sub.:** Request for display of environment clearance letter granted to M/s Maruti Suzuki India Limited.

**Ref.:**

1. Environment Clearance (EC) vide EC Identification no. EC24B3813HR5187061N dated 28.05.2024.
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As per the conditions, we are hereby submitting the copy of EC to your esteemed office for display at the prominent places for 30 days.

Please acknowledge the letter after receiving the EC copy.

Thanking you,  
Yours sincerely,

For M/s Maruti Suzuki India Limited,

Paresh Mani Sharma

Deputy General Manager-Environment

Paresh Mani Sharma

Deputy General Manager-Environment

Email: [Pareshmani.sharma@maruti.co.in](mailto:Pareshmani.sharma@maruti.co.in)

Encl: As above

ग्राम पंचायत गोपालपुर  
खण्ड खरखोदा, मनीषा

**MARUTI SUZUKI INDIA LIMITED**

**Head Office:**

Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
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Tel: 011-46781000, Fax: 011-46150275/46150276  
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**Manesar Plant:**

Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199

MSIL:CUIP:ESEC:ENV:24-25:091

03-September-2024

To,  
The Secretary,  
Municipal Committee Kharkhoda,  
Kharkhoda, Sonipat,  
Haryana.

**Sub.:** Request for display of environment clearance letter granted to M/s Maruti Suzuki India Limited.

**Ref.:**

1. Environment Clearance (EC) vide EC Identification no. EC24B3813HR5187061N dated 28.05.2024.
2. EC corrigendum Memo No: SEIAA (179)/HR/2024/252 dated 27.08.2024.

Dear Sir,

With reference to the subject matter, Maruti Suzuki India Limited (MSIL) has obtained Environment Clearance (EC Identification no. EC24B3813HR5187061N dated 28.05.2024) and subsequently received corrigendum (EC corrigendum Memo No: SEIAA (179)/HR/2024/252 dated 27.08.2024) for the Kharkhoda Plant for Automobile Manufacturing (Integrated Facilities) Unit situated at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat district of Haryana.

As per the conditions, we are hereby submitting the copy of EC to your esteemed office for display at the prominent places for 30 days.

Please acknowledge the letter after receiving the EC copy.

Thanking you,  
Yours sincerely,

For M/s Maruti Suzuki India Limited,

*Paresh Mani Sharma*

DGM (Environment)

Maruti Suzuki India Limited

Paresh Mani Sharma

Deputy General Manager-Environment

Email: [Pareshmani.sharma@maruti.co.in](mailto:Pareshmani.sharma@maruti.co.in)

Encl: As above

**MARUTI SUZUKI INDIA LIMITED**

**Head Office:**

Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India.

Tel: 011-46781000, Fax: 011-46150275/46150276  
E-mail: [contact@maruti.co.in](mailto:contact@maruti.co.in), [www.marutisuzuki.com](http://www.marutisuzuki.com)

CIN: L34103DL1981PLC011375

**Gurgaon Plant:**

Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India.

Tel: 0124-2346721, Fax: 0124-2341304

**Manesar Plant:**

Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.

Tel: 0124-4884000, Fax: 0124-4884199

Received  
03/09/24

MSIL:CUIP:ESEC:ENV:24-25:088

03-September-2024

To,  
The Head,  
Gram Panchayat, Rampur,  
Sonipat,  
Haryana.

**Sub.:** Request for display of environment clearance letter granted to M/s Maruti Suzuki India Limited.

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As per the conditions, we are hereby submitting the copy of EC to your esteemed office for display at the prominent places for 30 days.

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Thanking you,  
Yours sincerely,

For M/s Maruti Suzuki India Limited,

DGM (Environment)

Maruti Suzuki India Limited

Paresh Mani Sharma  
Deputy General Manager-Environment  
Email: [Pareshmani.sharma@maruti.co.in](mailto:Pareshmani.sharma@maruti.co.in)  
Encl: As above

जयप्रकाश सरपंच  
ग्राम पंचायत रामपुर  
तहसील खरखोदा (सोनपत)

#### MARUTI SUZUKI INDIA LIMITED

##### Head Office:

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1, Nelson Mandela Road, Vasant Kunj,  
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##### Gurgaon Plant:

Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India.  
Tel: 0124-2346721, Fax: 0124-2341304

##### Manesar Plant:

Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199

# Environmental & Energy Policy



**Maruti Suzuki India Limited, Kharkhoda, Sonipat, Haryana**  
**Environmental & Energy Policy**



## पर्यावरण और ऊर्जा नीति

हमारी अगली पीढ़ी को एक स्वच्छ, सुरक्षित और स्वस्थ वातावरण देने के लिए, हम अपनी व्यावसायिक गतिविधियों, उत्पादों और सेवाओं के परिणामस्वरूप पर्यावरणीय प्रभाव को निम्नलिखित तरीके से कम करने के लिए प्रतिबद्ध हैं:

- ❖ ऊर्जा संरक्षण, अक्षय ऊर्जा के उपयोग, पर्यावरण अनुकूल खरीद और उत्पादों के विकास द्वारा कार्बन डाइऑक्साइड उत्सर्जन में निरंतर कमी के लिए प्रयास करते रहना।
- ❖ प्राकृतिक संसाधनों के सतत उपयोग के लिए शो-शो-कै-तान-बी (छोटा, कम, हल्का, लघु और साफ सुथरा) और 3 आर (कम उपयोग, पुनः उपयोग, पुनः चक्रण) के सिद्धांतों का पालन करते रहना।
- ❖ पर्यावरण प्रबंधन प्रणाली को मजबूत करना और अनुपालन दायित्वों से बढ़कर काम करते रहना।
- ❖ हमारे नियंत्रण क्षेत्र में कार्य करने वाले सभी व्यक्तियों के बीच पर्यावरण जागरूकता को बढ़ावा देते रहना।

इस नीति की नियमित रूप से समीक्षा की जाएगी और इच्छुक व्यक्ति तथा समूह को उपलब्ध कराई जाएगी।

दिनांक: 23 मई, 2022



हिसाशी ताकेउचि  
प्रबंध निदेशक एवं सीईओ



**Maruti Suzuki India Limited, Kharkhoda, Sonipat, Haryana**  
**Environmental & Energy Policy**



## Environmental & Energy Policy

In order to pass on a cleaner, safer and healthier environment to our next generation, we are committed to mitigate environmental impact resulting from our business activities, products and services by:

- ❖ Striving for continual reduction of CO<sub>2</sub> emissions by energy conservation, use of renewable energy, green sourcing and developing clean products.
- ❖ Following principles of Sho-Sho-Kei-Tan-Bi (smaller, fewer, lighter, shorter, and neater) and practicing 3R (reduce, reuse, recycle) for sustainable use of natural resources.
- ❖ Strengthening environmental management system and working beyond compliance obligations.
- ❖ Promoting environmental awareness among all persons working under our control.

This Policy shall be regularly reviewed and made available to interested parties.

Date: 23<sup>rd</sup> May, 2022



A stylized black ink signature of Hisashi Takeuchi.

**Hisashi Takeuchi**  
Managing Director & CEO

**Receiving on letter**  
**for Traffic**  
**Management Plan to**  
**HSIIDC**

MSIL:BU-K:VEH:ENV-K:2025-26:001

09-May-2025

To,  
**The Estate Manager,**  
 Haryana State Industrial & Infrastructure Development Corporation Ltd- Kharkhoda  
 Sonipat, Haryana.

**Sub.:** Traffic Management Plan & Comprehensive Mobility Plan for IMT Kharkhoda

**Ref.:**

1. MSIL Environment Clearance vide EC identification no. EC24B3813HR5187061N dated 28.05.2024.
2. EC corrigendum vide memo no. SEIAA(179)/HR/2024/252 dated 27.08.2024.
3. Toolkit for Comprehensive Mobility Plan, 2014 issued by the Ministry of Urban Development.

Dear Sir,

With reference to the subject, Maruti Suzuki India Limited has been granted Environment Clearance vide EC identification no. EC24B3813HR5187061N dated 28.05.2024 EC corrigendum vide memo no. SEIAA(179)/HR/2024/252 dated 27.08.2024 for the Kharkhoda Plant for Automobile Manufacturing (Integrated Facilities) Unit located at Plot no. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat district of Haryana.

As per the conditions, a Comprehensive Mobility Plan (CMP) and Traffic Management Plan shall be prepared considering the traffic densities and parking capabilities in a 5 km radius from the site. The CMP shall be prepared in accordance with the guidelines of Ministry of Urban Development, where the concerned authority is responsible for the preparation and implementation of the plan.

Hence, we request your esteemed office to share the CMP and Traffic Management Plan of IMT Kharkhoda and adjoining area to MSIL for above compliance.

Your early response in this regard shall be highly appreciated.

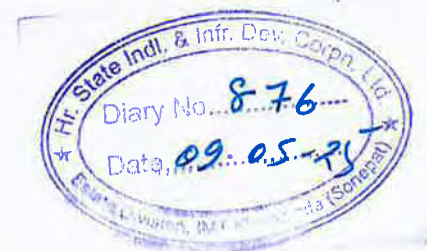
Kindly acknowledge the receipt of this letter for our records.

Thanking you,  
 For **Maruti Suzuki India Limited,**

**Maruti Suzuki India Limited**  
 (Plot No. -831, IMT Kharkhoda)

Vishal Rathore **Sonipat, Haryana**  
 Assistant General Manager  
 Email: Vishal.Rathore@maruti.co.in

Enclosed: As above



**MARUTI SUZUKI INDIA LIMITED**

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 Tel: 0124-4884000, Fax: 0124-4884199

# **Ambient Noise and**

# **Workzone Noise**

# **Reports**





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouses@gmail.com, testing@hthlabs.com



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250722040**

**ULR No. : TC781125100016595F**

**Party's Ref No. : Nil**

**Booking Date : 22/07/2025**

**Period of Testing : 22/07/2025 To 25/07/2025**

**Reporting Date : 25/07/2025**

**Sample Description : Noise Level Monitoring- Ambient Noise**

Type of Industry : Automobile Industry  
Sample Location : **Near Gate No.02**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-02)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Date of measurement : 21/07/2025  
Weather Condition : Clear Sky  
Site observation/Remarks : Vehicular movement , Industrial Activities & Human Activity  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB “A”)			Test Method
		Lmin	Lmax	Leq	
Discipline – Chemical, Group – Atmospheric Pollution					
1	Day time (06:00 AM to 10:00 PM)	64.5	72.1	68.1	IS 9989 : 1981
2	Night Time (10:00 PM to 06:00 AM)	59.7	66.7	64.2	IS 9989 : 1981

### CPCB Standard as per Noise Pollution Rules, 2000

Area Code	Category of Area/Zone	Day Time (LeqDay) (6:00am to 10:00pm)	Night Time(LeqNight) (10:00pm to 6:00am)
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

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

**Remarks :** Leq:- It is an energy mean of the noise level, over a specified period

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1

- Note : 1. Test report shall not be reproduce in whole or in part and cannot be used as an evidence in the court of Law.  
2. The results contained in this test report pertains only to the sample tested not for the whole lot.  
3. This report is only for your guidance, and not for legal purposes, commercial decision, and for advertisement.  
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5. Samples will be destroyed after one month from the date of issue of test report unless otherwise specified.  
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7. The details received from customer on its own responsibility. Lab does not confirm about it and hence does not taken any responsibility whatsoever.





DOC No. HTH/QF/7.8

# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169

Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouses@gmail.com, testing@hthlabs.com



TC-7811



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

**Issued To:****Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250722038****ULR No. : TC781125100016593F****Party's Ref No. : Nil****Booking Date : 22/07/2025****Period of Testing : 22/07/2025 To 25/07/2025****Reporting Date : 25/07/2025****Sample Description : Noise Level Monitoring- Ambient Noise**

Type of Industry : Automobile Industry  
 Sample Location : **Near Gate No.16**  
 Instrument used : Sound Level Meter (HTH/AP/12/SLM-03)  
 Instrument Calibration Status : Calibrated (upto 02.07.2026)  
 Date of measurement : 21/07/2025  
 Weather Condition : Clear Sky  
 Site observation/Remarks : Vehicular movement , Industrial Activities & Human Activity  
 Purpose of analysis : Monitoring  
 Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB “A”)			Test Method
		Lmin	Lmax	Leq	
Discipline – Chemical, Group – Atmospheric Pollution					
1	Day time (06:00 AM to 10:00 PM)	66.6	74.2	70.2	IS 9989 : 1981
2	Night Time (10:00 PM to 06:00 AM)	60.3	67.3	64.8	IS 9989 : 1981

**CPCB Standard as per Noise Pollution Rules, 2000**

Area Code	Category of Area/Zone	Day Time (LeqDay) (6:00am to 10:00pm)	Night Time(LeqNight) (10:00pm to 6:00am)
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

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

**Remarks :** Leq:- It is an energy mean of the noise level, over a specified period

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1

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(Formerly Known as Haryana Test House)

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Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250522017**

**ULR No. : TC781125100014868F**

**Party's Ref No. : Nil**

**Booking Date : 22/05/2025**

**Period of Testing : 22/05/2025 To 02/06/2025**

**Reporting Date : 02/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Casting Section)**

Type of Industry : Automobile Industry  
Sample Location : **Core Line**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-02)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Date of measurement : 21/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	CAS-K-Core Line	61.2	63.5	54.3	58.9	64.2	69.3

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	CAS-K-Core Line	54.3	69.3	64.2	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
Standard limits as per OSHA, Standard Number : 1910.95

Kimti  
Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1

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An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250526017**

**ULR No. : TC781125100014891F**

**Party's Ref No. : Nil**

**Booking Date : 26/05/2025**

**Period of Testing : 26/05/2025 To 02/06/2025**

**Reporting Date : 02/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Casting Section)**

Type of Industry : Automobile Industry  
Sample Location : **Transmission Area**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-06)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Date of measurement : 23/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	Transmission Area	75.4	73.6	73.9	74.7	72.3	71.7

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	Transmission Area	71.7	75.4	73.8	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
Standard limits as per OSHA, Standard Number : 1910.95

Kimti  
Review by

Shobhit Kumar  
Sr. Analyst (Environment)

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Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouses@gmail.com, testing@hthlabs.com



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250526018**

**ULR No. : TC781125100014892F**

**Party's Ref No. : Nil**

**Booking Date : 26/05/2025**

**Period of Testing : 26/05/2025 To 02/06/2025**

**Reporting Date : 02/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Casting Section)**

Type of Industry : Automobile Industry  
Sample Location : **Togata Area**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-04)  
Instrument Calibration Status : Calibrated (upto 25.04.2026)  
Date of measurement : 23/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	Togata Area	75.2	70.2	72.9	71.8	75.6	73.5

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	Togata Area	70.0	75.6	73.6	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
Standard limits as per OSHA, Standard Number : 1910.95

Kimti  
Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1

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## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250526019**

**ULR No. : TC781125100014893F**

**Party's Ref No. : Nil**

**Booking Date : 26/05/2025**

**Period of Testing : 26/05/2025 To 02/06/2025**

**Reporting Date : 02/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Casting Section)**

Type of Industry : Automobile Industry  
Sample Location : **C.B. Area**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-05)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Date of measurement : 23/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	C.R. Area	71.3	72.3	72.3	73.2	71.5	68.8

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	C.R. Area	68.8	73.2	71.8	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
Standard limits as per OSHA, Standard Number : 1910.95

Kimti  
Review by

Shobhit Kumar  
Sr. Analyst (Environment)

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## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250526061**

**ULR No. : TC781125100014944F**

**Party's Ref No. : Nil**

**Booking Date : 26/05/2025**

**Period of Testing : 26/05/2025 To 02/06/2025**

**Reporting Date : 02/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Casting Section)**

Type of Industry : Automobile Industry  
Sample Location : **Melting Area**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-03)  
Instrument Calibration Status : Calibrated (upto 02.07.2025)  
Date of measurement : 24/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	Melting Area	76.1	71.4	72.6	77.9	75.9	76.7

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	Melting Area	71.4	77.9	75.6	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
Standard limits as per OSHA, Standard Number : 1910.95

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd.

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

Report No. : HTH/EP/250526062

ULR No. : TC781125100014945F

Party's Ref No. : Nil

Booking Date : 26/05/2025

Period of Testing : 26/05/2025 To 02/06/2025

Reporting Date : 02/06/2025

Sample Description : Noise Level Monitoring-Work Place (Casting Section)

Type of Industry : Automobile Industry  
Sample Location : LPDC Area  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-07)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Date of measurement : 24/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	LPDC Area	77.2	70.5	74.3	73.2	71.6	70.8

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	LPDC Area	70.5	77.2	73.6	90 max.

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

Remarks : Leq:- It is an energy mean of the noise level over a specified period  
Standard limits as per OSHA, Standard Number : 1910.95

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## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250526063**

**ULR No. : TC781125100014946F**

**Party's Ref No. : Nil**

**Booking Date : 26/05/2025**

**Period of Testing : 26/05/2025 To 02/06/2025**

**Reporting Date : 02/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Casting Section)**

Type of Industry : Automobile Industry  
Sample Location : **Finishing Area**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-08)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Date of measurement : 24/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	Finishing Area	78.0	68.5	66.7	67.9	72.0	74.3

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	Finishing Area	66.7	78.0	73.1	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
Standard limits as per OSHA, Standard Number : 1910.95

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## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250526064**

**ULR No. : TC781125100014947F**

**Party's Ref No. : Nil**

**Booking Date : 26/05/2025**

**Period of Testing : 26/05/2025 To 02/06/2025**

**Reporting Date : 02/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Casting Section)**

Type of Industry : Automobile Industry  
Sample Location : **Die Maintenance Area**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-02)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Date of measurement : 24/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	Die Maintenance Area	73.4	72.4	76.3	72.1	70.8	68.9

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	Die Maintenance Area	68.9	76.3	72.9	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
Standard limits as per OSHA, Standard Number : 1910.95

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## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250603054**

**ULR No. : TC781125100015055F**

**Party's Ref No. : Nil**

**Booking Date : 03/06/2025**

**Period of Testing : 03/06/2025 To 11/06/2025**

**Reporting Date : 11/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Weld Shop)**

Type of Industry : Automobile Industry  
Sample Location : **White Body Area**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-03)  
Instrument Calibration Status : Calibrated (upto 02.07.2025)  
Date of measurement : 02/06/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	White Body Area	77.4	74.7	79.3	80.3	79.6	82.3

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	White Body Area	74.7	82.3	79.5	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
Standard limits as per OSHA, Standard Number : 1910.95

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Sr. Analyst (Environment)

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## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250603055**

**ULR No. : TC781125100015056F**

**Party's Ref No. : Nil**

**Booking Date : 03/06/2025**

**Period of Testing : 03/06/2025 To 11/06/2025**

**Reporting Date : 11/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Weld Shop)**

Type of Industry : Automobile Industry  
Sample Location : **Main Body Area**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-07)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Date of measurement : 02/06/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	Main Body Area	72.2	74.9	78.9	77.6	78.9	82.6

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	Main Body Area	72.2	82.6	78.7	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
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## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250603056**

**ULR No. : TC781125100015058F**

**Party's Ref No. : Nil**

**Booking Date : 03/06/2025**

**Period of Testing : 03/06/2025 To 11/06/2025**

**Reporting Date : 11/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Weld Shop)**

Type of Industry : Automobile Industry  
Sample Location : **Rear Under Body**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-08)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Date of measurement : 02/06/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	Rear Under Body	72.3	84.4	85.6	84.3	79.7	72.5

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	Rear Under Body	72.3	85.6	82.4	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
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## TEST REPORT

### Issued To:

**Maruti Suzuki India Ltd.**

Plot No. 831, Industrial Model Township, Kharkhoda, Sonipat (HR)

**Report No. : HTH/EP/250603057**  
**ULR No. : TC781125100015059F**

**Party's Ref No. : Nil**

**Booking Date : 03/06/2025**  
**Period of Testing : 03/06/2025 To 11/06/2025**  
**Reporting Date : 11/06/2025**

**Sample Description : Noise Level Monitoring-Work Place (Weld Shop)**

Type of Industry : Automobile Industry  
Sample Location : **Front Under Body**  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-02)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Date of measurement : 02/06/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline - Chemical, Group - Atmospheric Pollution -							
1	Front Under Body	97.6	87.3	88.7	84.5	86.8	77.9

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")			Standard Limits (dB "A")
		Lmin	Lmax	Leq	
1	Front Under Body	77.9	94.6	81.2	90 max.

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

**Remarks :** Leq:- It is an energy mean of the noise level over a specified period  
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# **Adequacy Reports**

MARUTI SUZUKI INDIA LTD, KHARKHODA

# ADEQUACY REPORT OF ETP (2 x 2520 KLD)



Plot No 831, IMT Kharkhoda , Sonipat, Haryana

2025

Environment Consultant



**Vardan Environet LLP**

82-A, IMT, SECTOR-5, MANESAR,  
HARYANA

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## **Chapter -1**

# **INTRODUCTION**

### **1.1 Preamble**

As industries play a very important role in the development of a nation, it can be of different types such as extractive industry, manufacturing, processing, construction industry etc. One such big industry in India is automobile industry where water plays a very important role, as it is the primary requirement for any industry. A huge amount of water is used and polluted during industrial process. Untreated wastewater from automobile industry has high levels of pH, turbidity, total solids, suspended solids, phosphorus. Despite its importance, water is the most poorly managed resource.

The water usages in different units of automobile industry are such as cooling, paint shops, welding, washing, condensing the steam and so on. A huge amount of water is consumed in paint shops and produces a large amount of wastewater. The major contaminants generated from the automobile wastewater are such as total solids, suspended solids, phosphate, chlorides, high B.O.D, C.O.D.

The adequacy of a Effluent Treatment Plant (ETP) depends on several factors, including its design capacity, the quality of influent and effluent, the technology used, and the efficiency of its operation. A well-designed and properly operated ETP should effectively reduce pollutants like BOD, COD, and TSS to meet the required standards set by regulatory bodies.

### **1.2 Company Profile**

Maruti Suzuki India Limited is a publicly listed Indian subsidiary of Japanese automaker Suzuki Motor Corporation. It is the largest automobile manufacturer in India, specialising in small(hatchback)cars. The company was established by the Government of India as Maruti Udyog Limited in February 1981 as a joint venture with Suzuki, the latter becoming the first Japanese automaker, as well as the first major foreign automaker, to invest in India.

Maruti opened its first production facility in Gurugram, Haryana, in 1982. Initially, Maruti was majority-owned by the Indian government, with Suzuki only taking a 26% stake during its establishment in 1982. The Indian government gradually reduced its stake, partially departed the business in 2003 by making it a public company and then sold all of its remaining shares to Suzuki Motor Corporation in 2007.

Maruti Suzuki has emerged as the largest Suzuki subsidiary in terms of production volume and sales. As of September 2022, the company had a leading market share of 42% in the Indian passenger car market.

### **1.3 Purpose of Report**

The purpose of an adequacy report for a Effluent Treatment Plant (ETP) is to assess and verify that the plant's design, capacity, and operational parameters are sufficient to effectively treat wastewater and meet the required effluent discharge standards. It ensures that the ETP is

appropriately sized and configured to handle the volume and characteristics of wastewater generated, and that it can consistently produce treated water that meets regulatory requirements for environmental safety.

This study is focused on following aspects;

- Performance evaluation of the ETP in terms of achieving discharge standards.
- Evaluation of technical design capacity of ETP with respect to load.
- Recommendations for improvement of plant performance, if required.

### **1.4 Demand and Export/Import scenarios**

Maruti Suzuki India Limited (MSIL), India's leading passenger vehicle company in domestic market and exports has attained the milestone of 3 million cumulative exports.

The 3 millionth landmark vehicle was part of a shipment of 1,053 units that sailed from Gujarat's Pipavav port yesterday comprising models like Celerio, Fronx, Jimny, Baleno, Ciaz, Dzire and S-Presso.

Maruti Suzuki commenced export of vehicles from India in 1986. The first large consignment of 500 cars was shipped to Hungary in September 1987. The company clocked the 1 millionth milestone in vehicle exports in FY 2012-13, followed by the next million in little less than 9 years in FY 2020-21. The progression from 2 million to 3 million cumulative exports was achieved in just 3 years and 9 months, making it the fastest million for Maruti Suzuki.

Maruti Suzuki exported 181,444 units in the period April-October in FY 2024-25, marking a growth of 17.4 % over the same period the previous year. Today, the company exports 17 models to nearly 100 countries. Latin America, Africa, Asia and the Middle East are important export markets for the company. Fronx, Jimny, Baleno, Dzire and S-Presso are the top export models from Maruti Suzuki.

### **1.5 Approvals Acquired**

Maruti Suzuki India Ltd has obtained Environmental Clearance vide F.No. SEAC/HR/2024/045 dated 28.05.2024 for Proposed Expansion of Industrial Shed for Automobile Manufacturing (Integrated Facilities) Unit at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonapat, Haryana. The plant is now operating under valid CTO vide Consent No. 313091424SONCTO63078373 dated 29.05.2024 valid till 30.09.2025.

### **1.6 Project Highlights**

The Kharkhoda facility is a green-field project where the first plant started commercial operations last month (February 2025). The Maruti Suzuki Brezza is being produced here. While the existing capacity at Kharkhoda is 2,50,000 units per year, the second plant with similar capacity is under construction. With this, Maruti Suzuki, including Suzuki Motor Gujarat Private Limited, the wholly owned subsidiary of Maruti Suzuki, will have a total annual production capability of 2.6 million units. The Kharkhoda plant is the brand's largest

manufacturing site in the country. It will be a key contributor to the brand's strategy of significantly expanding its production capacity to four million units annually by 2030.

## Chapter-2

### PROCESS DESCRIPTION

#### 2.1 Manufacturing Plant details

Maruti Suzuki's car manufacturing process utilizes a product layout, incorporating stages like blanking, pressing, welding, painting, machining, engine assembly, vehicle assembly, and rigorous inspection. The process begins with the press shop, which handles sheet metal shaping, and then moves to the weld shop where these parts are joined. Automated systems and robotics are heavily integrated, especially in the welding and material handling stages.

The detailed writeup is provided below:

Press Shop: This is the starting point, where steel coils are pressed into various body panels and chassis components. The press shop operates on a batch system and maintains a substantial inventory to supply other shops.

Weld Shop: The press shop's output, including large outer components like doors and roofs, is then welded together. Robotics play a crucial role in the welding process, performing spot welding with precision.

Painting: The assembled body is then painted, with a clear coat applied over the top coat to enhance gloss and provide durability. The painted vehicles undergo a drying and curing process in ovens.

Machining and Engine Assembly: Engine components are machined and assembled, and the engine is then integrated with the vehicle.

Vehicle Assembly: The chassis, body, engine, and other components come together on the assembly line. This stage involves a combination of manual and automated processes.

Inspection: Throughout the process, but particularly during and after painting, automated systems and human technicians inspect the vehicle for any defects.

#### 2.2 Technical Process of ETP

The ETP has been designed to treat 3600 KLD of effluent. The treatment system is designed to reduce pollutants such as BOD, COD, TSS etc. The proposed scheme of treatment typically involves preliminary, primary, secondary, and tertiary treatment stages. These stages utilize physical, chemical, and biological processes to remove pollutants from wastewater. Preliminary treatment removes large debris, primary treatment settles out solids, secondary treatment uses biological processes to break down organic matter, and tertiary treatment further polishes the water through filtration and disinfection. Following is brief description of the individual units.

The proposed System consists of following Processes.

a) Screening and oil removal



- b) Coagulation and flocculation
- c) Biological system
- d) Tertiary treatment
- e) Sludge Treatment

Different effluent collection tank is proposed to collect different types of effluent such as LDAL (Low Density Alkaline), HDAL (High Density Alkaline), LDAC (Low Density Acidic), HDAC (High Density Acidic) etc. Oily effluents are proposed to be collected in different tanks.

### ***Screening and oil removal***

The oily effluents are treated via various oil removal treatment methods including DAF system. The treated water of this oil removal system is transferred to ETP for further treatment.

### ***Coagulation and flocculation***

The raw effluent from collection tanks (LDAL, LDAC, HDAL, HDAC) will be pumped to the reaction tanks followed by clarifier for the removal of suspended particles and oil. The overflow from primary clarifier is collected in intermediate collection called as neutralization tank. The primary clarifiers are used to separate settle able solids from the raw influent's wastewater. The major function of the primary clarifier is the removal of all settle able and floating solid. The principle of gravity settling is used in primary clarifier to remove suspended solids or solid particulates from the liquid. After removing settle able suspended solid in primary clarifier raw influents travel by gravity in neutralization tank.

In neutralization tank, chemical neutralization is required to bring the pH of influent to neutral range for better setting of suspended solid. From neutralization tank, the raw influents travel to equalization tank. The equalization tank serves as a balancing tank to store the excess flows during peak hours and to supply the effluent during the lean period to allow constant flow rate at downstream units. Submersible mixer or air blower will be provided to prevent deposition of suspended solids.

### ***Biological system***

This equalized effluent will then be transferred to aeration tank for biological process. In the aeration tank, suspended-growth microorganisms are applied to breakdown wastes. Aeration, the mixing of air and a liquid, is the means used to speed the reactions involved. The aeration systems may be switched on or off or modulated to regulate dissolved oxygen in the basin so that they can biologically remove organic matter. With help of surface aerator and microorganism / bio culture BOD and COD load is reduced from the influent wastewater.

The overflow from the aeration tank is taken in secondary clarifier where again the small particle sludge settles at the bottom. The overflow from the secondary clarifier is collected in chlorine contact tank to remove bacterial load in water.

### ***Tertiary treatment***

From the chlorine contact tank, water will be pumped through a pressure sand filter and activated carbon removal filter for polishing of the treated effluent. After further treatment, the treated effluent will be used for process.

### ***Sludge Treatment***

The settled sludge from the bottom of primary clarifier, aeration tank and secondary clarifier will be stored in sludge holding tank through sludge transfer pump. The sludge will then be pumped to sludge thickener tank by pump to make sludge thicker. The sludge will then be pumped to sludge dehydrator where sludge will be dewatered to required sludge concentration. Sludge cake will be collected from outlet of dehydrator and sent for safe disposal

## **Detailed Description of Process units involved in the treatment**

### ***HD Acidic Collection Tank***

The High-Density (HD) acidic collection tank is designed to store highly corrosive acidic solutions generated from industrial processes. Made from High-Density Polyethylene (HDPE), these tanks offer superior chemical resistance, mechanical strength, and durability. They are designed to safely store highly corrosive acidic liquids commonly produced in industrial processes. These tanks prevent leakage and corrosion, ensuring safe containment of hazardous acids. They are ideal for environments where strong acids are handled, ensuring safe containment and minimizing the risk of corrosion or leakage.

### ***LD Acidic Collection Tank***

Low-Density (LD) acidic collection tanks are used for the storage of diluted or less aggressive acidic substances. Constructed from Low-Density Polyethylene (LDPE), these tanks provide flexibility and cost-efficiency. However, they are more suitable for lower-risk applications due to their comparatively reduced resistance to harsh chemicals and mechanical stress.

### ***HD Alkaline Collection Tank***

HD alkaline collection tanks are utilized for storing strong alkaline (caustic) chemicals, such as sodium hydroxide or potassium hydroxide. Their construction using HDPE ensures high resistance to chemical attack, temperature fluctuations, and physical wear, making them ideal for industrial applications where concentrated alkaline substances are handled.

### ***LD Alkaline Collection Tank***

LD alkaline collection tanks are appropriate for containing mild or diluted alkaline solutions.

Made from LDPE, these tanks are lightweight and flexible, offering a cost-effective solution for non-aggressive applications. However, they are not recommended for storing concentrated or high-temperature alkaline chemicals due to limited chemical resistance.

#### ***HD Oil Collection Tank***

The HD oil collection tank is specifically designed for collecting and storing heavy industrial oils or hydrocarbon-based waste. Constructed with HDPE, these tanks provide excellent resistance to oils, solvents, and UV exposure, making them durable and safe for outdoor and industrial environments where oil waste needs secure handling.

#### ***LD Oil Collection Tank***

LD oil collection tanks are used in situations where light-duty oil waste or lubricants need to be collected. These tanks are made from LDPE and are suitable for lower-volume, non-critical oil storage. While they are cost-effective and easier to handle, they are not ideal for storing more aggressive or high-temperature oil waste.

#### ***LD Phosphate Tank***

An LD Phosphate tank in an Effluent Treatment Plant (ETP) is a treatment tank for phosphate-laden wastewater and the tank's purpose is to facilitate phosphate removal, either chemically through precipitation or biologically, by creating conditions for phosphate-accumulating organisms (PAOs) to uptake the nutrient.

#### ***HD Phosphate Tank***

The HD phosphate tank is intended for the storage of phosphate-based chemicals, commonly used in surface treatment and metal finishing processes such as phosphating. These tanks are constructed from HDPE, offering excellent corrosion resistance and structural integrity, essential for safely managing phosphate solutions in industrial environments

#### ***LDAL (Low Density Alkaline Liquefy) Tank***

The LDAL Tank is a specialized unit used in the pretreatment stage of an Effluent Treatment Plant particularly for effluents containing oily, greasy, or organic-rich substances. This tank is designed to treat wastewater by dosing it with a low concentration of alkaline chemicals (such as sodium hydroxide or soda ash) to raise the pH moderately. The alkaline environment helps to emulsify and liquefy oils, fats, and greases making them less viscous and easier to separate in subsequent stages like primary clarifier.

#### ***HDAL (High Density Alkaline liquefy) Tank***

The HDAL Tank is a critical component in the pre-treatment phase of oily or organic-rich effluent treatment systems. It is designed to treat highly contaminated wastewater by dosing it with a high concentration of alkaline chemicals such as sodium hydroxide (NaOH) or lime (Ca(OH)<sub>2</sub>). The primary function of the HDAL tank is to break down and liquefy concentrated oils, fats, greases (OFG), and certain organic materials through alkaline hydrolysis or saponification. This process converts insoluble or viscous oils and fatty substances into more water-soluble forms (like soap), significantly reducing their adhesion and stickiness, and making them easier to separate in downstream units such as primary

clarifiers. The high pH environment also helps in emulsifying stubborn oil layers, reducing sludge formation and improving the overall flow ability of the effluent.

#### ***LDAC (Low Density Acidic Conditioning) Tank***

The LDAC Tank is a part of the chemical pre-treatment stage in an Effluent Treatment Plant, designed to gently lower the pH of wastewater using dilute acidic solutions, typically sulfuric acid ( $\text{H}_2\text{SO}_4$ ) or hydrochloric acid ( $\text{HCl}$ ) in low concentrations. This tank is primarily used when only mild pH adjustment is required—such as for slightly alkaline effluents or when fine-tuning the pH before coagulation, flocculation, or biological treatment. In oily or organic-rich wastewater, the LDAC tank helps to partially break oil-water emulsions, improve metal solubility, and optimize conditions for downstream separation processes like reaction tanks. Unlike the more aggressive HDAC system, the LDAC tank offers a controlled and less corrosive environment, which reduces chemical consumption.

#### ***HDAC (High Density Acidic Conditioning) Tank***

The HDAC Tank is a unit in the chemical pre-treatment section of an Effluent Treatment Plant primarily used to adjust the pH of alkaline or metal-laden wastewater using high concentrations of acidic chemicals such as sulfuric acid ( $\text{H}_2\text{SO}_4$ ) or hydrochloric acid ( $\text{HCl}$ ). Its main purpose is to reduce the pH to a strongly acidic range (typically around pH 3–5), which is crucial for breaking oil emulsions, solubilizing metals, or conditioning the effluent for effective coagulation and precipitation in subsequent stages. The high-acid environment facilitates the destabilization of emulsified oils and suspended solids, making them easier to remove in flotation or settling units.

#### ***Dissolved Air Flotation (DAF)***

It is an effective method for separating oils, greases, and suspended solids from wastewater. Oily wastewater can be difficult to treat due to the presence of emulsified oils and fine particles. DAF works by introducing dissolved air under pressure into the effluent, forming micro bubbles when the pressure is released. These micro bubbles attach to the oil droplets and suspended solids, causing them to float to the surface. The floated material, which includes oil and solid contaminants, forms a scum layer at the top of the tank. This layer is then skimmed off, and the clarified water is sent to the next stage of treatment.

#### ***Reaction Tank***

The Reaction Tank is a crucial unit in the chemical treatment phase of an Effluent Treatment Plant (ETP), designed to facilitate chemical reactions between wastewater and added reagents for the effective removal of pollutants. Its primary role is to mix the effluent with coagulants (like alum or ferric chloride) and flocculants (such as poly-electrolytes), allowing colloidal and suspended particles, emulsified oils, and heavy metals to destabilize and aggregate into larger, settleable or floatable masses known as flocs. The tank is usually equipped with mechanical or slow-speed agitators to ensure uniform mixing and optimal reaction time, promoting thorough contact between the wastewater and treatment chemicals.

#### ***Primary clarifier***

The Primary Clarifier is designed to remove settleable solids, floating materials, and a



significant portion of the organic load from raw wastewater. It operates on the principle of gravity separation, where the wastewater is allowed to flow slowly through a large tank. During this period, heavier suspended solids settle to the bottom, forming primary sludge, while lighter substances like oil, grease, and scum float to the surface and are skimmed off. The clarified liquid in the middle layer is then sent to the next stage of treatment, typically chemical or biological processes. The primary clarifier plays a critical role in reducing the pollutant load early in the process, thereby improving the efficiency and reducing the operational burden on downstream units. The tank may be circular or rectangular, often equipped with mechanical scrapers to collect settled sludge and surface skimmers for floating debris.

### ***Anoxic tank***

The Anoxic Tank is designed for the removal of nitrogen compounds through a process called de-nitrification. In this tank, conditions are maintained without free or dissolved oxygen (anoxic conditions), allowing facultative anaerobic bacteria to thrive. These bacteria use nitrates ( $\text{NO}_3^-$ ) as an alternative oxygen source to break down organic matter, converting nitrates into harmless nitrogen gas ( $\text{N}_2$ ), which escapes into the atmosphere. The anoxic tank typically receives partially treated effluent containing nitrates. By removing these nitrates, the anoxic tank plays a crucial role in reducing total nitrogen in the treated water, which is essential for preventing eutrophication in natural water bodies. The tank is usually equipped with slow-speed mixers to keep the biomass in suspension without introducing oxygen. Proper balance of carbon source, mixing, and retention time is vital for efficient de-nitrification.

### ***Equalization tank***

The Equalization Tank is designed to regulate the flow and quality of incoming wastewater before it enters downstream treatment units. In industrial settings, wastewater is often discharged in batches with fluctuating flow rates, pH, temperature, and pollutant concentrations. The equalization tank acts as a buffer zone, collecting and storing this variable effluent and homogenizing its characteristics through continuous mixing. This ensures that subsequent treatment processes whether chemical, biological, or physical receives a steady and consistent influent, improving their efficiency and preventing shock loads. The tank is typically equipped with agitators or air diffusers to maintain uniformity and prevent solids from settling.

### ***Aeration Tank***

In Aeration Tank, aerobic microorganisms break down organic pollutants present in the wastewater. In this tank, air or pure oxygen is continuously supplied typically through diffused aerators or mechanical surface aerators to maintain a high level of dissolved oxygen. This oxygen is essential for aerobic bacteria, which metabolize and convert complex organic matter into simpler, non-polluting end products such as carbon dioxide, water, and new biomass (sludge). The tank is usually designed with retention time, mixing, and oxygen transfer efficiency in mind to ensure optimal microbial activity. In some systems, Return Activated Sludge (RAS) from the secondary clarifier is also introduced into the aeration tank

to maintain a healthy microbial population. The performance of the aeration tank is critical to the overall success of the ETP, as it significantly reduces the organic load in the wastewater.

### ***Secondary Clarifier***

The Secondary Clarifier, also known as the Final Settling Tank, is a vital component in the biological treatment stage of an ETP. Its primary function is to separate the biological solids (also known as activated sludge) from the treated wastewater coming from the aeration tank. After aerobic treatment, the mixed liquor containing both treated water and suspended microbial biomass flows into the secondary clarifier, where it is allowed to settle under calm conditions. The settled biomass known as secondary sludge accumulates at the bottom and is either returned to the aeration tank as Return Activated Sludge (RAS) to maintain microbial populations or removed as Waste Activated Sludge (WAS) for further sludge treatment. The clarified water at the top overflows and is sent to disinfection stages.

### ***Chlorine Contact Tank***

The Chlorine Contact Tank is where treated water is exposed to chlorine or chlorine based compounds to eliminate pathogenic microorganisms before discharge or reuse. After secondary or tertiary treatment, the effluent though largely free of pollutants may still contain bacteria, viruses, and other pathogens. In the chlorine contact tank, a precise dose of chlorine is added and the effluent is held for a specific retention time to ensure effective disinfection. The tank is typically designed in a serpentine (zigzag) or baffled layout to maximize contact time and prevent short-circuiting, allowing the chlorine to interact thoroughly with the water. Proper mixing and detention ensure that the chlorine can inactivate harmful organisms without requiring excessive dosing. The goal is to achieve adequate residual chlorine (usually around 0.5–1.0 mg/L) at the outlet to confirm effective disinfection.

### ***PSF – Pressure Sand Filter***

PSF consists of a closed, pressurized vessel filled with layers of graded sand and gravel. As water flows under pressure through the filter bed, suspended particles get trapped in the pores of the sand media, resulting in clear, filtered water. PSFs are typically placed after biological and chemical treatment stages to further polish the effluent before reuse. They are highly effective in reducing TSS (Total Suspended Solids) to meet regulatory standards. Regular backwashing is necessary to clean the media and restore its filtering capacity.

### ***ACF – Activated Carbon Filter***

It contains a bed of activated carbon granules, which have an extremely high surface area and adsorption capacity. As water passes through the filter, contaminants adhere to the carbon surface through physical adsorption and chemical interaction. ACFs are especially useful after PSFs, acting as a polishing step to ensure high-quality effluent, particularly when water is intended for reuse or must meet stringent discharge norms. They are also critical for protecting downstream systems like reverse osmosis membranes, which are sensitive to organic fouling.

### ***Sludge Holding Tank***

A sludge holding tank is used to temporarily store sludge generated from primary and

secondary clarifiers before further processing. It allows for the accumulation and equalization of sludge flow, ensuring consistent feeding to downstream sludge treatment units. The tank may be equipped with mixers or aerators to prevent settling, reduce odors, and maintain sludge in a pumpable condition. It also serves as a buffer to accommodate variations in sludge generation throughout the day.

### ***Sludge Thickener***

The Sludge Thickener is used to increase the solids concentration of sludge by removing a portion of the free water, reducing its volume before further treatment. Typically located after the sludge holding tank, thickeners may operate using gravity settling (in a circular tank) or mechanical means (using rotary drums or belt thickeners). In a gravity thickener, sludge enters slowly, and solids settle at the bottom while clearer water overflows from the top. Chemical aids like polyelectrolytes may be added to improve settling efficiency.

### ***Sludge Dehydrator***

The Sludge Dehydrator is used to remove as much moisture as possible from thickened sludge, converting it into a semi-solid or cake form for easy handling, transportation, and disposal. Common types include belt filter presses, screw presses, and centrifuges. The process typically involves applying mechanical pressure, often combined with chemical conditioning, to squeeze out water from the sludge. The resulting sludge cake may contain 20–35% solids, depending on the technology and sludge type. This drastically reduces the volume and weight of sludge, minimizing disposal costs and environmental impact.

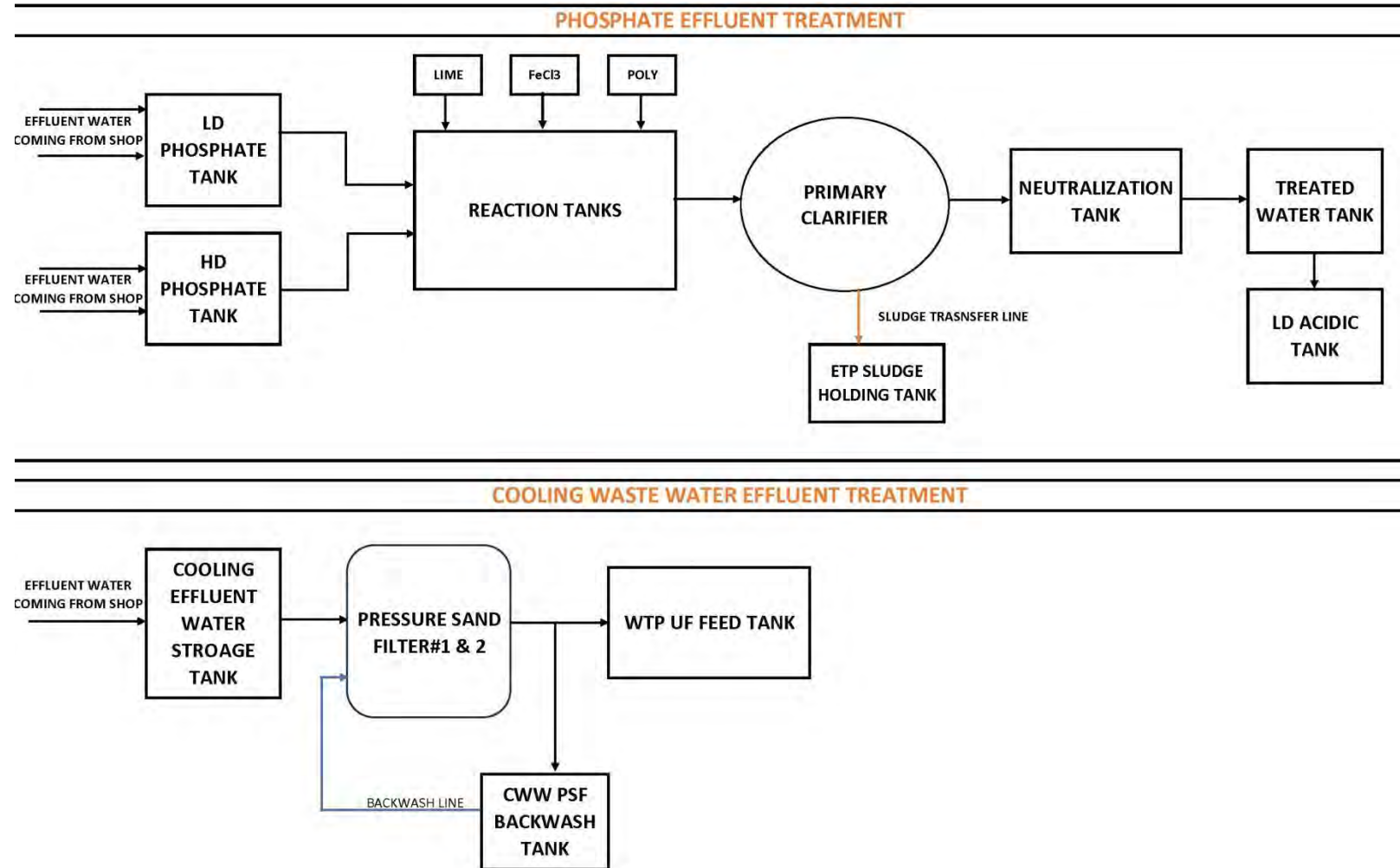


Fig. Process flow diagram of Phosphate ETP



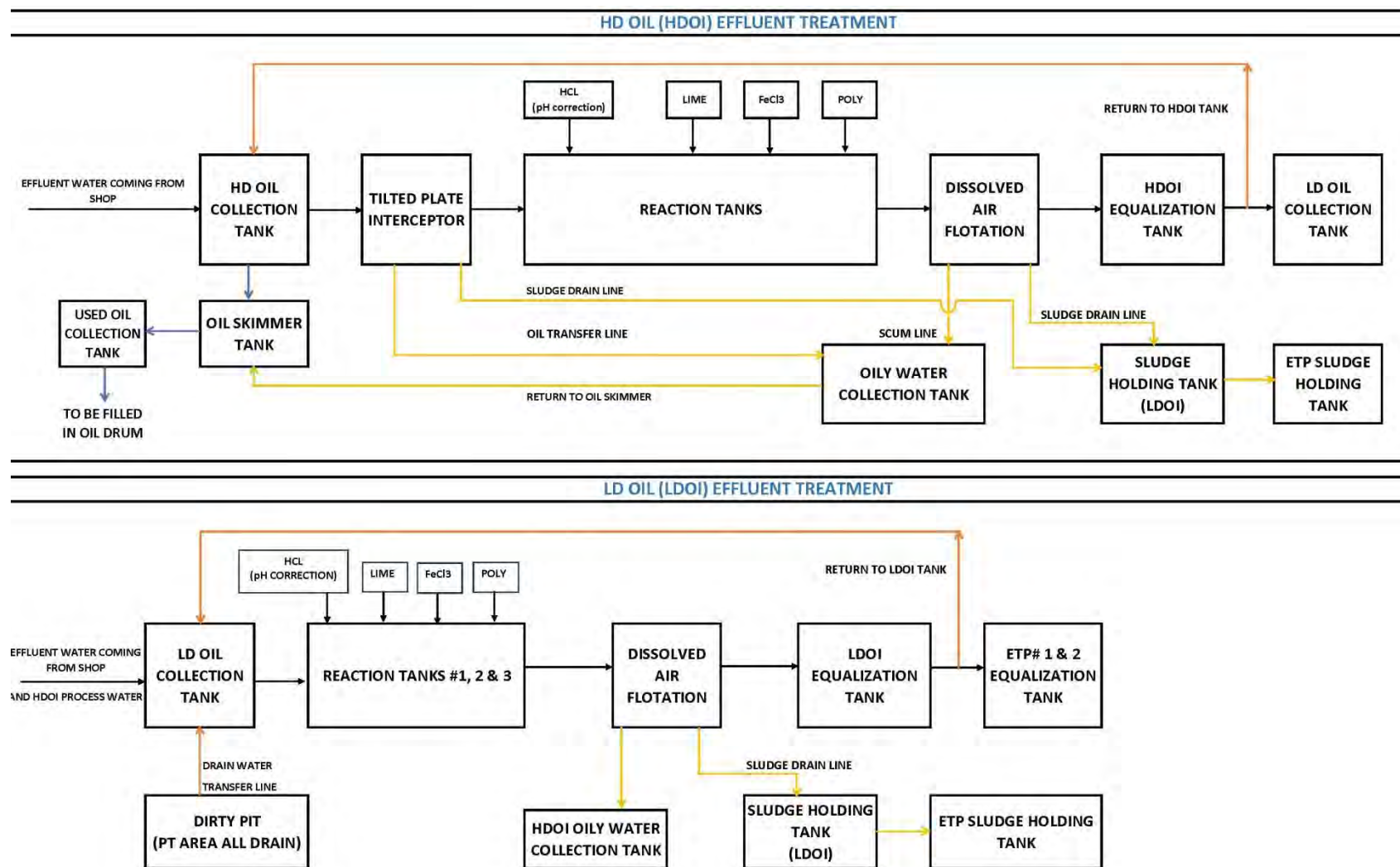
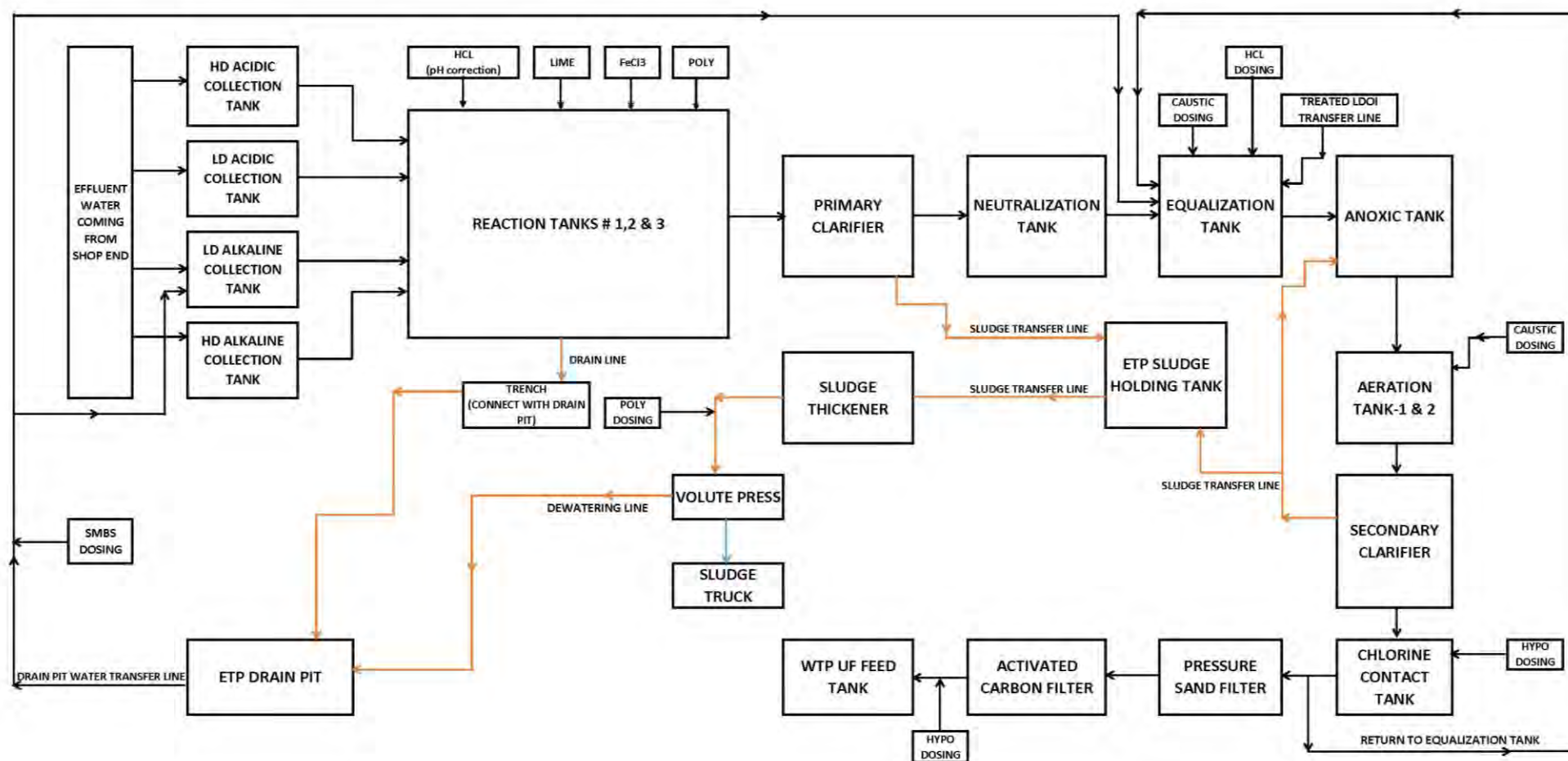


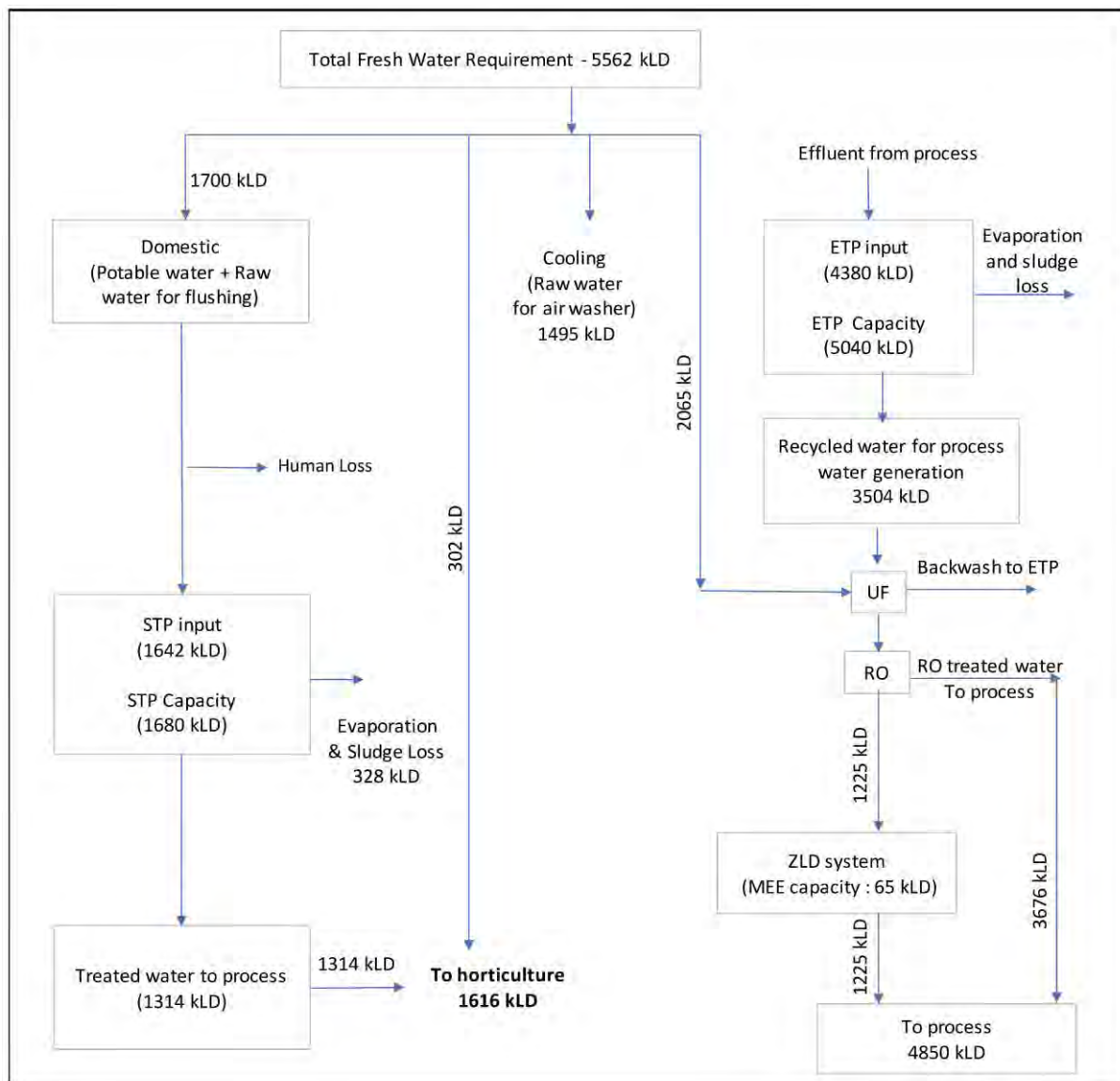
Fig. Process flow diagram of Oil ETP



**Fig. Process flow diagram of ETP**

### 2.3 Water Balance of Plant

The plant has installed STP of 2x821 KLD capacity to treat domestic waste water and ETP of 2x2520 KLD capacity to treat industrial effluents. Both the treatment plants are designed based on the design flow of the effluents generated during operation of manufacturing plant. The ETP and STP are regularly monitored and Maintained by the plant executives. The desired quality of treated water is achieved in both the treatment plants. The water balance diagram of the entire manufacturing plant is provided below.



**Fig.1 Water Balance Diagram of Maruti Suzuki India Ltd, Kharkhoda**

### 2.4 Requirements

The ultimate goal of any ETP is to produce water that is safe for reuse and discharge. Treated water must meet strict standards for clarity, purity, and safety. The water should be clear, odorless, and free from harmful levels of organic matter, suspended solids, nitrogen

compounds, and pathogens. Achieving these standards protects public health and the environment.

- **Inline Sensors:** Continuously track key parameters such as pH, total suspended solids (TSS), biochemical oxygen demand (BOD), chemical oxygen demand (COD), and flow rate.
- **Automated Data Transmission:** Sensors should use robust communication protocols (like RS 485 with Modbus) to ensure accurate, timely data for operators and regulators.
- **Operational Transparency:** Real-time monitoring helps operators quickly detect and address any deviations, ensuring consistent compliance and efficient operation
- **Clear Warning Signs:** Prominently display safety and caution boards at all ETP locations to alert maintenance personnel and visitors to potential hazards.
- **Water Reuse Notices:** Clearly mark all taps supplying treated water with “Not for Drinking” signs to prevent accidental consumption.

## **2.5 Control Measures Adopted**

Following Control measures are currently being followed in the plant.

- A History card is maintained for each equipment so that record is maintained for equipment performance and maintenance.
- Good housekeeping is an important aspect of plant operation.
- Proper & efficient removal of silt in grit channel will improve the functioning of treatment.
- Flow is recorded every hour.
- Distribution Channel Must be cleaned every day
- Online sensors are required to be provided
- **Ultrasonic Flow Meters:** When ultrasonic impulses are released onto a pipe surface carrying effluent, the impulses are deflected along the flow direction based on the velocity of the flow before they impinge on the opposite sidewall of the pipe. The time taken by impulse wave is measured and is correlated to the velocity and then to the diameter of the pipeline and hence the flow rate is arrived.



### **Chapter-3**

## **ADEQUACY STUDY OF ETP**

At present the Effluent treatment plant is designed for 5040 KLD (2x2520 KLD) capacity based on physico-chemical treatment followed by secondary treatment. The influent is just flow through rapid mixing and flocculation tank and first stage tube settlers are working as pre-settling tanks. The ETP scheme comprises one Raw Effluent Pump House (REPH), having coarse screen at upstream and fine screen at downstream, HDAL & LDAL tank, Oil & Grease trap unit, equalization tanks, Reaction tanks, Anoxic tank, Primary & secondary clarifier, Aeration tank, Chlorine contact tank, PSF and ACF. The project has also interlinked oily effluent treatment plant with each ETP for more refined and better quality treated water.

### **3.1 Water Quality Details**

Grab samples were collected for physico-chemical and heavy metal analysis. The samples were collected after LDAL tank, Reaction tank, Primary clarifier, Anoxic Tank, Equalization tank, Aeration tank, Secondary clarifier, Chlorine contact tank, Outlet of PSF and ACF and discharge pond. Samples were preserved in an ice container at 4°C prior to the analysis and processed within 24 hr of sample collection. Ample air space was left in the bottle (at least 2.5 cm) to facilitate mixing by shaking, before examination.

Samples collected from both ETP were analyzed for physico-chemical parameters and heavy metals.

The average wastewater flow during monitoring period was observed as 75 m<sup>3</sup>/hr. The results obtained from the analysis of wastewater samples from different treatment stages of both the ETPs are summarized in Table 1&2. The visual comparison of Inlet and Outlet samples from ETP is shown in Fig.4

Table 1: Detailed Analysis Data of waste water samples of Phosphate, Oil, Acidic and Alkaline ETP-1

S.N o.	Parameters	Unit	Inlet of ETP(HD Acidic Collection Tank)	Inlet of ETP(LD Acidic Collection Tank)	Inlet of ETP(HD Alkaline Collection Tank)	Inlet of ETP(LD Alkaline Collection Tank)	Inlet of ETP(HD Oil Collection Tank)	Inlet of ETP(LD Oil Collection Tank)	Inlet of ETP(LD Phosphate Tank)	Inlet of ETP(HD Phosphate Tank)
1	Colour	--	Grey	White	Colourless	White	Grey	Black	Yellow	Colourless
2	Odour	--	Acidic	Acidic	Pungent	Disagreeable	Disagreeable	Pungent	Disagreeable	Disagreeable
3	pH (at 25°C)	--	5.07	5.33	7.40	6.82	6.53	6.81	4.82	3.38
4	Total Suspended Solids at 105°C	mg/L	469.00	451.00	682.00	228.00	350.00	310.00	356.00	307.00
5	Temperature	°c	25.6	25.9	26.2	25.4	25.8	26.6	26.6	26.1
6	Oil & Grease,max (Free)	mg/L	7.60	6.80	7.20	6.40	48.60	20.60	6.90	BLQ (LOQ-4.0)
7	Oil & Grease,max (Emulsified)	mg/L	682.00	462.00	943.00	405.00	438.0	419.00	520.00	501.00
8	Total Residual Chlorine	mg/L	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Ammonical Nitrogen {as N}	mg/L	5.74	5.74	5.74	6.31	35.58	12.62	9.18	10.90
10	Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	7.83	7.81	7.89	8.24	39.72	15.16	12.63	14.22
11	Free Ammonia (as NH <sub>3</sub> )	mg/L	6.97	6.19	7.66	7.66	43.20	15.32	11.15	13.24
12	BOD (3 Days at 27°C)	mg/L	486.00	98.00	381.00	87.00	930.0	182.00	753.00	42.00
13	COD, max	mg/L	1735.00	316.00	947.00	316.00	3155.00	473.00	1893.00	158.00
14	Lead (as Pb)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.011	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
15	Dissolved Phosphate as P	mg/L	17.47	11.49	8.74	2.13	4.03	1.79	6.08	6.72
16	Hexavalent Chromium	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
17	Total Chromium (as Cr)	mg/L	0.050	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.031	0.004

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18	Copper (as Cu)	mg/L	0.010	0.014	0.011	0.006	0.025	0.006	0.013	0.008
19	Zinc (as Zn)	mg/L	15.524	8.315	BLQ (LOQ-0.01)	0.015	0.582	BLQ (LOQ-0.01)	40.391	37.919
20	Nickel (as Ni)	mg/L	2.370	5.614	0.061	0.985	0.060	0.005	21.519	21.467
21	Boron (as B)	mg/L	0.552	0.495	0.698	0.936	8.122	3.351	0.977	0.507
22	Molybdneum	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.012	0.006	0.010	0.008	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
23	Fluoride (as F)	mg/L	2.89	2.86	2.76	1.85	0.29	1.07	27.07	20.72
24	Sulphide (asS)	mg/L	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	8.62	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	18.72	3.02	BLQ (LOQ-0.02)
25	Arsenic (as As)	mg/L	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	0.014	0.008	0.010	0.007
26	Mercury (as Hg)	mg/L	BLQ (LOQ-0.0005)	BLQ (LOQ -0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)
27	Cadmium (as Cd)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
28	Selenium (as Se)	mg/L	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)
29	Cyanide (as CN)	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
30	Phenolic Compounds (as C6H5OH)	mg/L	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)
31	Aluminium (as Al)	mg/L	0.251	0.275	0.018	0.008	0.195	0.157	0.449	0.511
32	Lithium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.019	0.010	0.006	0.009	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
33	Vanadium (as V)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
34	Iron (as Fe)	mg/L	1.504	0.077	0.657	3.131	29.894	0.095	0.282	0.880
35	Manganese (as Mn)	mg/L	1.619	2.019	0.119	0.607	0.305	0.106	8.394	7.879
36	Nitrite Nitrogen (as N02)	mg/L	0.04	0.03	0.04	0.02	0.07	0.13	4.37	0.09
37	Barium	mg/L	0.013	BLQ (LOQ-0.01)	0.101	0.135	0.149	0.039	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
38	Cobalt	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.003	BLQ (LOQ-0.002)	0.005	BLQ (LOQ-0.002)

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39	Silver (as Ag)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
40	Beryllium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)



Table 2: Detailed Analysis Data of waste water samples of Phosphate, Oil, Acidic and Alkaline ETP-2

S.N o.	Parameters	Unit	Inlet of ETP(HD Acidic Collection Tank)	Inlet of ETP(LD Acidic Collection Tank)	Inlet of ETP(HD Alkaline Collection Tank)	Inlet of ETP(LD Alkaline Collection Tank)	Inlet of ETP(HD Oil Collection Tank)	Inlet of ETP(LD Oil Collection Tank)	Inlet of ETP(LD Phosphate Tank)	Inlet of ETP(HD Phosphate Tank)
1	Colour	--	Grey	White	Colourless	White	Grey	Black	Yellow	Colourless
2	Odour	--	Acidic	Acidic	Pungent	Disagreeable	Disagreeable	Pungent	Disagreeable	Disagreeable
3	pH (at 25°C)	--	5.24	5.47	7.62	6.97	6.72	6.87	5.16	3.94
4	Total Suspended Solids at 105°C	mg/L	472.0	452.00	731.00	326.00	284.00	252.00	320.00	296.00
5	Temperature	°C	26.3	26.1	26.4	26.9	26.7	26.9	25.7	25.8
6	Oil & Grease,max (Free)	mg/L	8.40	7.80	8.10	7.60	52.00	28.80	6.40	BLQ (LOQ-4.0)
7	Oil & Grease,max (Emulsified)	mg/L	705.00	682.00	972.00	510.00	474.00	451.00	492.00	461.00
8	Total Residual Chlorine	mg/L	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)
9	Ammonical Nitrogen {as N}	mg/L	6.35	6.72	6.21	5.87	37.24	13.76	9.72	8.31
10	Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	8.62	9.06	9.38	8.46	40.55	16.28	13.54	11.42
11	Free Ammonia (as NH <sub>3</sub> )	mg/L	7.71	8.16	7.54	7.13	45.22	16.71	11.80	10.09
12	BOD (3 Days at 27.C)	mg/L	510.0	109.00	402.00	96.00	962.00	198.00	720.00	53.00
13	COD, max	mg/L	1820.00	482.00	1005.00	464.00	3268.00	511.00	1806.00	172.00
14	Lead (as Pb)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.012	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
15	Dissolved Phosphate as P	mg/L	18.32	10.29	10.25	3.69	5.21	2.73	6.21	5.82
16	Hexavalant Chromium	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
17	Total Chromium (as Cr)	mg/L	0.045	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.009	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.030	0.004
18	Copper (as Cu)	mg/L	0.012	0.017	0.013	BLQ (LOQ-	0.028	0.008	0.016	0.011

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						0.002)				
19	Zinc (as Zn)	mg/L	14.710	7.466	BLQ (LOQ-0.01)	0.016	0.584	BLQ (LOQ-0.01)	39.064	36.980
20	Nickel (as Ni)	mg/L	2.124	4.816	0.055	0.873	0.057	0.005	20.045	20.699
21	Boron (as B)	mg/L	0.500	0.454	0.633	0.862	7.614	3.094	0.935	0.490
22	Molybdenum	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.011	0.006	0.010	0.007	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)}
23	Fluoride (as F)	mg/L	3.16	3.02	2.94	2.52	0.33	0.42	24.29	18.31
24	Sulphide (asS)	mg/L	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	9.43	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	17.84	2.83	BLQ (LOQ-0.02)}
25	Arsenic (as As)	mg/L	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	0.016	0.010	0.011	0.008
26	Mercury (as Hg)	mg/L	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)
27	Cadmium (as Cd)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)}
28	Selenium (as Se)	mg/L	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)}
29	Cyanide (as CN)	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)
30	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)
31	Aluminium (as Al)	mg/L	0.236	0.248	0.017	0.008	0.199	0.147	0.433	0.496
32	Lithium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.017	0.010	0.006	0.009	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
33	Vanadium (as V)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)

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34	Iron (as Fe)	mg/L	1.397	0.067	0.598	2.979	28.017	0.070	0.247	0.827
35	Manganese (as Mn)	mg/L	1.455	1.781	0.107	0.536	0.278	0.097	7.870	7.593
36	Nitrite Nitrogen (as N02)	mg/L	0.06	BLQ (LOQ-0.01)	0.05	BLQ (LOQ-0.01)	0.10	0.08	4.21	0.11
37	Barium	mg/L	0.012	BLQ (LOQ-0.01)	0.096	0.128	0.137	0.037	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)
38	Cobalt	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.003	BLQ (LOQ-0.002)	0.005	0.003
39	Silver (as Ag)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)
40	Beryllium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)

Table 3: Detailed Analysis Data of waste water samples of ETP-1 (2520 KLD)

S.No.	Parameters	Unit	Inlet of ETP	Inlet of reaction tank (tank-1A)	Outlet of reaction tank (tank 3A)	Outlet of primary clarifier A	Outlet of anoxic tank	Outlet of equalization A	Outlet of aeration A	Outlet of Secondary Clarifier	Outlet of Chlorine Contact Tank	Outlet of PSF & ACF	Outlet of ETP	General Standards as per EPA-1986 (Schedule-VI)		
														Inland Surface Water	Public Sewers	Land for Irrigation
1	Colour	--	Brownish	Light yellow	Light Yellow	Brownish	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	--	Colourless
2	Odour	--	Pungent	odourless	odourless	odourless	odourless	odourless	odourless	odourless	odourless	odourless	odourless	Odourless	--	Odourless
3	pH (at 25°C)	--	7.71	7.53	7.56	7.61	7.57	7.30	8.30	7.87	8.01	7.48	7.48	5. 5- 9.0	5. 5- 9.0	5. 5- 9.0
4	Total Suspended Solids at 10°C	mg/L	342.00	422.00	184.60	301.00	42.00	38.00	46.00	58.00	8.40	26.00	18.40	100	600	200
5	Temperature	°C	25.9	26.4	26.4	27.4	26.4	26.3	26.4	26.4	26.4	25.8	26.4	--	--	--
6	Oil & Grease,max (Free)	mg/L	5.60	6.00	4.80	6.80	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	--	--	--
7	Oil & Grease,max (Emulsified)	mg/L	435.00	510.00	126.00	440.00	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	--	--	--
8	Total Residual Chlorine	mg/L	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	1.0	--	--
9	Ammonical Nitrogen (as N)	mg/L	42.76	44.76	16.56	43.77	12.43	7.89	9.67	16.86	2.56	8.64	6.41	50.0	50.0	--
10	Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	49.88	52.89	24.87	50.53	17.82	12.74	16.83	26.77	4.17	13.77	10.86	100.0	--	--
11	Free Ammonia (as NH <sub>3</sub> )	mg/L	1.52	1.06	0.50	1.21	0.39	BLQ (LOQ-0.3)	1.05	0.74	0.25	BLQ (LOQ-0.3)	BLQ (LOQ-0.3)	5.0	--	--
12	BOD (3 Days at 27°C)	mg/L	141.00	162.00	138.00	175.00	25.00	27.00	29.00	137.00	21.00	17.00	12.00	30.0	350.0	100.0
13	COD, max	mg/L	323.00	403.00	403.00	483.00	81.00	220.00	210.00	403.00	241.00	241.00	161.00	250.0	--	--
14	Lead (as Pb)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.1	1.0	--
15	Dissolved Phosphate as P	mg/L	8.64	15.62	16.52	11.86	4.58	2.84	3.45	3.08	2.36	2.64	1.89	5.0	--	--
16	Hexavalent Chromium	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	0.1	2.0	--
17	Total Chromium	mg/L	0.002	BLQ	BLQ	BLQ	BLQ	BLQ (LOQ-0.05)	BLQ	BLQ	BLQ	BLQ	BLQ	2.0	2.0	--



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S.No.	Parameters	Unit	Inlet of ETP	Inlet of reaction tank(tank-1A)	Outlet of reaction tank (tank 3A)	Outlet of primary clarifier A	Outlet of anoxic tank	Outlet of equalization A	Outlet of aeration A	Outlet of Secondary Clarifier	Outlet of Chlorine Contact Tank	Outlet of PSF & ACF	Outlet of ETP	General Standards as per EPA-1986 (Schedule-VI)		
														Inland Surface Water	Public Sewers	Land for Irrigation
	(as Cr)			(LOQ-0.002)	(LOQ-0.002)	(LOQ-0.002)	(LOQ-0.002)	0.002	(LOQ-0.002)	(LOQ-0.002)	(LOQ-0.002)	(LOQ-0.002)	(LOQ-0.002)			
18	Copper (as Cu)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.002	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	3.0	3.0	--
19	Zinc (as Zn)	mg/L	0.021	0.042	0.057	0.019	0.032	0.040	0.020	0.016	0.102	0.055	0.042	5.0	15.0	--
20	Nickel (as Ni)	mg/L	0.018	2.32	2.54	1.78	0.877	0.894	0.211	0.211	0.171	0.199	0.133	3.0	3.0	--
21	Boron (as B)	mg/L	0.597	0.549	0.568	0.560	0.639	0.642	0.596	0.595	0.582	0.580	0.616	--	--	--
22	Molybdneum	mg/L	0.008	0.005	0.006	0.005	0.005	0.005	0.006	0.006	0.006	0.007	0.006	--	--	--
23	Fluoride (as F)	mg/L	0.56	0.77	0.49	0.53	0.28	0.27	0.31	0.34	0.37	0.31	0.27	2.0	15.0	--
24	Sulphide (asS)	mg/L	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	2.0	--	--
25	Arsenic (as As)	mg/L	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	0.2	0.2	0.2
26	Mercury (as Hg)	mg/L	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.0005 )	BLQ (LOQ-0.0005 )	BLQ (LOQ-0.0005 )	BLQ (LOQ-0.0005 )	BLQ (LOQ-0.0005 )	0.01	0.01	--
27	Cadmium (as Cd)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.0005 )	BLQ (LOQ-0.0005 )	BLQ (LOQ-0.0005 )	BLQ (LOQ-0.0005 )	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	2.0	1.0	--
28	Selenium (as Se)	mg/L	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	0.05	0.05	--
29	Cyanide (as CN)	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	0.2	2.0	0.2
30	Phenolic Compounds (as C6H5OH)	mg/L	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	1.0	5.0	--
31	Aluminium (as Al)	mg/L	0.044	BLQ (LOQ-0.005)	0.005	0.007	0.015	0.012	0.014	0.018	0.023	0.020	0.015	--	--	--
32	Lithium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	--	--

**ETP Adequacy Report****Maruti Suzuki India Ltd, Kharkhoda**

S.No.	Parameters	Unit	Inlet of ETP	Inlet of reaction tank(tank-1A)	Outlet of reaction tank (tank 3A)	Outlet of primary clarifier A	Outlet of anoxic tank	Outlet of equalization A	Outlet of aeration A	Outlet of Secondary Clarifier	Outlet of Chlorine Contact Tank	Outlet of PSF & ACF	Outlet of ETP	General Standards as per EPA-1986 (Schedule-VI)		
														Inland Surface Water	Public Sewers	Land for Irrigation
33	Vanadium (as V)	mg/L	0.002	0.002	0.002	0.002	0.005	0.005	0.007	0.007	0.006	0.005	0.004	0.2	0.2	--
34	Iron (as Fe)	mg/L	0.120	0.029	0.030	0.013	0.024	0.020	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	0.017	0.021	0.011	3.0	3.0	--
35	Manganese (as Mn)	mg/L	0.032	0.465	0.611	0.302	0.151	0.150	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	2.0	2.0	--
36	Nitrite Nitrogen (as NO <sub>2</sub> )	mg/L	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	0.84	1.34	0.89	0.095	2.11	2.068	BLQ (LOQ-0.01)	--	--	--
37	Barium	mg/L	0.151	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	0.01	--	--	--
38	Cobalt	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	--	--
39	Silver (as Ag)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	--	--	--
40	Beryllium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ(LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	--	--

Table 4: Detailed Analysis Data of waste water samples of ETP-2 (2520 KLD)

S.No.	Parameters	Unit	Inlet of ETP	Inlet of reaction tank(tank-1A)	Outlet of reaction tank (tank 3A)	Outlet of primary clarifier A	Outlet of anoxic tank	Outlet of equalization A	Outlet of aeration A	Outlet of Secondary Clarifier	Outlet of Chlorine Contact Tank	Outlet of PSF & ACF	Outlet of ETP	General Standards as per EPA-1986 (Schedule-VI)		
														Inland Surface Water	Public Sewers	Land for Irrigation
1	Colour	--	Light Brownish	Yellowish	Yellowish	Yellowish	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless	--	Colourless
2	Odour	--	Punjent	odourless	odourless	odourless	odourless	odourless	odourless	odourless	odourless	odourless	odourless	Odourless	--	Odourless
3	pH (at 25°C)	--	7.62	7.82	7.21	7.78	7.41	7.14	8.21	7.72	8.14	7.56	7.59	5. 5- 9.0	5. 5- 9.0	5. 5- 9.0
4	Total Suspended Solids at 100°C	mg/L	305.00	384.00	152.00	268.00	34.60	30.00	51.20	51.00	7.20	22.00	24.80	100	600	200
5	Temperature	°C	25.7	26.1	25.8	26.5	27.2	26.8	26.8	27.3	27.3	26.4	27.3	--	--	--
6	Oil & Grease,max (Free)	mg/L	6.20	5.80	5.40	5.40	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	--	--	--
7	Oil & Grease,max (Emulsified)	mg/L	410.00	462.00	172.00	372.00	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	--	--	--
8	Total Residual Chlorine	mg/L	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	7.21	BLQ (LOQ-0.1)	1.0	--	--
9	Ammonical Nitrogen {as N}	mg/L	45.83	38.24	21.52	37.56	13.89	8.14	8.24	13.82	2.18	9.68	7.26	50.0	50.0	--
10	Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	52.77	44.63	28.62	45.74	19.37	14.25	12.83	17.64	3.72	14.28	9.11	100.0	--	--
11	Free Ammonia (as NH <sub>3</sub> )	mg/L	1.30	1.76	BLQ (LOQ-0.3)	1.69	0.34	BLQ (LOQ-0.3)	1.31	0.59	5.0	0.31	BLQ (LOQ-0.3)	5.0	--	--
12	BOD (3 Days at 27°C)	mg/L	162.00	185.00	159.00	186.00	21.00	24.00	27.00	156.00	30.0	24.00	8.72	30.0	350.0	100.0
13	COD, max	mg/L	381.00	462.00	480.00	510.00	93.00	201.00	196.00	480.00	250.0	190.00	150.00	250.0	--	--
14	Lead (as Pb)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.1	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.1	1.0	--
15	Dissolved Phosphate as P	mg/L	10.56	17.84	14.28	13.72	3.27	3.25	4.06	3.72	5.0	2.83	2.27	5.0	--	--

## ETP Adequacy Report

## Maruti Suzuki India Ltd, Kharkhoda

S.No.	Parameters	Unit	Inlet of ETP	Inlet of reaction tank(tank-1A)	Outlet of reaction tank (tank 3A)	Outlet of primary clarifier A	Outlet of anoxic tank	Outlet of equalization A	Outlet of aeration A	Outlet of Secondary Clarifier	Outlet of Chlorine Contact Tank	Outlet of PSF & ACF	Outlet of ETP	General Standards as per EPA-1986 (Schedule-VI)		
														Inland Surface Water	Public Sewers	Land for Irrigation
16	Hexavalant Chromium	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	0.1	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	0.1	2.0	--
17	Total Chromium (as Cr)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	2.0	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	2.0	2.0	--
18	Copper (as Cu)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	3.0	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	3.0	3.0	--
19	Zinc (as Zn)	mg/L	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	5.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	5.0	15.0	--
20	Nickel (as Ni)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	3.0	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	3.0	3.0	--
21	Boron (as B)	mg/L	0.026	0.029	0.029	0.027	0.028	0.029	0.029	0.026	--	0.029	0.027	--	--	--
22	Molybdneum	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	--	--
23	Fluoride (as F)	mg/L	0.62	0.52	0.37	0.62	0.31	0.24	0.27	0.38	2.0	0.37	0.23	2.0	15.0	--
24	Sulphide (asS)	mg/L	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.002)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	2.0	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	2.0	--	--
25	Arsenic (as As)	mg/L	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	0.2	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	0.2	0.2	0.2
26	Mercury (as Hg)	mg/L	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	0.01	BLQ	BLQ (LOQ-0.0005)	0.01	0.01	--
27	Cadmium (as Cd)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	2.0	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	2.0	1.0	--
28	Selenium (as Se)	mg/L	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ (LOQ-	BLQ	BLQ	0.05	BLQ	BLQ	0.05	0.05	--



## ETP Adequacy Report

## Maruti Suzuki India Ltd, Kharkhoda

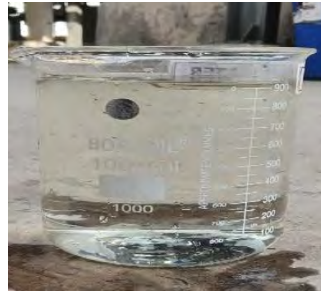
S.No.	Parameters	Unit	Inlet of ETP	Inlet of reaction tank(tank-1A)	Outlet of reaction tank (tank 3A)	Outlet of primary clarifier A	Outlet of anoxic tank	Outlet of equalization A	Outlet of aeration A	Outlet of Secondary Clarifier	Outlet of Chlorine Contact Tank	Outlet of PSF & ACF	Outlet of ETP	General Standards as per EPA-1986 (Schedule-VI)		
														Inland Surface Water	Public Sewers	Land for Irrigation
			(LOQ-0.001)	(LOQ-0.001)	(LOQ-0.001)	(LOQ-0.001)	(LOQ-0.001)	0.001	(LOQ-0.001)	(LOQ-0.001)		(LOQ-0.001)	(LOQ-0.001)			
29	Cyanide (as CN)	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	0.2	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	0.2	2.0	0.2
30	Phenolic Compounds (as C6H5OH)	mg/L	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	1.0	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	1.0	5.0	--
31	Aluminium (as Al)	mg/L	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	--	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	--	--	--
32	Lithium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	--	--
33	Vanadium (as V)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.2	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.2	0.2	--
34	Iron (as Fe)	mg/L	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	3.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	3.0	3.0	--
35	Manganese (as Mn)	mg/L	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	2.0	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	2.0	2.0	--
36	Nitrite Nitrogen (as N02)	mg/L	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	0.93	0.72	0.082	--	0.72	BLQ (LOQ-0.01)	--	--	--
37	Barium	mg/L	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	--	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	--	--	--
38	Cobalt	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	--	--
39	Silver (as Ag)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	--	--

**ETP Adequacy Report****Maruti Suzuki India Ltd, Kharkhoda**

S.No.	Parameters	Unit	Inlet of ETP	Inlet of reaction tank(tank-1A)	Outlet of reaction tank (tank 3A)	Outlet of primary clarifier A	Outlet of anoxic tank	Outlet of equalization A	Outlet of aeration A	Outlet of Secondary Clarifier	Outlet of Chlorine Contact Tank	Outlet of PSF & ACF	Outlet of ETP	General Standards as per EPA-1986 (Schedule-VI)		
														Inland Surface Water	Public Sewers	Land for Irrigation
40	Beryllium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	--	--	--



Inlet of ETP



Outlet of ETP

**Fig. Visual Comparison of sample at Inlet and Outlet of ETP**

### 3.2 Treatment performance status of ETP

#### ***BOD Removal***

As the biomass present in the waste water uses the oxygen by aeration and increases their quantity and breakdown the organic matter, therefore in treated water we found less organic matter and more dissolve oxygen. The biological oxygen demand is an important parameter used in water pollution to determine the impact of wastewater on the receiving water bodies.

As per the analysis data, biological oxygen demand value ranges from 175 to 12 mg/l for ETP-1 and 8.72 to 186 mg/l for ETP-2. The efficiency removal value of BOD for both ETPs was observed in ranges of 90% to 95%.

#### ***COD and TSS Removal***

Chemical oxygen demand test is the best method for organic matter determination and rapid test for estimation of total oxygen demand by organic matter. As per Analysis data, chemical oxygen demand value ranges from 483 to 81 mg/l for ETP-1 and 510 to 93 mg/l for ETP-2. The efficiency removal value for both the ETPs in respect of COD removal was observed in ranges of 80% to 86%. The TSS value ranges from 422 to 8.4 mg/l for ETP-1 and 384 to 7.20 mg/l for ETP-2. The efficiency removal value for both the ETPs in respect of TSS removal was observed in ranges of 95% to 98%.

Analysis of the collected samples showed COD, BOD and TSS in the influent of the 2 x 2520 KLD ETP were 323 mg/L, 141 mg/L and 342 mg/L, which is reduced to 241 mg/L, 137 mg/L and 58 mg/L after the secondary clarifier and further drops again to 161 mg/L, 12.0 mg/L and 18.4 mg/L after PSF and ACF unit, which is quite below the regulatory standard prescribed by Ministry Of Environment, Forest and Climate Change (MoEFCC). The overall removal efficiency of both effluent treatment plants for above mentioned parameters was found to be 85%, 95%, 98% respectively.

#### ***Nitrogen Removal***

Present analysis results revealed that concentration of ammonia nitrogen decreased from 44.76 mg/L in influent to 2.56 mg/L in final effluent of ETP-1 and from 45.83 to 2.18 mg/l

for ETP-2. The concentration of ammonia in the effluent is below the effluent discharge standards. Similar scenario is with nitrate (For ETP-1 influent 2.11 mg/L & 0.095 mg/L in effluent and For ETP-2 influent 0.93 mg/L & 0.082 mg/L in effluent) and TKN (For ETP-1 influent 52.89 mg/L to 4.17 mg/L in effluent and for ETP-2 influent 52.77 mg/L & 3.72 mg/L in effluent) satisfying effluent standards.

#### ***Heavy metal removal***

Heavy metals were analysed in the influent and effluent samples collected from both the ETPs results were presented in Table 4 and 5. The heavy metals analysed at each tank reveals approximately 85 to 92% efficiency and the results showed that the heavy metal concentrations are much below discharge standards in the effluent.

### **3.3 Water Quality Index (WQI)**

The mean water quality with respect to selected parameters is given in **Table 3**.



Table 5 Summarized Water quality of different ETP process of ETP -1

Significant parameters	Parameter average values											General Standards as per EPA-1986 (Schedule-VI)		
	Inlet of ETP (LDAL Tank)	Inlet of reaction tank	Outlet of reaction tank	Outlet of primary clarifier	Outlet of Anoxic tank	Outlet of Equalization tank	Outlet of Aeration tank	Outlet of Secondary clarifier	Outlet of Chlorine contact tank	Outlet of PSF & ACF	Outlet of ETP	Inland Surface Water	Public Sewers	Land for Irrigation
pH	7.71	7.53	7.56	7.61	7.57	7.30	8.30	7.87	8.01	7.48	7.48	5. 5- 9.0	5. 5- 9.0	5. 5- 9.0
Total Suspended Solid (mg/l)	342.00	422.00	184.60	301.00	42.00	38.00	46.00	58.00	8.40	26.00	18.40	100	600	200
BOD (mg/l)	141.00	162.00	138.00	175.00	25.00	27.00	29.00	137.00	21.00	17.00	12.00	30.0	350.0	100.0
COD (mg/l)	323.00	403.00	403.00	483.00	81.00	220.00	210.00	403.00	241.00	241.00	161.00	250.0	--	--
Fluoride (mg/l)	0.56	0.77	0.49	0.53	0.28	0.27	0.31	0.34	0.37	0.31	0.27	2.0	15.0	--

Table 6 Summarized Water quality of different ETP process of ETP -2

Significant parameters	Parameter average values											General Standards as per EPA-1986 (Schedule-VI)		
	Inlet of ETP (LDAL Tank)	Inlet of reaction tank	Outlet of reaction tank	Outlet of primary clarifier	Outlet of Anoxic tank	Outlet of Equalization tank	Outlet of Aeration tank	Outlet of Secondary clarifier	Outlet of Chlorine contact tank	Outlet of PSF & ACF	Outlet of ETP	Inland Surface Water	Public Sewers	Land for Irrigation
pH	7.62	7.82	7.21	7.78	7.41	7.14	8.21	7.72	8.14	7.56	7.59	5. 5- 9.0	5. 5- 9.0	5. 5- 9.0
Total Suspended Solid (mg/l)	305.00	384.00	152.00	268.00	34.60	30.00	51.20	51.00	7.20	22.00	24.80	100	600	200
BOD (mg/l)	162.00	185.00	159.00	186.00	21.00	24.00	27.00	156.00	30.0	24.00	8.72	30.0	350.0	100.0
COD (mg/l)	381.00	462.00	480.00	510.00	93.00	201.00	196.00	480.00	250.0	190.00	150.00	250.0	--	--
Fluoride (mg/l)	0.62	0.52	0.37	0.62	0.31	0.24	0.27	0.38	2.0	0.37	0.23	2.0	15.0	--

From the above data, it can be observed that all the significant parameters (pH, TSS, Fluoride, BOD & COD) which may change due to industrial operations are well within the desirable limit water quality standards as per MoEFCC. Thus it is observed that the efficiency of ETP is adequate to be reused in process and other usages.

Based on the above selected parameters, the water quality index (WQI) was calculated and the WQI so obtained is classified in the quality grade to determine the water quality of treated water. The Rating of water quality index is provided in **Table 7** and comparative WQI values for the study area is presented in **Table 8**.

**Table 7 Rating of Water Quality**

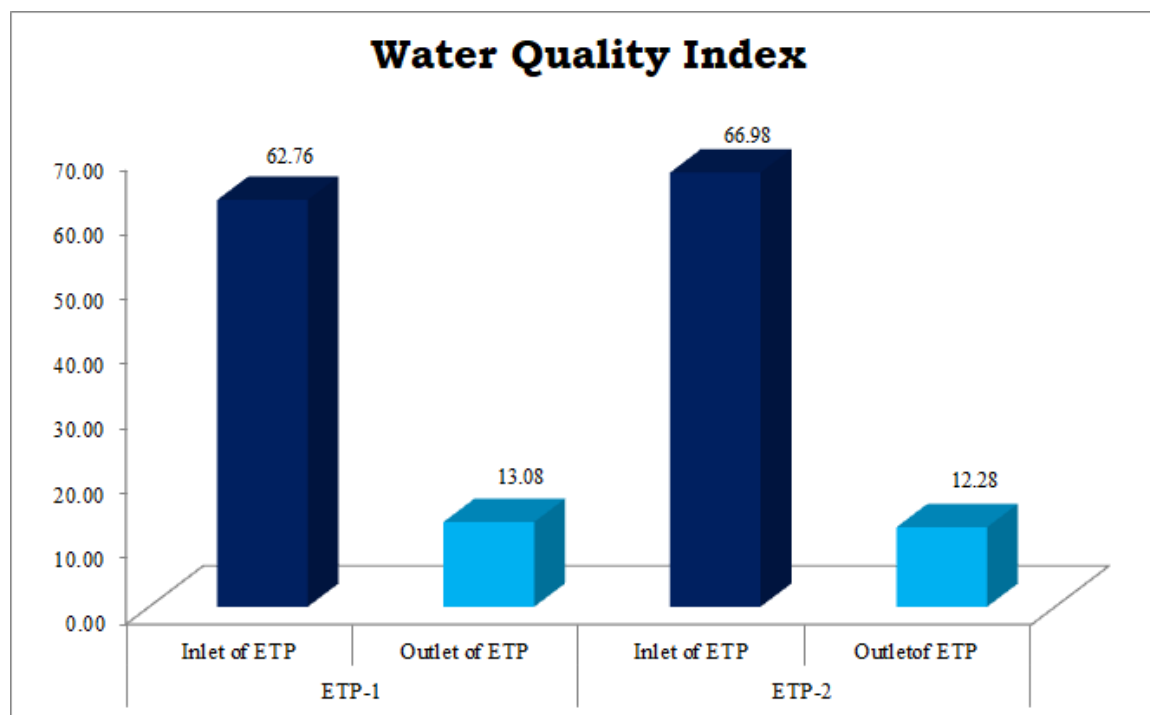
WQI Value	Rating of Water Quality	Grading
0-25	Excellent Water Quality	A
26-50	Good Water Quality	B
51-75	Poor Water Quality	C
76-100	Very poor Water Quality	D
Above 100	Unsuitable for drinking purpose	E

\* Technical Paper by K. Ravindhranath and AK Yadav entitled –Calculation of water quality index (WQI) to assess the suitability of groundwater quality for drinking purposes in Vinukonda Mandal, Guntur District, Andhra Pradesh” and –Water Quality Index Assessment of Groundwater in Todaraisingh Tehsil of Rajasthan State, India” respectively

**Table 8 Water Quality Index of ETP**

Samples	Inlet of ETP - 1	Outlet of ETP-1	Inlet of ETP -2	Outlet of ETP-2
Calculated WQI	62.76	13.08	66.98	12.28
Associated grade of water quality	Grade – C Poor Water Quality	Grade – A Excellent Water Quality	Grade – C Poor Water Quality	Grade – A Excellent Water Quality

The graphical representation of above values is provided below



**Fig.4 Graphical Representation of WQI of both ETP**

From the above table it can be concluded that the wastewater generated is of poor quality and after treatment in highly efficient ETP, the quality of water improves to Excellent Quality. The treated water from ETP can be reused in the process and can also be used for dust suppression and cleaning purposes. This WQI proves that both ETP are efficiently working and are adequate to handle the wastewater generated from the operation of the plant.

### 3.4 Conclusions of Laboratory Analysis

Bases on the laboratory analysis and the operating data of effluent treatment plant, it is concluded that,

The BOD at inlet for ETP-1 & ETP-2 is 141 mg/L & 162 mg/L respectively. After the advanced treatment, BOD levels at outlet for ETP-1 & ETP-2 was observed to be 12 mg/L & 8.72 mg/L respectively. Maximum BOD observed for ETP-1 & ETP-2 is 175 mg/L & 186 mg/L respectively. Effluent BOD is within standard limits of reusing the plant. The overall BOD removal efficiency is 95 % (max) for both ETPs.

The concentration of total suspended solids at inlet for ETP-1 & ETP-2 was observed to be 342 mg/L & 305 mg/L respectively and TSS at outlet for ETP-1 & ETP-2 was 18.4 mg/L & 24.8 mg/L respectively. The overall TSS removal efficiency of 97% of which about 50% of suspended solids were removed in primary treatment itself.

The removal efficiencies of nitrogen and Heavy metals were 80 % and 90 % respectively.

The WQI also proved that both the ETP are working quite adequately and efficiently. Also, the plant is designed on Zero liquid discharge, so no effluent is discharged outside the plant

premises which could potentially percolate and contaminate the ground water or mix with surface water in the area.

### 3.5 Technical Specifications

The ETP is designed at 5040 KLD (2x2520 KLD) but the actual flow of the influent is 3600 KLD. The following is the design evaluation of key units of ETP installed with standards of ETP design.

Description of Parameter	Value	Unit	Reference	Remarks on ETP installed
<b>Quantity of Effluent Generated</b>	3600000.00	LPD		
	3.60	MLD		
	<b>3600.00</b>	<b>KLD</b>		
<b>Raw Effluent Characteristics</b>				
Average Effluent flow entering the treatment plant	3600000.00	LPD		
Assumed Peak Factor	1.25			
Peak Sewage flow entering the treatment plant	4500000.00	LPD		<i>Each ETP is designed for 2520 KLD (Total 5040 KLD)</i>
COD	400 - 800	mg/l		
BOD	300.00	mg/l		
TDS	1520-1620	mg/l		
TSS	460.00	mg/l		
pH	6.50			
				<i>All parameters are meeting the norms of ETP outlet as per CPCB</i>
<b>Collection Tank</b>				
Tank Inlet Flow	3600	Cum/d ay		
Operating Hours	16	Hours		
Assumed Detention period	10	Mins		
Required volume of Tank	37.5	m <sup>3</sup>		
Depth of Water	2	m		
Area of Tank	18.75	Sq.m		<i>Collection tank is designed at 500 m<sup>3</sup> volume</i>
<b>Reaction Tanks</b>				
Peak Design Flow	0.0625	Cum/s		
Operating Hours	16	Hours		
Required capacity of Tank	1200	m <sup>3</sup>		<i>Three Reaction tanks are designed at 500 m<sup>3</sup> each capacity (Total 1500 m<sup>3</sup>)</i>
<b>Primary Clarifier</b>				
Peak Design Flow	3600	Cum/d ay		



Operating Hours	16	Hours		
Depth of Water tank	3	m		
Required volume of Tank	200	m <sup>3</sup>		<i>Primary Clarifier is designed at 465 m<sup>3</sup> capacity</i>
<b><i>Aeration Tank</i></b>				
Peak Design Flow	3600	Cum/d ay		
Operating Hours	16	Hours		
Retention time	52	Hours		
Volume of Aeration tank	3200	m <sup>3</sup>		<i>Aeration Tank is designed at 4125 m<sup>3</sup> capacity</i>
<b><i>Secondary Clarifier</i></b>				
Peak Design Flow	3600	Cum/d ay		
Operating Hours	16	Hours		
Depth of Water tank	3	m		
Required volume of Tank	200	m <sup>3</sup>		<i>Secondary Clarifier is designed at 396 m<sup>3</sup> capacity</i>

As observed from the above, it can be concluded that technical specification of each unit of ETP is adequately designed and are able to handle an actual load of influent. Effluent systems have minimal operating and maintenance costs, can withstand shock loads, reduce acidic influence and reduce odour using aerobic microorganisms. The best possible aeration and digestion of organic matter also makes it possible to significantly reduce BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), TSS (Total Suspended Solids), Oil and Grease. The treated water would adhere to the discharge regulations and be suitable for reuse in process.

## Chapter-4 RECOMMENDATIONS

### 4.1 Efficiency of the ETP

The efficiency of ETP and its adequacy is determined by treated water quality and performance of each unit of ETP. The quality of water treated from ETP is meeting the CPCB norms and design of ETP was done for 105 m<sup>3</sup>/hr but actual flow of influent is 75 m<sup>3</sup>/hr, The treatment efficiency of ETP is around 88 % and therefore the ETP implemented in Maruti Suzuki India Ltd, Kharkhoda is adequate for the current influent flow rate. Following is adequacy of ETP based on the design parameters.

Sr. no.	Unit process	Required Basis of Design	Required Capacity	Existing Capacity	Adequacy	Status of work
1	Screen Chamber	Retention time(30 min to 1 hrs)	0.78 m <sup>3</sup>	1.60 m <sup>3</sup>	adequate	Working was satisfactorily
2	Collection tank	Retention time(1 hrs)	75 m <sup>3</sup>	100 m <sup>3</sup>	adequate	Working satisfactorily
3	Reaction tank	Retention time(10 to 30 min)	500 m <sup>3</sup>	1165 m <sup>3</sup>	adequate	Working satisfactorily
4	Primary Clarifier	Retention time(10 - 30 min)	10.8 m <sup>3</sup>	15 m <sup>3</sup>	adequate	Implemented and working properly
5	Equalization Tank	Retention time(6-8 hrs)	12.5 m <sup>3</sup>	15 m <sup>3</sup>	adequate	Working satisfactorily
6	Anoxic tank	--	-	-	adequate	Installed and working efficiently.
7	Aeration tank	Retention time(1-2 hour)	88 m <sup>3</sup>	150 m <sup>3</sup>	adequate	Working satisfactorily
8	Secondary clarifier	--	78 m <sup>3</sup>	90 m <sup>3</sup>	adequate	Working satisfactorily
9	Chlorine contact tank	--	550 m <sup>3</sup>	700 m <sup>3</sup>	adequate	Implemented and working properly
10	PSF & ACF	--	39.7 m <sup>3</sup> & 102 m <sup>3</sup>	50 m <sup>3</sup> & 135 m <sup>3</sup>	adequate	Working satisfactorily
11	Fifteen days storage tank	30 days storage capacity	14000 m <sup>3</sup>	30000 m <sup>3</sup>	adequate	Treated water was stored to reuse

### 4.2 Measures Implemented

#### 1. Monitoring and Maintenance:

##### Regular Monitoring:

Consistent monitoring of various parameters like pH, BOD, COD, TSS, and fecal coliforms is essential to ensure the treated effluent meets the required standards.

##### Cleaning and Maintenance:

Regular cleaning of the plant, including manholes and filters, is necessary to prevent blockages and maintain optimal performance. This may involve forming a Manhole Cleaning Task Force, similar to fire services, to prevent accidents.

*Mechanical Components:*

Regular inspection and maintenance of mechanical components like blowers, diffusers, and pumps are crucial for smooth operation.

*Sludge Management:*

Proper sludge treatment and disposal are essential. This may involve thickening, dewatering, and even anaerobic digestion for stabilization and biogas production.

**2. Safety Measures:**

*Personal Protective Equipment (PPE):*

Workers should be provided with and required to wear appropriate PPE, including chemical-resistant gloves, masks, and goggles, especially when handling chemicals or working in confined spaces.

*Ventilation:*

If the ETP is in a basement, mechanical ventilation with a minimum of 25 air changes per hour is crucial. Exhausts should be terminated at the terrace level, and ducting should be insulated.

*Hot Work Safety:*

Before any hot work (welding, cutting, etc.) within the ETP, thorough risk assessments, gas monitoring, and fire prevention measures are necessary. Workers should be trained and provided with appropriate PPE.

*Permit System:*

A permit system should be implemented to ensure that all necessary safety precautions are followed during any potentially hazardous work.

**3. Environmental Controls:**

*Temperature Management:*

In colder climates, maintaining optimal temperature in bioreactors and other treatment units is essential. Heating systems may be necessary in some cases.

*Disinfection:*

Depending on the required effluent quality, disinfection methods like UV radiation or chlorination may be implemented.

#### ***4. Process Optimization:***

##### ***Fine Tuning:***

Fine-tuning the ETP process may involve adjusting aeration rates, filtration rates, or other parameters to improve efficiency and effluent quality.

##### ***Tertiary Treatment:***

If needed, tertiary treatment stages like sand filtration, ultrafiltration, or reverse osmosis can be added or upgraded to further purify the effluent.

#### ***5. Documentation and Training:***

##### ***SOPs:***

Standard Operating Procedures (SOPs) should be developed and followed for all aspects of ETP operation, including sewage treatment, sludge management, and filter backwashing.

##### ***Training:***

Workers should be adequately trained on all aspects of ETP operation and maintenance, including safety procedures and emergency response.

#### **4.3 Additional Measures to be adopted**

Effluent treatment plants (ETP) play a vital role in managing and treating wastewater, safeguarding public health, and protecting the environment. However, ensuring the long-term efficiency and sustainability of these facilities requires more than just effective design and construction. Proper operations and maintenance (O&M) practices are crucial to optimize performance, minimize energy consumption, reduce operational costs, and mitigate environmental impacts.

In this section, we will explore best practices for sustainable operations and maintenance in sewage treatment plants, highlighting their importance for long-term efficiency.

##### ***1. Regular Monitoring and Performance Evaluation***

Regular monitoring of key operational parameters is essential to assess the performance of a sewage treatment plant. Parameters such as flow rates, chemical dosing, dissolved oxygen levels, and effluent quality should be continuously monitored and recorded. This data helps identify deviations from optimal performance and allows for prompt corrective actions. Performance evaluation should include regular audits, inspections, and laboratory testing to ensure compliance with regulatory standards and identify areas for improvement.



## ***2. Preventive Maintenance and Equipment Optimization***

Implementing a robust preventive maintenance program is crucial for maintaining the efficiency and reliability of equipment and infrastructure within a sewage treatment plant. This includes regular inspection, cleaning, lubrication, and calibration of equipment. By conducting preventive maintenance, potential issues can be identified and addressed before they turn into major failures or cause operational disruptions. Equipment optimization techniques such as adjusting pump speeds, optimizing chemical dosing, and using energy-efficient technologies can significantly reduce energy consumption and operational costs.

## ***3. Training and Skill Development***

Investing in the training and skill development of plant operators and maintenance personnel is essential for achieving sustainable operations and maintenance. Properly trained staff members are better equipped to understand the complexities of the treatment processes, identify operational inefficiencies, and respond effectively to emergencies. Training programs should cover technical aspects of plant operations, safety procedures, environmental compliance, and the use of advanced monitoring and control systems.

## ***4. Energy Efficiency Measures***

Energy consumption is a significant operational cost for sewage treatment plants. Implementing energy efficiency measures can help reduce energy consumption, lower carbon emissions, and improve overall sustainability. Some energy-saving strategies include:

- Implementing variable frequency drives (VFDs) to control pump and blower speeds based on demand.
- Optimizing aeration systems by adjusting dissolved oxygen levels to match actual treatment needs.
- Utilizing energy-efficient equipment and motors.
- Capturing and utilizing biogas generated during the treatment process for power generation.
- Incorporating renewable energy sources such as solar panels or wind turbines to offset power requirements.

## ***5. Resource Recovery and Reuse***

Sewage treatment plants can be transformed into resource recovery hubs, contributing to a circular economy approach. By implementing technologies such as anaerobic digestion and sludge dewatering, it is possible to recover energy from sludge and generate biogas for electricity generation or heat production. Additionally, treated wastewater can be reused for non-potable purposes such as irrigation, industrial processes, or groundwater recharge.

Resource recovery and reuse initiatives help reduce dependence on external resources, minimize waste generation, and enhance the overall sustainability of the plant.

#### ***6. Continuous Improvement and Innovation***

Sustainable operations and maintenance require a culture of continuous improvement and innovation. Regularly evaluating new technologies, processes, and best practices can lead to operational efficiencies and improved environmental performance. Collaborating with research institutions, industry associations, and technology providers can help stay abreast of the latest advancements and identify opportunities for optimization.

## **Chapter-5**

### **CONCLUSION**

The conclusions drawn from the present study were

- Detention time of the primary sedimentation tank was within the limit.
- Detention time of aeration tank was also within the limits but the MLSS was too low for the proper functioning of the plants. So, the percentage of sludge from the FST should be increased to the aeration tank.
- Discharge should be increased to reduce the detention time in the grit chamber.
- Detention time of the final Clarifier tank was also within the range.
- Effluent quantity is reduced by good housekeeping, reuse of cooling water, use of excess condensate as raw water
- Aesthetic view of plant should be enhanced.
- Gas generated should be used in electricity generation.
- The ETP is working well and satisfying the effluent discharge criteria.
- Laboratory for water analysis is also established. Experienced Environmental officer on contract was appointed with trained staff for ETP operation and maintenance

No river or nala nearby to the Maruti Suzuki Kharkhoda Plant. There is no effluent stream flow from the Plant in the nearby nala or river. Treated effluent is reused in the Plant operations and miscellaneous activities.

As per the adequacy report, each ETP was designed for the flow rate 5040 KLD having BOD 1000 mg/l. Now, as per the present flow meter record, actual effluent generation varies from 3600 to 4000 m<sup>3</sup>/day having BOD of 400 to 500 mg/l. Therefore, ETP system installed is adequate.

As per the online monitoring analysis and standard laboratory reports, treated water quality was within the norms of CPCB. Total quantity of treated water is used for dust suppression, Plantation and reused in plant as required.

Sustainable operations and maintenance practices are essential for ensuring the long-term efficiency, environmental performance, and economic viability of effluent treatment plants. By adopting regular monitoring and performance evaluation, preventive maintenance, training programs, energy efficiency measures, resource recovery, and embracing a culture of continuous improvement, ETPs can operate at optimal levels, reduce their ecological footprint, and contribute to a more sustainable and resilient future. A comprehensive approach to O&M in sewage treatment plants is key to protecting public health, preserving natural resources, and achieving long-term operational success.

MARUTI SUZUKI INDIA LTD, KHARKHODA

# ADEQUACY REPORT OF STP (2 x 821 KLD)



Plot No 831, IMT Kharkhoda , Sonipat, Haryana

2025

Environment Consultant



**Vardan Environet LLP**

82-A, IMT, SECTOR-5, MANESAR,  
HARYANA



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## **Chapter -1**

# **INTRODUCTION**

### **1.1 Preamble**

Sewage treatment is the process of removing contaminants from wastewater, primarily from household sewage. It includes physical, chemical, and biological processes to remove these contaminants and produce environmentally safe treated wastewater (or treated effluent). A by-product of sewage treatment is usually a semisolid waste or slurry, called sewage sludge, that has to undergo further treatment before being suitable for disposal or land application. The objective of sewage treatment is to reduce the polluting substances to the prevailing Government norms.

The adequacy of a Sewage Treatment Plant (STP) depends on several factors, including its design capacity, the quality of influent and effluent, the technology used, and the efficiency of its operation. A well-designed and properly operated STP should effectively reduce pollutants like BOD, COD, and TSS to meet the required standards set by regulatory bodies.

### **1.2 Company Profile**

Maruti Suzuki India Limited is a publicly listed Indian subsidiary of Japanese automaker Suzuki Motor Corporation. It is the largest automobile manufacturer in India, specialising in small(hatchback)cars. The company was established by the Government of India as Maruti Udyog Limited in February 1981 as a joint venture with Suzuki, the latter becoming the first Japanese automaker, as well as the first major foreign automaker, to invest in India.

Maruti opened its first production facility in Gurugram, Haryana, in 1982. Initially, Maruti was majority-owned by the Indian government, with Suzuki only taking a 26% stake during its establishment in 1982. The Indian government gradually reduced its stake, partially departed the business in 2003 by making it a public company and then sold all of its remaining shares to Suzuki Motor Corporation in 2007.

Maruti Suzuki has emerged as the largest Suzuki subsidiary in terms of production volume and sales. As of September 2022, the company had a leading market share of 42% in the Indian passenger car market.

### **1.3 Purpose of Report**

The purpose of an adequacy report for a Sewage Treatment Plant (STP) is to assess and verify that the plant's design, capacity, and operational parameters are sufficient to effectively treat wastewater and meet the required effluent discharge standards. It ensures that the STP is appropriately sized and configured to handle the volume and characteristics of wastewater generated, and that it can consistently produce treated water that meets regulatory requirements for environmental safety.

This study is focused on following aspects;

- Performance evaluation of the STP in terms of achieving discharge standards.

- Evaluation of technical design capacity of STP with respect to load.
- Recommendations for improvement of plant performance, if required.

### **1.4 Demand and Export/Import scenarios**

Maruti Suzuki India Limited (MSIL), India's leading passenger vehicle company in domestic market and exports has attained the milestone of 3 million cumulative exports.

The 3 millionth landmark vehicle was part of a shipment of 1,053 units that sailed from Gujarat's Pipavav port yesterday comprising models like Celerio, Fronx, Jimny, Baleno, Ciaz, Dzire and S-Presso.

Maruti Suzuki commenced export of vehicles from India in 1986. The first large consignment of 500 cars was shipped to Hungary in September 1987. The company clocked the 1 millionth milestone in vehicle exports in FY 2012-13, followed by the next million in little less than 9 years in FY 2020-21. The progression from 2 million to 3 million cumulative exports was achieved in just 3 years and 9 months, making it the fastest million for Maruti Suzuki.

Maruti Suzuki exported 181,444 units in the period April-October in FY 2024-25, marking a growth of 17.4 % over the same period the previous year. Today, the company exports 17 models to nearly 100 countries. Latin America, Africa, Asia and the Middle East are important export markets for the company. Fronx, Jimny, Baleno, Dzire and S-Presso are the top export models from Maruti Suzuki.

### **1.4 Approvals Acquired**

Maruti Suzuki India Ltd has obtained Environmental Clearance vide F.No. SEAC/HR/2024/045 dated 28.05.2024 for Proposed Expansion of Industrial Shed for Automobile Manufacturing (Integrated Facilities) Unit at Plot No. 831, Industrial Model Township (IMT) Kharkhoda, Sonipat, Haryana. The plant is now operating under valid CTO vide Consent No. 313091424SONCTO63078373 dated 29.05.2024 valid till 30.09.2025.

### **1.5 Project Highlights**

The Kharkhoda facility is a green-field project where the first plant started commercial operations last month (February 2025). The Maruti Suzuki Brezza is being produced here. While the existing capacity at Kharkhoda is 2,50,000 units per year, the second plant with similar capacity is under construction. With this, Maruti Suzuki, including Suzuki Motor Gujarat Private Limited, the wholly owned subsidiary of Maruti Suzuki, will have a total annual production capability of 2.6 million units. The Kharkhoda plant is the brand's largest manufacturing site in the country. It will be a key contributor to the brand's strategy of significantly expanding its production capacity to four million units annually by 2030.

## **Chapter-2**

### **PROCESS DESCRIPTION**

#### **2.1 Manufacturing Plant details**

Maruti Suzuki's car manufacturing process utilizes a product layout, incorporating stages like blanking, pressing, welding, painting, machining, engine assembly, vehicle assembly, and rigorous inspection. The process begins with the press shop, which handles sheet metal shaping, and then moves to the weld shop where these parts are joined. Automated systems and robotics are heavily integrated, especially in the welding and material handling stages.

The detailed writeup is provided below:

*Press Shop:* This is the starting point, where steel coils are pressed into various body panels and chassis components. The press shop operates on a batch system and maintains a substantial inventory to supply other shops.

*Weld Shop:* The press shop's output, including large outer components like doors and roofs, is then welded together. Robotics play a crucial role in the welding process, performing spot welding with precision.

*Painting:* The assembled body is then painted, with a clear coat applied over the top coat to enhance gloss and provide durability. The painted vehicles undergo a drying and curing process in ovens.

*Machining and Engine Assembly:* Engine components are machined and assembled, and the engine is then integrated with the vehicle.

*Vehicle Assembly:* The chassis, body, engine, and other components come together on the assembly line. This stage involves a combination of manual and automated processes.

*Inspection:* Throughout the process, but particularly during and after painting, automated systems and human technicians inspect the vehicle for any defects.

#### **2.2 Technical Process of STP**

The STP has been designed to treat 1642 KLD of sewage. The treatment system is designed to reduce pollutants such as BOD, COD, TSS etc. The proposed scheme of treatment in the STP consist of perforated screen, collection tank (flow equalization), aeration tank (secondary biological treatment based on conventional activated sludge process with sludge recirculation). Moreover, the STP was given with a provision of sludge drying beds, pressure sand filter (PSF), activated carbon filter (ACF) and disinfection units. Following is brief description of the individual units.

##### **Scheme and process of treatment:**

###### **A Preliminary Treatment**



- Screening
- Oil & Grease Trap

**B Primary Treatment**

- Equalization Tank

**C Secondary Treatment**

- Membrane Bioreactor

**D Sludge Treatment**

- Sludge dewatering system

**Process units involved in the treatment*****A Preliminary Treatment******Screening***

Coarse screen or rocks is used for removal of large pieces of gunny bags, plastics, branches, rubbers, packing materials, gaskets, cotton waste and other floatable. It is used as protecting devices so that large suspended solids and floating material do not damage pumps, agitators, mixers and aerators. Coarse screens have opening ranging from 15mm to 150mm and racks are set at an angle of 90°. Bar screen was installed on gutter.

***Oil & Grease Skimmer:***

Oil being lighter than water, floats. This property is used to separate it out. However, if there is more turbulence or if the travel distance is high, gradient slope is more, or if boiler blow, excess condensate, steam trap, cooling purging co-enters, the oil gets emulsified and then does not float out easily. It has to avoid such situations to the maximum extent possible by either providing the trap very near to the source, or by segregating the sub-streams. If the oil does not float and a thick film does not develop, the physical removal by big spoons becomes difficult. In such case, the oil and grease escapes out to further downstream units of the ETP to spoil the situation. In aeration tank the contents are further churned and the oil may cover the bacterial cell wall, stopping their work of adsorbing and absorbing the food (BOD) and utilizing the same in turn for their life growth cycle. The BOD will not get utilized for removal, and the shining oil will escape out from the secondary clarifier to the disposal site.

Removal of oil and grease is necessary to increase treatability. Various patterns are available for oil and grease trap. The most common is the one in which inlet is below the surface and outlet is at the bottom with sufficient retention period (30-60 min). The floating material rises and remains on the surface of the wastewater.

***B Primary treatment***

**Equalization Tank:**

Equalization is often used for smoothening out individual wastewater stream flow variations so that a composite stream of relatively constant flow rate is fed to the treatment plant and, also to even out variations in effluent feed BOD to the treatment facility. This will avoid stock loading and process upsets of the treatment plant. Effluents after passing through the oil and grease tank are entering equalization tank. Clear effluent from sulphate removal system was also added in equalization tank.

***C Secondary Treatment:*****Aeration tank:**

The effluent from anaerobic lagoon is further subjected to aeration tank. The biological treatment of effluents by aeration process with sludge culture is very sensitive. The efficiency depends on pH, temperature, air contact, suspended solids, culture growth, concentration of floc, that is optimum mixed liquor suspended solid concentration (MLSS). The microbial culture concentration is to be maintained in the range of 1500 to 4000 mg/l. hence initial culture development and maintaining of activated sludge rate by recirculation of sludge and addition of cow dung, urea, DAP and their mixing are essential. The nutrients are to be in liquid form. The ratio of BOD:N:P is 100:5:1 will be maintained. Care is to be taken not to destabilize the microbial culture.

**Anoxic Tank:**

The effluent from aeration tanks is sent to Anoxic Tank. Sludge is collected at the bottom from where it re-circulated to aeration tank and excess sludge was taken on sludge drying beds by pumping.

***D. Tertiary treatment:*****Membrane Bioreactor (MBR):**

Activated sludge in the aeration tank is clearly removed by the flat sheet type submerged membrane. The membrane module consists of housing, aeration diffuser, permeate water manifold and membrane elements. The membrane element consisting of flat sheet membranes sandwiching a support panel is set up vertically. Feed water including activated sludge is filtrated by flat sheet membranes with pore size of 0.02 micron meter. The air bubbles supplied from the bottom of the membrane elements continuously scour off cake of activated sludge accumulated on the membrane surface. This is continuous filtration operation. The air bubbles are also used for the biological reaction to decompose organic substances included in the raw sewage.

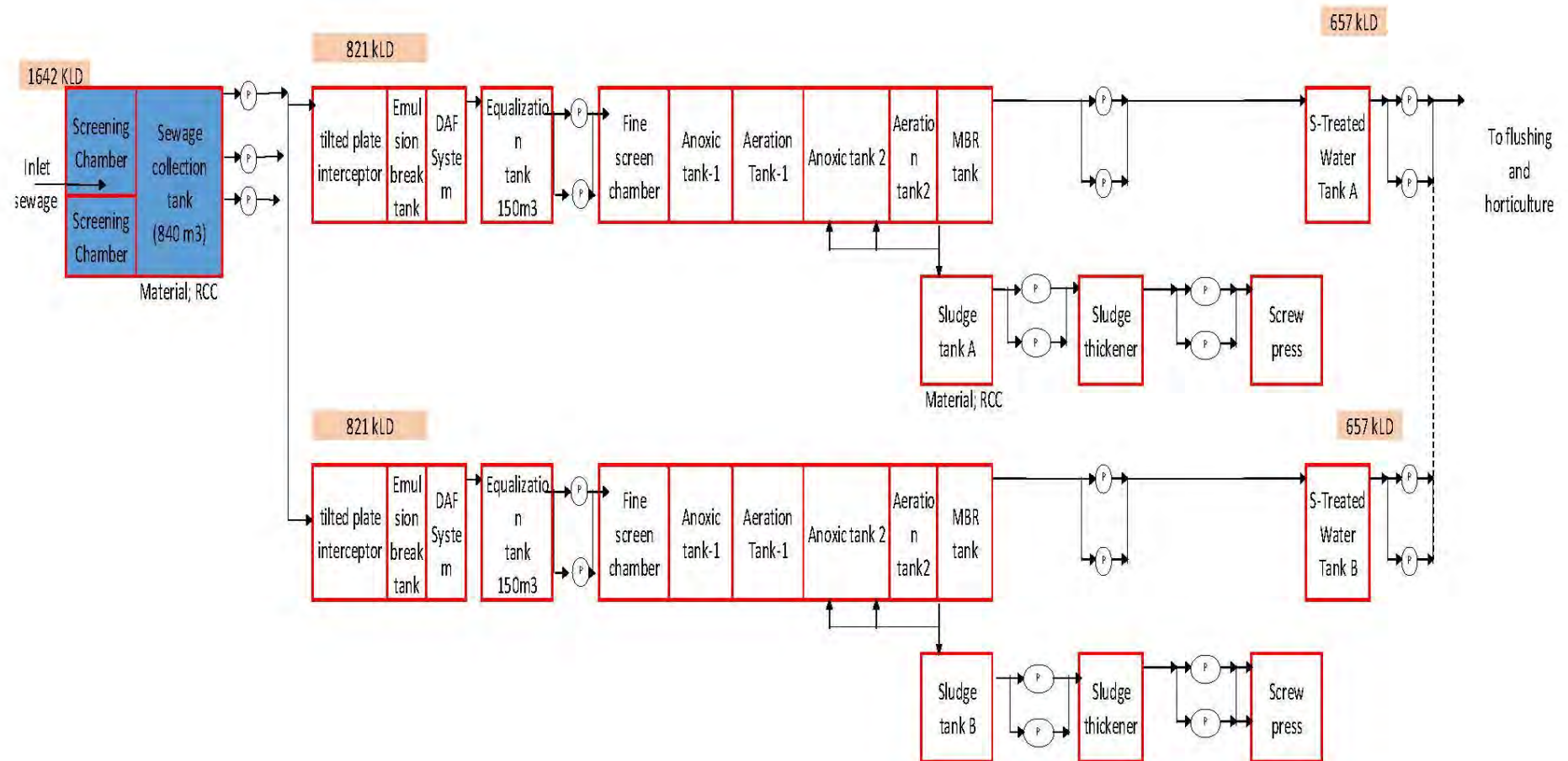
The material of the membrane is hollow fiber PVDF (polyvinylidene difluoride). PVDF is fluorine polymer which has high stability for chemicals and good physical strength. The form of membrane is fiber reinforced flat sheet membrane. The membrane has small and uniform pore size. Therefore, the rejection property of this membrane is excellent. Almost

all particles with sizes more than 0.1 micron meter can be removed effectively using this membrane.

***E: Sludge Treatment***

***Sludge dewatering system***

The sludge from primary and secondary clarifier is sent to sludge drying beds. Sludge is dried in natural heat of sunlight. The dried cakes are scrapped off periodically and utilized as manure.

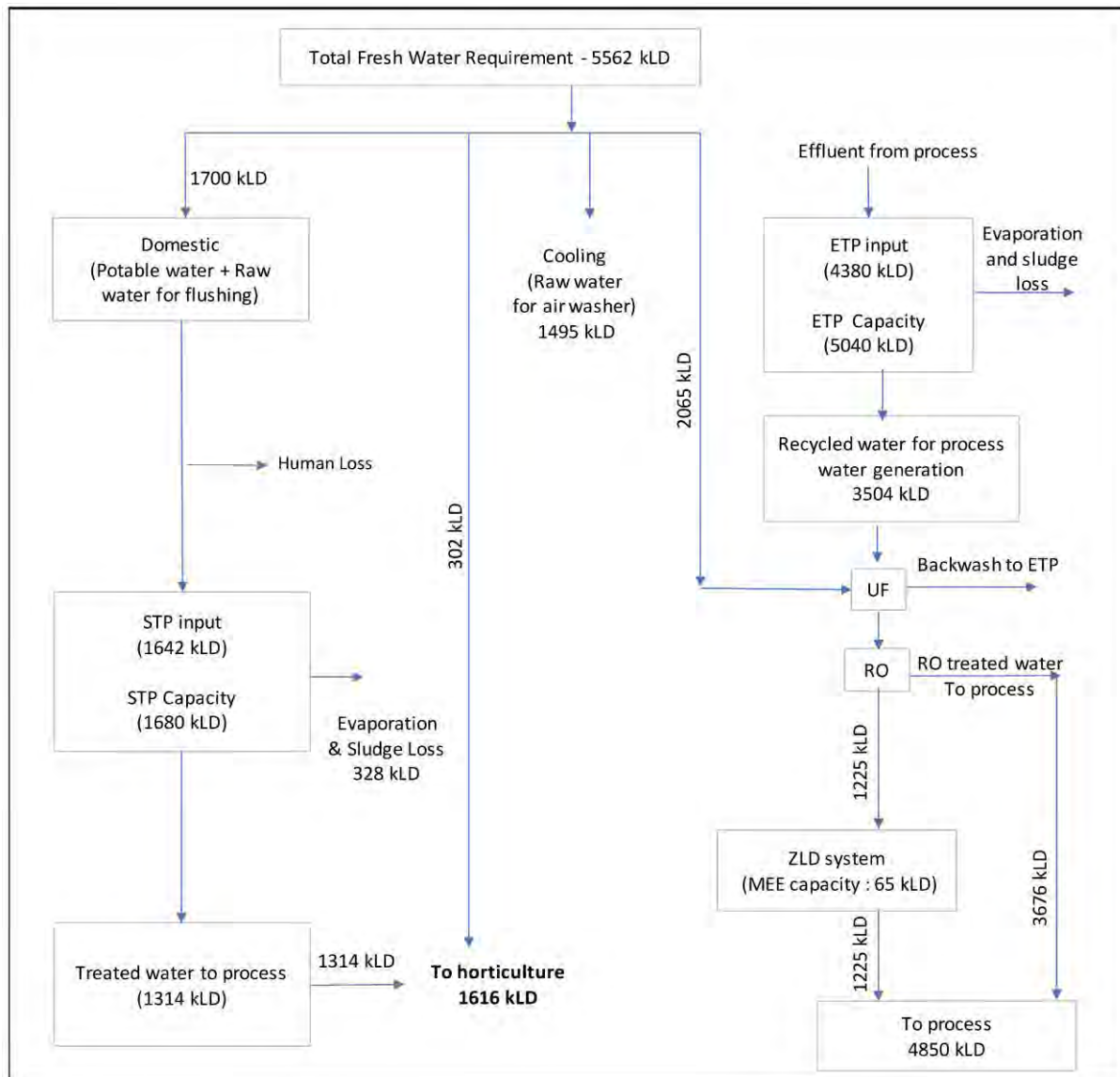


**Fig. 1 Process flow diagram of STP**



### 2.3 Water Balance of Plant

The plant has installed STP of 2x821 KLD capacity to treat domestic waste water and ETP of 2x2520 KLD capacity to treat industrial effluents. Both the treatment plants are designed based on the design flow of the effluents generated during operation of manufacturing plant. The STP installed is of MBR (Membrane Bioreactor) Type. The ETP and STP are regularly monitored and Maintained by the plant executives. The desired quality of treated water is achieved in both the treatment plants. The water balance diagram of the entire manufacturing plant is provided below.



**Fig.2 Water Balance Diagram of Maruti Suzuki India Ltd, Kharkhoda**

### 2.4 Requirements

The ultimate goal of any STP is to produce water that is safe for reuse and discharge. Treated sewage must meet strict standards for clarity, purity, and safety. The water should be clear, odorless, and free from harmful levels of organic matter, suspended solids, nitrogen

compounds, and pathogens. Achieving these standards protects public health and the environment.

- **Inline Sensors:** Continuously track key parameters such as pH, total suspended solids (TSS), biochemical oxygen demand (BOD), chemical oxygen demand (COD), and flow rate.
- **Automated Data Transmission:** Sensors should use robust communication protocols (like RS 485 with Modbus) to ensure accurate, timely data for operators and regulators.
- **Operational Transparency:** Real-time monitoring helps operators quickly detect and address any deviations, ensuring consistent compliance and efficient operation
- **Clear Warning Signs:** Prominently display safety and caution boards at all STP locations to alert maintenance personnel and visitors to potential hazards.
- **Water Reuse Notices:** Clearly mark all taps supplying treated sewage water with “Not for Drinking” signs to prevent accidental consumption.

## **2.5 Control Measures Adopted**

Following Control measures are currently being followed in the plant.

- A History card is maintained for each equipment so that record is maintained for equipment performance and maintenance.
- Good housekeeping is an important aspect of plant operation.
- Proper & efficient removal of silt in grit channel will improve the functioning of treatment.
- Flow is recorded every hour. In MBR Plants the Flow recording graphs are recorded in SCADA PC.
- Distribution Channel Must be cleaned every day
- Online sensors are required to be provided
- **Ultrasonic Flow Meters:** When ultrasonic impulses are released onto a pipe surface carrying sewage, the impulses are deflected along the flow direction based on the velocity of the flow before they impinge on the opposite sidewall of the pipe. The time taken by impulse wave is measured and is correlated to the velocity and then to the diameter of the pipeline and hence the flow rate is arrived.

### **Chapter-3**

## **ADEQUACY STUDY OF STP**

At present the Sewage treatment plant is based on fully biological process, there is no chemical addition. The influent is just flow through rapid mixing and flocculation tank and first stage tube settlers are working as pre-settling tanks. The STP scheme comprises one Raw Effluent Pump House (REPH), having coarse screen at upstream and fine screen at downstream, Oil & Grease trap unit, equalization tanks, Pre-settling tank (PSTs), MBR tank, Aeration tank, DAF etc.

### **3.1 Water Quality Details**

Grab samples were collected for physico-chemical and heavy metal analysis. The samples were collected after equalization tank, after DAF, after Aeration tank, MBR Outlet and discharge pond. Samples were preserved in an ice container at 4°C prior to the analysis and processed within 24 hr of sample collection. Ample air space was left in the bottle (at least 2.5 cm) to facilitate mixing by shaking, before examination.

Samples collected from both STP were analyzed for physico-chemical parameters and heavy metals.

The average wastewater flow during monitoring period was observed as 25 m<sup>3</sup>/hr. The results obtained from the analysis of wastewater samples from different treatment stages of both the STPs are summarized in Table 1&2. The visual comparison of Inlet and Outlet samples from STP is shown in Fig.3

Table 1: Detailed Analysis Data of Waste water samples of STP-1 (821 KLD)

S.No.	Parameters	Unit	Inlet of STP	Outlet of Sewage Collection tank	Outlet of DAF	Outlet of Equalization tank	Outlet of Aeration tank 1& 2	Outlet of MBBR tank	Outlet of Treated water	Limit as per HSPCB
1	pH at 25 <sup>0</sup> C	--	8.08	7.95	7.80	7.58	7.86	8.16	8.08	6.5 - 8.0
2	Total Suspended Solids at 105 <sup>0</sup> C	mg/L	210.00	41.00	31.00	38.00	158.00	10.0	8.60	20.0
3	Total Dissolved Solids at 150 <sup>0</sup> C	mg/L	670.00	778.00	801.00	820.00	720.00	724.00	680.00	1500
4	Oil & Grease, Max. (Free)	mg/L	7.60	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	4.60	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	--
5	Oil & Grease, Max. (Emulsified}	mg/L	320.00	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	172.00	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	--
6	Ammonical Nitrogen (as N}	mg/L	56.74	10.76	11.42	7.62	23.76	5.67	1.28	5.0
7	Total Nitrogen	mg/L	72.51	16.86	17.86	21.52	28.84	9.21	3.56	20.0
8	Nitrate Nitrogen (as N03}	mg/L	16.1.0	8.94	64.04	54.86	16.72	4.26	BLQ (LOQ-1.0)	10.0
9	Biochemical Oxygen Demand (3 Days at 27 <sup>0</sup> C }	mg/L	121.00	68.00	62.00	12.00	110.00	7.21	4.25	10.0
10	COD at 150 <sup>0</sup> C	mg/L	242.00	564.00	403.00	56.00	483.84	24.00	16.00	50.0
11	Lead (as Pb)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.01
12	Total Chromium (as Cr)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.2
13	Copper (as Cu}	mg/L	0.002	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.004	0.002	0.004	1.5



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14	Zinc (as Zn)	mg/L	0.027	0.024	0.033	0.022	0.023	0.021	0.029	2.0
15	Nickel (as Ni)	mg/L	0.016	0.016	0.019	0.017	0.011	0.010	0.008	0.2
16	Boron (as B)	mg/L	0.396	0.395	0.379	0.375	0.375	0.354	0.354	1.0
17	Chloride as Cl	mg/L	187.54	189.82	320.46	396.46	305.77	284.58	156.77	100
18	Fluoride (as F)	mg/L	0.42	0.30	0.32	0.23	0.35	0.23	0.22	1.0
19	Dissolved Phosphate (as P)	mg/L	3.11	22.85	5.82	1.96	3.86	0.72	0.43	1.0
20	Total Phosphorus (as P)	mg/L	7.67	26.72	8.42	3.15	5.74	1.34	0.61	5.0
21	Sulphate (as S04)	mg/L	89.76	104.03	76.42	82.58	67.09	60.71	65.34	200
22	Sulphide (as S)	mg/L	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	0.01
23	Arsenic (as As)	mg/L	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	0.01
24	Mercury (as Hg)	mg/L	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	0.001
25	Cadmium (as Cd)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.01
26	Selenium (as Se)	mg/L	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	0.02
27	Cyanide (as CN)	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	--
28	Bicarbonates	mg/L	414.27	334.82	283.75	278.07	261.05	255.37	266.72	--
29	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	0.002
30	Sodium (as Na)	mg/L	132.67	221.84	289.72	261.53	156.77	187.35	134.58	100

**STP Adequacy Report****Maruti Suzuki India Ltd, Kharkhoda**

31	Electrical Conductivity	IJS/cm	1119.00	1310.00	1342.00	1372.00	1205.00	1210.00	1142.00	2000
32	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	414.27	334.82	283.75	278.07	261.05	255.37	266.72	200
33	Total Hardness (as CaCO <sub>3</sub> )	mg/L	280.00	395.21	476.25	458.10	385.69	389.66	357.22	200
34	Calcium (as Ca)	mg/L	40.08	80.22	90.41	90.29	74.28	78.28	62.15	100
35	Magnesium (as Mg)	mg/L	43.69	47.30	57.15	56.46	48.59	47.13	49.04	60
36	ResidualFree Chlorine	mg/L	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	0.2
37	Aluminium (as Al)	mg/L	0.044	0.041	0.040	0.017	0.012	0.035	0.022	1.0
38	Vanadium (as V)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.003	0.002	0.004	0.005	0.006	0.1
39	Iron (as Fe)	mg/L	0.022	0.024	0.031	0.014	0.011	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	5.0
40	Molybdenum	mg/L	0.008	0.008	0.008	0.007	0.008	0.008	0.01	0.01
41	Berillium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.1
42	Manganese (as Mn)	mg/L	0.034	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	0.013	0.111	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	0.5
43	Sodium Adsorption Ratio	..	4.18	5.59	6.65	6.15	4.03	4.76	3.65	10
44	Anionic Detergent as MBAS	mg/L	0.10	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	1.0
45	Barium	mg/L	0.024	0.023	0.033	0.017	BLQ (LOQ-0.01)	0.012	0.026	1.0

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46	Cobalt	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.05
47	Silver (as Ag)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.1
48	Residual Sodium Carboante	meq/L	0.33	Nill	Nill	Nill	Nill	Nill	Nill	2.5
49	Lithium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	2.5
50	E-Coli	MPN/100ml	50	21	17	11	12	14	11	--
51	Feacal Coliform	MPN/100ml	900	80	90	50	60	70	50	Less than 100

Table 2: Detailed Analysis Data of Waste water samples of STP-2 (821 KLD)

S.No.	Parameters	Unit	Inlet of STP	Outlet of Sewage Collection tank	Outlet of DAF	Outlet of Equalization tank	Outlet of Aeration tank 1& 2	Outlet of MBBR tank	Outlet of Treated water	Limit as per HSPCB
1	pH at 25 <sup>0</sup> C	--	8.24	7.83	7.92	7.72	7.72	8.17	8.16	6.5 - 8.0
2	Total Suspended Solids at 105 <sup>0</sup> C	mg/L	196.00	34.00	25.00	44.00	142.00	12.40	6.80	20.0
3	Total Dissolved Solids at 100 <sup>0</sup> C	mg/L	720.00	750.00	850.00	800.00	758.00	760.00	710.00	1500
4	Oil & Grease, Max. (Free)	mg/L	6.20	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	4.80	BLQ (LOQ-4.0)	BLQ {LOQ-4.0}	--
5	Oil & Grease, Max. (Emulsified}	mg/L	272.00	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	181.00	BLQ (LOQ-4.0)	BLQ (LOQ-4.0)	--
6	Ammonical Nitrogen (as N}	mg/L	41.83	12.56	13.76	6.72	20.53	6.21	1.37	5.0
7	Total Nitrogen	mg/L	61.88	17.37	19.28	18.79	25.89	8.37	3.72	20.0
8	Nitrate Nitrogen (as N03}	mg/L	14.29	9.25	52.26	37.84	19.35	3.11	BLQ {LOQ-1.0}	10.0
9	Biochemical Oxygen Demand (3 Days at 27 <sup>0</sup> C}	mg/L	132.00	82.00	70.00	8.21	101.00	8.37	4.47	10.0
10	COD at 150 <sup>0</sup> C	mg/L	290.00	501.00	451.00	48.00	461.00	31.00	22.00	50.0
11	Lead (as Pb)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ {LOQ-0.002}	0.01
12	Total Chromium (as Cr)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ {LOQ-0.002}	0.2
13	Copper (as Cu}	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	1.5



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14	Zinc (as Zn)	mg/L	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	2.0
15	Nickel (as Ni)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.2
16	Boron (as B)	mg/L	0.032	0.029	0.033	0.029	0.029	0.028	0.030	1.0
17	Chloride as Cl	mg/L	208.63	162.73	389.72	337.59	321.82	310.67	189.56	100
18	Fluoride (as F)	mg/L	0.38	0.25	0.37	0.25	0.38	0.24	0.24	1.0
19	Dissolved Phosphate (as P)	mg/L	3.39	18.63	5.01	1.88	3.98	0.31	0.49	1.0
20	Total Phosphorus (as P)	mg/L	5.29	23.45	7.34	2.96	5.82	0.84	0.65	5.0
21	Sulphate (as S04)	mg/L	101.43	116.84	101.53	96.72	82.53	78.35	78.35	200
22	Sulphide (as S)	mg/L	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	BLQ (LOQ-0.02)	0.01
23	Arsenic (as As)	mg/L	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	BLQ (LOQ-0.005)	0.01
24	Mercury (as Hg)	mg/L	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	BLQ (LOQ-0.0005)	0.001
25	Cadmium (as Cd)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.01
26	Selenium (as Se)	mg/L	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	BLQ (LOQ-0.001)	0.02
27	Cyanide (as CN)	mg/L	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	--
28	Bicarbonates	mg/L	432.84	323.56	301.62	BLQ (LOQ-	284.21	282.54	284.83	--

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						0.002)				
29	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	BLQ (LOQ- 0.002)	BLQ (LOQ- 1.0)	BLQ (LOQ-1.0)	BLQ (LOQ-1.0)	0.002
30	Sodium (as Na)	mg/L	193.82	205.35	299.36	BLQ (LOQ- 0.002)	172.54	205.33	158.69	100
31	Electrical Conductivity	IJS/cm	1204.00	1262.00	1426.00	BLQ (LOQ- 0.002)	1272.00	1272.00	1192.00	2000
32	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	432.84	323.56	301.62	BLQ (LOQ- 0.002)	284.21	282.54	284.83	200
33	Total Hardness (as CaCO <sub>3</sub> )	mg/L	401.57	362.44	510.32	BLQ (LOQ- 0.002)	405.29	412.85	398.47	200
34	Calcium (as Ca)	mg/L	85.32	74.95	105.78	BLQ (LOQ- 0.002)	92.67	89.67	79.33	100
35	Magnesium (as Mg)	mg/L	45.74	42.54	59.74	BLQ (LOQ- 0.002)	42.18	45.84	48.63	60
36	Residual Free Chlorine	mg/L	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.1)	BLQ (LOQ-0.1)	BLQ (LOQ-0.1)	0.2
37	Aluminium (as Al)	mg/L	BLQ (LOQ- 0.005)	BLQ (LOQ- 0.005)	BLQ (LOQ- 0.005)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.005)	BLQ (LOQ- 0.005)	BLQ (LOQ- 0.005)	1.0
38	Vanadium (as V)	mg/L	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	0.1
39	Iron (as Fe)	mg/L	BLQ (LOQ- 0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.1)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	5.0
40	Molybdenum	mg/L	BLQ (LOQ-0.1)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	0.01
41	Berillium	mg/L	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	BLQ (LOQ- 0.002)	0.1

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42	Manganese (as Mn)	mg/L	BLQ (LOQ-0.001)	BLQ (LOQ-0.01)	BLQ (LOQ-0.1)	BLQ (LOQ-0.002)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	0.5
43	Sodium Adsorption Ratio	..	4.80	5.38	6.61	BLQ (LOQ-0.002)	4.20	5.00	3.99	10
44	Anionic Detergent as MBAS	mg/L	0.09	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.002)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	BLQ (LOQ-0.05)	1.0
45	Barium	mg/L	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.002)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	BLQ (LOQ-0.01)	1.0
46	Cobalt	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.05
47	Silver (as Ag)	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	0.1
48	Residual Sodium Carboante	meq/L	Nill	Nill	Nill	Nill	Nill	Nill	Nill	2.5
49	Lithium	mg/L	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	BLQ (LOQ-0.002)	2.5
50	E-Coli	MPN/100ml	50	14	11	17	21	22	21	--
51	Feacal Coliform	MPN/100ml	500	70	60	60	90	80	80	Less than 100



Inlet of STP

Outlet of STP

**Fig.3 Visual Comparison of sample at Inlet and Outlet of STP**

### 3.2 Treatment performance status of STP

#### ***BOD Removal***

As the biomass present in the waste water uses the oxygen by aeration and increases their quantity and breakdown the organic matter, therefore in treated water we found less organic matter and more dissolve oxygen. The biological oxygen demand is an important parameter used in water pollution to determine the impact of wastewater on the receiving water bodies.

As per the analysis data, biological oxygen demand value ranges from 121 to 4.25 mg/L for STP-1 and 132 to 4.47 mg/L for STP-2. The efficiency removal value of BOD for both STPs was observed in ranges of 93% to 96%.

#### ***COD and TSS Removal***

Chemical oxygen demand test is the best method for organic matter determination and rapid test for estimation of total oxygen demand by organic matter. As per Analysis data, chemical oxygen demand value ranges from 564 to 16 mg/L for STP-1 and 501 to 22 mg/L for STP-2. The efficiency removal value for both the STPs in respect of COD removal was observed in ranges of 90% to 95%. The TSS value ranges from 210 to 8.6 mg/L for STP-1 and 196 to 6.80 mg/L for STP-2. The efficiency removal value for both the STPs in respect of TSS removal was observed in ranges of 93% to 97%.

Analysis of the collected samples showed COD, BOD and TSS in the influent of the 2 x 821 KLD STP were 242 mg/L, 121 mg/L and 210 mg/L, which is reduced to 56 mg/L, 12 mg/L and 38 mg/L after the Equalization tank and further drops again to 16 mg/L, 4.25 mg/L and 8.60 mg/L at treated water outlet unit, which is quite below the regulatory standard prescribed by Ministry Of Environment, Forest and Climate Change (MoEFCC) & HSPCB. The overall removal efficiency of both effluent treatment plants for above mentioned parameters was found to be 90%, 95%, 97% respectively.

#### ***Nitrogen Removal***

Present analysis results revealed that concentration of ammonia nitrogen decreased from 56.74 mg/L in influent to 1.28 mg/L in final effluent of STP-1 and from 41.83 to 1.37 mg/l for STP-2. The concentration of ammonia in the effluent is below the effluent discharge



standards. Similar scenario is with nitrate (For STP-1 influent 16.10 mg/L & BLQ in effluent and For STP-2 influent 14.29 mg/L & BLQ in effluent) and TKN (For STP-1 influent 72.51 mg/L to 3.56 mg/L in effluent and for STP-2 influent 61.88 mg/L & 3.72 mg/L in effluent) satisfying effluent standards.

#### ***Heavy metal removal***

Heavy metals were analysed in the influent and effluent samples collected from both the STPs results were presented in Table 4 and 5. The heavy metals analysed at each tank reveals approximately 85 to 92% efficiency and the results showed that the heavy metal concentrations are much below discharge standards in the effluent.

### **3.3 Water Quality Index (WQI)**

The mean water quality with respect to selected parameters is given in **Table 13**.

Table 3 Summarized Water quality of different STP process of STP -1

Significant parameters	Parameter average values							Limit as per HSPCB
	Inlet of STP	Outlet of Sewage Collection tank	Outlet of DAF	Outlet of Equalization tank	Outlet of Aeration tank 1& 2	Outlet of MBBR tank	Outlet of Treated water	
pH	8.08	7.95	7.80	7.58	7.86	8.16	8.08	6.5-8.0
Total Suspended Solid (mg/l)	210.00	41.00	31.00	38.00	158.00	10.0	8.60	20.0
BOD (mg/l)	121.00	68.00	62.00	12.00	110.00	7.21	4.25	10.0
COD (mg/l)	242.00	564.00	403.00	56.00	483.84	24.00	16.00	50.0
Fluoride (mg/l)	0.42	0.30	0.32	0.23	0.35	0.23	0.22	1.0

Table 4 Summarized Water quality of different STP process of STP -2

Significant parameters	Parameter average values							Limit as per HSPCB
	Inlet of STP	Outlet of Sewage Collection tank	Outlet of DAF	Outlet of Equalization tank	Outlet of Aeration tank 1& 2	Outlet of MBBR tank	Outlet of Treated water	
pH	8.24	7.83	7.92	7.72	7.72	8.17	8.16	6.5-8.0
Total Suspended Solid (mg/l)	196.00	34.00	25.00	44.00	142.00	12.40	6.80	20.0
BOD (mg/l)	132.00	82.00	70.00	8.21	101.00	8.37	4.47	10.0
COD (mg/l)	290.00	501.00	451.00	48.00	461.00	31.00	22.00	50.0
Fluoride (mg/l)	0.38	0.25	0.37	0.25	0.38	0.24	0.24	1.0

From the above data, it can be observed that all the significant parameters (pH, TSS, Fluoride, BOD & COD) which may change due to industrial operations are well within the desirable limit specified by HSPCB. Thus it is observed that the efficiency of STP is adequate to be reused in process and plantation purposes.

Based on the above selected parameters, the water quality index (WQI) was calculated and the WQI so obtained is classified in the quality grade to determine the water quality of treated water. The Rating of water quality index is provided in **Table 14** and comparative WQI values for the study area is presented in **Table 15**.

**Table 5 Rating of Water Quality**

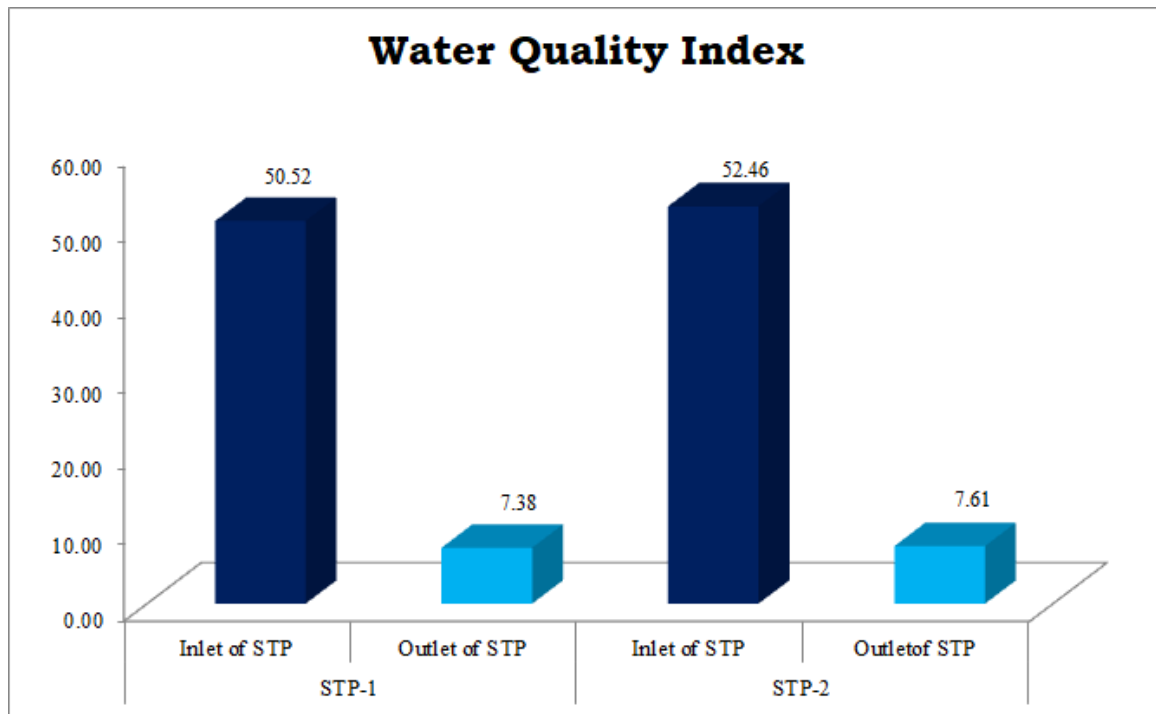
WQI Value	Rating of Water Quality	Grading
0-25	Excellent Water Quality	A
26-50	Good Water Quality	B
51-75	Poor Water Quality	C
76-100	Very poor Water Quality	D
Above 100	Unsuitable for drinking purpose	E

\* Technical Paper by K. Ravindhranath and AK Yadav entitled "Calculation of water quality index (WQI) to assess the suitability of groundwater quality for drinking purposes in Vinukonda Mandal, Guntur District, Andhra Pradesh" and "Water Quality Index Assessment of Groundwater in Todaraisingh Tehsil of Rajasthan State, India" respectively

**Table 6 Water Quality Index of STP**

Samples	Inlet of STP - 1	Outlet of STP-1	Inlet of STP -2	Outlet of STP-2
Calculated WQI	50.52	7.38	52.46	7.61
Associated grade of water quality	Grade – C Poor Water Quality	Grade – A Excellent Water Quality	Grade – C Poor Water Quality	Grade – A Excellent Water Quality

The graphical representation of above values is provided below



**Fig.4 Graphical Representation of WQI of both STP**

From the above table it can be concluded that the wastewater generated is of poor quality and after treatment in highly efficient STP, the quality of water improves to Excellent Quality. The treated water from STP can be used in plantation and can also be used for process, dust suppression and cleaning purposes. This WQI proves that both STP are efficiently working and are adequate to handle the wastewater generated from the operation of the plant

### 3.4 Conclusions of Laboratory Analysis

Bases on the laboratory analysis and the operating data of sewage treatment plant, it is concluded that,

The BOD at inlet for STP-1 & STP-2 is 121 mg/L & 132 mg/L respectively. After the advanced treatment, BOD levels at outlet for STP-1 & STP-2 was observed to be 4.25 mg/L & 4.47 mg/L respectively. Maximum BOD observed for STP-1 & STP-2 is 121 mg/L & 132 mg/L respectively. Effluent BOD is within standard limits of using in plantation. The overall BOD removal efficiency is 95 % (max) for both STPs.

The concentration of total suspended solids at inlet for STP-1 & STP-2 was observed to be 210 mg/L & 196 mg/L respectively and TSS at outlet for STP-1 & STP-2 was 8.6 mg/L & 6.8 mg/L respectively. The overall TSS removal efficiency of 97% of which about 50% of suspended solids were removed in primary treatment itself.

The removal efficiencies of nitrogen and Heavy metals were 80 % and 90 % respectively.

The WQI also proved that both the STP are working quite adequately and efficiently. Also, the plant is designed on Zero liquid discharge, so no effluent is discharged outside the plant



premises which could potentially percolate and contaminate the ground water or mix with surface water in the area.

### 3.5 Technical Specifications

The STP is designed at 821 KLD but the actual flow of the influent is 600 KLD. The following is the design evaluation of key units of STP installed with standards of STP design.

Description of Parameter	Value	Unit	Reference	Remarks on STP installed
<i>Quantity of Sewage Generated</i>	600000.00	LPD	--	--
	0.60	MLD	--	--
	<b>600.00</b>	<b>KLD</b>	--	--
<i>Raw Sewage Characteristics</i>				
Average Sewage flow entering the treatment plant	600000.00	LPD	--	Each STP is designed for 821 KLD
Assumed Peak Factor	2.25	--	--	
Peak Sewage flow entering the treatment plant	1350000.00	LPD	--	
COD	400 - 800	mg/l	--	All parameters are meeting the norms of STP outlet as per CPCB
BOD	300.00	mg/l	--	
TDS	1520-1620	mg/l	--	
TSS	460.00	mg/l	--	
pH	6.50	--	--	
<i>Inlet Chamber</i>				
Quantity of Flow (Ave)	600.00	Cum/day	--	Inlet chamber is designed at 0.45 m <sup>3</sup> volume
Peak Flow	1350.00	Cum/day	--	
	0.02	Cum/Sec	--	
Assumed Detention period	10.00	sec	--	
Volume of the Inlet Chamber	0.16	Cum	--	
Assumed Depth of flow	0.60	m	--	
Area Required for Inlet Chamber	0.26	Sq.m	--	
Assumed Length to Breadth Ratio	1.00	--	--	
Breadth of the Tank	0.60	m	--	
length of the Tank	0.60	m	--	
Dimension of Inlet Chamber as 0.6 m x 0.6 m x 0.6 m SWD + 0.3 m Freeboard				
<i>Screen Chamber (Fine Screens)</i>				
Peak Design Flow	0.02	Cum/s	Assume Size of the screen flats of size having a thickness of 10 mm and a width of 50 mm (CPHEEO page no 201)	--
Assume Clear spacing between bars, o	6.00	mm	20-50mm, pg.201 of CPHEEO	--

			Manual	
Velocity ahead of screen (Va)	0.60	m/sec	pg. 202 of CPHEEO Manual	Bar screen chamber is designed at 0.6 m <sup>3</sup> volume
Area of Screen Channel, A= (Q/Va)	0.03	m2	--	
Keeping Side Water Depth	0.50	m	--	
Width of each screen channel, W	0.10	m	--	
Water depth upstream, ha = A/W	0.30	m	--	
t	0.01	m	--	
Number of openings in chamber, W = X.o + (X - 1).t where , X = No. of Opening ; o = Clear Space between bars ; t = Thickness of flat	7.00	no	--	
Total width of opening, Ws =x*o	0.04	m	--	
Assume Angle of inclination	60.00	Degree	--	
Assumed Detention Period in the Screen channel	6.00	sec	--	
Assume Length of the screen chamber	3.60	m	--	
Inclined height of the screen, H1	0.35	m	--	
say				
Velocity through the screen, Vs= Q/H1*Ws	1.08	m/sec	--	
Head loss thru screen in normal condition, h1=0.0729(Vs2-Va2)	0.06	m	less than 0.15 m	
Head loss on 50% clogging h1=0.0729(2*Vs2-Va2)	0.14	m	less than 0.3 m	
Water Depth downstream Hb, (Za-Zb)+Va2/2g-Vs2/2g+Ha-Headloss thru screen in normal condition	0.20	m	--	
Water Depth downstream Hb, (Za-Zb)+Va2/2g-Vs2/2g+Ha-Headloss thru screen in clogged condition	0.12	m	--	
Dimension of Screen Chamber (Fine Screens) as 3.6 m x 0.1 m x 0.5 m SWD + 0.3 m Freeboard				
<b>Equalization Tank (Collection Chamber)</b>				
Peak Design Flow	1350.00	Cum/day	--	Equalization tank of 150 m <sup>3</sup> is designed for each STP
Assumed Detention period	2.1	hours	--	
Volume of the Tank	118.125	Cum	--	
Assumed Depth of Liquid column	2.5	m	--	
Area required for the equalization tank	47.25	Sq.m	--	
No. of Tanks Proposed	2	--	--	
area required for each equalization tank	23.625	Sq.m	--	
Length to Breadth ratio	1	--	--	
Breadth of the tank	5	m	--	
Length of the tank	5	m	--	
Dimension of Equalization Tank (Collection Chamber ) as 5 m x 5 m x 2.5 m SWD + 0.3 m Freeboard				
<b>Aeration tank</b>				
No of Tanks	2	--	--	Aeration Tank of 700 m <sup>3</sup> is designed for STP
Flow - completely mixed				
Q- per tank	300.00	cum/day	--	
BOD	255.00	mg/Lt	--	
MLSS	2500.00	--	--	

Type Aeration - Diffuser type fine bubble				
Blowers -	2.00	--	( 1W+1SB)	
F/M assumed	0.12	--	--	
Volume of the tank	255.00	Cum	volume of tank as per 13.6 page 226	
Add additional volume of 25% for sludge recycle	63.75	Cum	--	
Total volume of tank	318.75	Cum	--	
Hydraulic Detention Time	0.03	day	--	
Depth of the tank	4.00	m	--	
Area of the Tank	79.69	Sq.m	--	
Area for each tank	79.69	Sq.m	--	
Assumed Breadth to Length Ratio	1.00	--	--	
width of the tank	9.0	m	--	
Length of tank	8.9	m	--	
Dimension of Aeration tank as 8.9 m x 9 m x 4 m SWD + 0.5 m Freeboard				
<b>Membrane Bioreactor (MBR)</b>				
No. of Tanks	2	--	--	<i>MBR tank of 50 m<sup>3</sup> is provided in the STP</i>
Average Flow in each tank	300.00	cum/day	--	
SOR	25.00	Cum/Sqm /day	Table 12.1, but it is 8-15 for average flow and 25-35 for peak flow for extended aeration	
SWD	2.00	m	table 12.1, it is 3.5-4.5 m for extended aeration, although para 12.4.2.5 give depth 2 m in vertical flow tanks	
Solid conc. In settled sludge -%	0.8 to 0.9	%	--	
Withdrawal frequency - continuous				
Area Required for the Tank	12.00	Sq.m	--	
Diameter Required for Secondary Settling Tank	3.91	m	--	
Assumed Detention Period	3.10	hrs	1.5-2 hrs as per table 12.1	
	38.75	Cum	--	
Depth of the Clarifier assumed	2.50	m	--	
Area of the Clarifier	15.50	Sq.m	--	
Provide Secondary Clarifier of Diameter	4.50	m	OK.	
Surface Loading Rate	19.35	Cum/Sq. m/day	--	
Dimension of Secondary clarifier as 4.5 m diameter x 2.5 m SWD + 0.5 m Freeboard				

As observed from the above, it can be concluded that technical specification of each unit of STP is adequately designed and are able to handle an actual load of influent. MBR systems have minimal operating and maintenance costs, can withstand shock loads, and reduce odour using aerobic microorganisms. The best possible aeration and digestion of organic matter also makes it possible to significantly reduce BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), TSS (Total Suspended Solids), Oil and Grease. The treated water would adhere to the discharge regulations and be suitable for use in gardening.



## Chapter-4 RECOMMENDATIONS

### 4.1 Efficiency of the STP

The efficiency of STP and its adequacy is determined by treated water quality and performance of each unit of STP. The quality of water treated from STP is meeting the CPCB norms and design of STP was done for 35 m<sup>3</sup>/hr but actual flow of influent is 25 m<sup>3</sup>/hr, The treatment efficiency of STP is around 85 % and therefore the STP implemented in Maruti Suzuki India Ltd, Kharkhoda is adequate for the current influent flow rate. Following is adequacy of STP based on the design parameters.

Sr. no.	Unit process	Required Basis of Design	Required Capacity	Existing Capacity	Adequacy	Status of work
1	Inlet Chamber	Retention time (3-5 min)	0.25 m <sup>3</sup>	0.45 m <sup>3</sup>	adequate	Constructed and in operation
2	Screen Chamber	Retention time(30 min to 1 hrs)	0.18 m <sup>3</sup>	0.60 m <sup>3</sup>	adequate	Working was satisfactorily
3	Equalization Tank	Retention time(6-8 hrs)	62.5 m <sup>3</sup>	150 m <sup>3</sup>	adequate	Working satisfactorily
4	DAF	Surface loading	-	-	adequate	Installed and working efficiently.
5	Aeration tank	Conventional ASP: F/M ratio:0.15-0.2 Mlss:3000 mg/lit	320 m <sup>3</sup>	700 m <sup>3</sup>	adequate	Working satisfactorily
6	Aerators	Diffused aeration: Air:50-60 m <sup>3</sup> /kg BOD	Air blower capacity:300m <sup>3</sup> /hr	Air blower capacity:400m <sup>3</sup> /hr	adequate	Implemented and working properly
7	MBR	--	39.7 m <sup>3</sup>	50 m <sup>3</sup>	adequate	Working satisfactorily
8	chlorination	Retention time(15-20 min)	5.20-7.0m <sup>3</sup>	9.0 m <sup>3</sup>	adequate	Constructed
9	Sludge drying beds	10 days drying	Area-200 m <sup>2</sup>	250 m <sup>2</sup>	adequate	Sludge was observed on beds
10	Fifteen days storage tank	30 days storage capacity	7000 m <sup>3</sup>	7500 m <sup>3</sup>	adequate	Treated water was stored
11	disposal	Soil texture: sandy loam	Area required: 5 acres	Required land is available	adequate	Disposed in own plantation

### 4.2 Measures Implemented

#### 1. Monitoring and Maintenance:

##### Regular Monitoring:

Consistent monitoring of various parameters like pH, BOD, COD, TSS, and fecal coliforms is essential to ensure the treated effluent meets the required standards.

##### Cleaning and Maintenance:

Regular cleaning of the plant, including manholes and filters, is necessary to prevent blockages and maintain optimal performance. This may involve forming a Manhole Cleaning Task Force, similar to fire services, to prevent accidents.

*Mechanical Components:*

Regular inspection and maintenance of mechanical components like blowers, diffusers, and pumps are crucial for smooth operation.

*Sludge Management:*

Proper sludge treatment and disposal are essential. This may involve thickening, dewatering, and even anaerobic digestion for stabilization and biogas production.

**2. Safety Measures:**

*Personal Protective Equipment (PPE):*

Workers should be provided with and required to wear appropriate PPE, including chemical-resistant gloves, masks, and goggles, especially when handling chemicals or working in confined spaces.

*Ventilation:*

If the STP is in a basement, mechanical ventilation with a minimum of 25 air changes per hour is crucial. Exhausts should be terminated at the terrace level, and ducting should be insulated.

*Hot Work Safety:*

Before any hot work (welding, cutting, etc.) within the STP, thorough risk assessments, gas monitoring, and fire prevention measures are necessary. Workers should be trained and provided with appropriate PPE.

*Permit System:*

A permit system should be implemented to ensure that all necessary safety precautions are followed during any potentially hazardous work.

**3. Environmental Controls:**

*Temperature Management:*

In colder climates, maintaining optimal temperature in bioreactors and other treatment units is essential. Heating systems may be necessary in some cases.

*Disinfection:*

Depending on the required effluent quality, disinfection methods like UV radiation or chlorination may be implemented.

#### ***4. Process Optimization:***

##### ***Fine Tuning:***

Fine-tuning the STP process may involve adjusting aeration rates, filtration rates, or other parameters to improve efficiency and effluent quality.

##### ***Tertiary Treatment:***

If needed, tertiary treatment stages like sand filtration, ultrafiltration, or reverse osmosis can be added or upgraded to further purify the effluent.

#### ***5. Documentation and Training:***

##### ***SOPs:***

Standard Operating Procedures (SOPs) should be developed and followed for all aspects of STP operation, including sewage treatment, sludge management, and filter backwashing.

##### ***Training:***

Workers should be adequately trained on all aspects of STP operation and maintenance, including safety procedures and emergency response.

#### **4.3 Additional Measures to be adopted**

Sewage treatment plants (STP) play a vital role in managing and treating wastewater, safeguarding public health, and protecting the environment. However, ensuring the long-term efficiency and sustainability of these facilities requires more than just effective design and construction. Proper operations and maintenance (O&M) practices are crucial to optimize performance, minimize energy consumption, reduce operational costs, and mitigate environmental impacts.

In this section, we will explore best practices for sustainable operations and maintenance in sewage treatment plants, highlighting their importance for long-term efficiency.

##### ***1. Regular Monitoring and Performance Evaluation***

Regular monitoring of key operational parameters is essential to assess the performance of a sewage treatment plant. Parameters such as flow rates, chemical dosing, dissolved oxygen levels, and effluent quality should be continuously monitored and recorded. This data helps identify deviations from optimal performance and allows for prompt corrective actions. Performance evaluation should include regular audits, inspections, and laboratory testing to ensure compliance with regulatory standards and identify areas for improvement.

##### ***2. Preventive Maintenance and Equipment Optimization***

Implementing a robust preventive maintenance program is crucial for maintaining the efficiency and reliability of equipment and infrastructure within a sewage treatment plant.

This includes regular inspection, cleaning, lubrication, and calibration of equipment. By conducting preventive maintenance, potential issues can be identified and addressed before they turn into major failures or cause operational disruptions. Equipment optimization techniques such as adjusting pump speeds, optimizing chemical dosing, and using energy-efficient technologies can significantly reduce energy consumption and operational costs.

### ***3. Training and Skill Development***

Investing in the training and skill development of plant operators and maintenance personnel is essential for achieving sustainable operations and maintenance. Properly trained staff members are better equipped to understand the complexities of the treatment processes, identify operational inefficiencies, and respond effectively to emergencies. Training programs should cover technical aspects of plant operations, safety procedures, environmental compliance, and the use of advanced monitoring and control systems.

### ***4. Energy Efficiency Measures***

Energy consumption is a significant operational cost for sewage treatment plants. Implementing energy efficiency measures can help reduce energy consumption, lower carbon emissions, and improve overall sustainability. Some energy-saving strategies include:

- Implementing variable frequency drives (VFDs) to control pump and blower speeds based on demand.
- Optimizing aeration systems by adjusting dissolved oxygen levels to match actual treatment needs.
- Utilizing energy-efficient equipment and motors.
- Capturing and utilizing biogas generated during the treatment process for power generation.
- Incorporating renewable energy sources such as solar panels or wind turbines to offset power requirements.

### ***5. Resource Recovery and Reuse***

Sewage treatment plants can be transformed into resource recovery hubs, contributing to a circular economy approach. By implementing technologies such as anaerobic digestion and sludge dewatering, it is possible to recover energy from sludge and generate biogas for electricity generation or heat production. Additionally, treated wastewater can be reused for non-potable purposes such as irrigation, industrial processes, or groundwater recharge. Resource recovery and reuse initiatives help reduce dependence on external resources, minimize waste generation, and enhance the overall sustainability of the plant.

### ***6. Continuous Improvement and Innovation***

Sustainable operations and maintenance require a culture of continuous improvement and innovation. Regularly evaluating new technologies, processes, and best practices can lead to operational efficiencies and improved environmental performance. Collaborating with research institutions, industry associations, and technology providers can help stay abreast of the latest advancements and identify opportunities for optimization.



## **Chapter-5**

### **CONCLUSION**

The conclusions drawn from the present study were

- Detention time of the primary sedimentation tank was within the limit.
- Detention time of aeration tank was also within the limits but the MLSS was too low for the proper functioning of the plants. So, the percentage of sludge from the FST should be increased to the aeration tank.
- Discharge should be increased to reduce the detention time in the grit chamber.
- Detention time of the final sedimentation tank was also within the range.
- Effluent quantity is reduced by good housekeeping, reuse of cooling water, use of excess condensate as raw water
- Aesthetic view of plant should be enhanced.
- Gas generated should be used in electricity generation.
- The STP is working well and satisfying the effluent discharge criteria.
- Laboratory for water analysis is also established. Experienced Environmental officer on contract was appointed with trained staff for STP operation and maintenance

No river or nala nearby to the Maruti Suzuki Kharkhoda Plant. There is no effluent stream flow from the Plant in the nearby nala or river. Treated effluent is reused in the Plant operations and miscellaneous activities.

As per the adequacy report, each STP was designed for the flow rate 821 KLD having BOD 1000 mg/l. Now, as per the present flow meter record, actual effluent generation varies from 600 to 650 m<sup>3</sup>/day having BOD of 400 to 500 mg/l. Therefore, STP system installed is adequate.

As per the online monitoring analysis and standard laboratory reports, treated water quality was within the norms of CPCB. Total quantity of treated water is used for dust suppression, Plantation and reused in plant as required.

Sustainable operations and maintenance practices are essential for ensuring the long-term efficiency, environmental performance, and economic viability of sewage treatment plants. By adopting regular monitoring and performance evaluation, preventive maintenance, training programs, energy efficiency measures, resource recovery, and embracing a culture of continuous improvement, STPs can operate at optimal levels, reduce their ecological footprint, and contribute to a more sustainable and resilient future. A comprehensive approach to O&M in sewage treatment plants is key to protecting public health, preserving natural resources, and achieving long-term operational success.

# EMP Budget Expenditure Status

Environment Budget (Construction Phase)					
S. No.	Component	Capital Cost (MRs.)		Recurring Cost (MRs.)	
		Proposed	Actual	Proposed	Actual
1	Barricading of the site	89.27	29.76	-	0
2	Dust Mitigation Measures	0.71	0.24	25.55	8.52
3	Site Sanitation + Temporary toilets	0.35	0.12	17.91	5.97
4	Disinfection/Pest Control	-	-	0.71	0.24
5	Labour Health Check Up & First Aid facility	1.18	0.39	21.95	7.32
6	Labor Welfare	28.62	9.54	56.21	18.74
7	Wheel washing	2.66	0.89	0.04	0.01
8	Waste Storage Bins-Labour Camp/Site offices	0.01	0	-	-
9	Traffic Management Signages	0.12	0.04	-	-
10	Safety Training to workers	5.9	1.97	4.25	1.42
11	Environment Monitoring	0.89	0.3	-	-
12	Others	-	191.6	-	-
	<b>Total</b>	<b>129.71</b>	<b>234.85</b>	<b>126.62</b>	<b>42.22</b>

Environment Budget (Production Phase)					
S. No.	Component	Capital Cost (MRs.)		Recurring Cost (MRs.)	
		Proposed	Actual	Proposed	Actual
1	Effluent Treatment Plant	583.52	237	66.88	30.19
2	ZLD system	355.6	197	66.88	
3	Sewage Treatment Plant	332.46	169	50.16	18.03
4	Solid waste storage bins + Composter unit	2.2	3.55	0.5	62.76
5	Green Area Development (Tree Plantation & Land Scapping)	302.6	-	19.2	-
6	Solar Power Plant (30 + 20 MWp)	3418.75	1429	8.28	0.88
7	Pollution control devices	246.09	5.1	17.38	-
8	Bio-gas plant	1350	-	94	-
9	Handling & disposal of co-processing waste	106	6.6	97.26	1.92
10	Rainwater Harvesting Structures (Including Lagoons)	422.6	4	2.5	-
11	Environment monitoring	2.5		0.7	
	<b>Total</b>	<b>7122.32</b>	<b>2051.25</b>	<b>423.74</b>	<b>113.78</b>

SPEED POST

J 13012/06/2009-IA.II (T)

**Government of India  
Ministry of Environment & Forests**



Ph: 011-2436 3973  
e-mail:plahujarai@yahoo.com  
Paryavaran Bhawan  
CGO Complex, Lodi Road  
New Delhi-110 003  
Dated: June 3, 2011

To

M/s Maruti Suzuki India Ltd.  
Gurgaon Plant  
Palam Gurgaon Road  
Gurgaon – 122 015  
Haryana

***Sub: Expansion of 77.5 MW to 83.0 MW by addition of 6.0 MW  
Gas Based Captive Power Plant at Gurgaon Plant, in  
Haryana - reg. Environmental Clearance.***

Sir,

The undersigned is directed to refer to your letter no. MSIL:PDRS:EGM:10-11:0074, dated 18.01.2011 on the subject mentioned above seeking environmental clearance under the provisions of EIA Notification, 2006. The Ministry of Environment & Forests has examined the application.

2. It has been noted that the proposal is for expansion of existing 77.5 MW unit by addition of 6.0 MW Gas Based Captive Power Plant at Gurgaon, in Gurgaon Distt., in Haryana. The existing units are 3x20 MW Gas Turbines and 17.5 MW Steam Turbine. Land requirement will be 0.068 hectares, which is within the existing Maruti Plant which is an Industrial area. The co-ordinates of the site are at Latitude 28°29'32.09" N to 28°29'55.58"N and Longitude 77°03'37.43" E to 77°04'36.49"E. Fuel will be natural gas. Natural Gas requirement will be 0.0279 MMSCMD. Water requirement will be 0.002 MLD and will be met from the existing water supplied by Haryana Development Authority. There are no national parks, wildlife sanctuaries, heritage sites, tiger/biosphere reserves etc. within 10 km of the site. Cost of the project will be Rs 30.0 Crores.

3. The project has been considered in accordance with the provisions of the EIA notification issued by the Ministry of Environment & Forests vide S.O. 1533 (E), dated September 14, 2006. The proposal is a 'B' Category project. Due to location of project within 10 Km of inert-state boundary, Expert Appraisal Committee (Thermal) in the Ministry has appraised the project as per General Conditions of EIA Notification, 2006.

4. Based on the information submitted by you as at para no.2 above and others and presentation made by you before the Expert Appraisal Committee (Thermal) in the 22<sup>nd</sup> Meeting held during April 4-5, 2011, the Ministry of Environment and Forests hereby *accords environmental clearance* to the above project under the provisions of EIA notification dated September 14, 2006, subject to the compliance of the following Specific and General conditions:

**A. Specific Conditions:**

- i) In case fuel for running the power plant is proposed to be changed from natural gas to other fuel (liquid or solid) the project proponent shall apply for such a change in environmental clearance along with necessary documents as required under EIA notification, 2006 (and its amendments). In such a case the necessity for holding public hearing again or otherwise will be determined by the Ministry in consultation with the Expert Appraisal Committee (Thermal Power).
- ii) Mass Spectrometer based Helium detector to detect the gas leakage shall be installed.
- iii) Concentration for photochemical oxidants shall be monitored along with NO<sub>x</sub> and permanent monitoring stations shall be installed at appropriate location in consultation with the Central / State pollution Control Board.
- iv) COC of 5.0 shall be adopted.
- v) No ground water shall be extracted for the project work at any stage.
- vi) It shall be ensured that the area drainage is not disturbed due to the proposed expansion.
- vii) The treated effluents conforming to the prescribed standards only shall be reused to the extent possible and excess discharged. Arrangements shall be made that effluents and storm water do not get mixed.
- viii) A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation. Continuous monitoring of effluent discharge shall be undertaken and it shall be ensured that when discharge enters the natural drain the temperature of effluent shall be at ambient.
- ix) Monitoring of ground and surface water quality (if any nearby) shall be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction



of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.

- x) A well designed rainwater harvesting shall be put in place. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within **a period of three months** from the date issue of clearance and details shall be furnished. Status of implementation shall be submitted to the Regional Office of the Ministry.
- xi) Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires especially during summer season. Measures taken with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.
- xii) Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA at 1m from the source of noise. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.
- xiii) NO<sub>x</sub> emission from each Gas Turbine shall not exceed 50 ppm.
- xiv) Stacks of 70 m shall be provided with continuous online monitoring equipments. Exit velocity of flue gases shall not be less than 22 m/sec.
- xv) Regular monitoring of ground level concentration of SO<sub>2</sub>, NO<sub>x</sub>, RSPM (PM<sub>10</sub> & PM<sub>2.5</sub>) etc. shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.
- xvi) An amount of Rs 0.12 Crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 0.024 Crores per annum till the life of the plant shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be **submitted within one month** along with road map for implementation.
- xvii) CSR scheme shall be identified based on need based assessment in and around the villages within 5 km of the site and in constant

consultation with the village Panchayat and the District Administration. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. As part of CSR vocational training programme for possible self employment and jobs shall be imparted to identify villagers free of cost.

- xviii) It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.
- xix) Green Belt consisting of 3 tiers of plantations around the plant with adequate tree density not less than 2500 per ha and survival rate not less than 80 % shall be developed. The green belt developed shall not be less than 33% of the total area.

**B. General Conditions:**

- i) Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS (if any) shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.
- ii) First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- iii) 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.
- iv) The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>.
- v) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the

proposal. The clearance letter shall also be put on the website of the Company by the proponent.

- vi) An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the organization.
- vii) The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.
- viii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e- mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.
- ix) **The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.**
- x) Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six monthly basis. **Criteria pollutants levels including NO<sub>x</sub> (from stack & ambient air) shall be displayed at the main gate of the power plant and in public domain.**
- xi) Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.

- xii) The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.
- xiii) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.

4. The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.

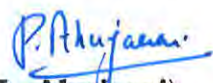
5. The environmental clearance accorded **shall be valid for a period of five years** to start operations by the power plant.

6. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

7. In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.

8. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 2008 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.

Yours faithfully,

  
(Dr. P.L. Ahujarai)  
Scientist 'F'

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Forests and Environment Department Government of Maharashtra.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.

4. The Chairman, Haryana Pollution Control Board, .C-11, Sector-6, Panchkulla.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests (C), Regional Office (NZ), Ministry of Environment & Forests, Sector -31A, Dakshin Marg, Chandigarh - 160 030.
7. The District Collector, Gurgaon District, Govt. of Haryana.
8. The Director (EI), MOEF.
9. Guard file.
10. Monitoring file.

(Dr. P.L. Ahujarai)  
Scientist 'F'



MSIL:CUIP:ESEC:ENV:2025-26:106

26-Nov-2025

To  
Ministry of Environment, Forest, and Climate Change  
Integrated Regional Office  
Bays No 24-25, Sector – 31 A  
Dakshin Marg  
Chandigarh - 160030

**Sub:** Half yearly report for the compliance of conditions given in Environment Clearance for Expansion of 77.5 MW to 83.5 MW by addition of 6.0 MW Gas Based Captive Power Plant at Gurgaon Plant, Haryana by M/s Maruti Suzuki India Ltd.

**Ref:** Environment Clearance Letter from MoEF–J-13012/06/2009-IA-II(T) dated June 3, 2011.

Dear Sir,

Enclosed please find herewith the half yearly compliance report for the period of April'25 to September'25 related to Environment clearance issued for 6.0 MW Gas based Captive Power Plant.

Thanking You

Yours Faithfully

  
**Paresh Mani Sharma**  
**DGM (Environment)**  
**Maruti Suzuki India Limited**  
Paresh Mani Sharma  
Deputy General Manager (Environment)  
Maruti Suzuki India Limited, Gurgaon.

CC: 1. Haryana State Pollution Control Board, Panchkula  
2. Central Pollution Control Board, Lucknow

**MARUTI SUZUKI INDIA LIMITED**

**Head Office:**

Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India.  
Tel: 011- 46781000, Fax: 011-46150275/46150276  
E-mail id: contact@maruti.co.in, www.marutisuzuki.com

**Gurgaon Plant:**

Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India.  
Tel: 0124-2346721, Fax: 0124-2341304

**Manesar Plant:**

Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199

# **“Six Monthly Compliance Report”**

April’25 to September’25

For the conditions stipulated in  
Environmental Clearance for Expansion  
of 77.5 MW to 83.5 MW by addition of 6.0  
MW Gas based Captive Power Plant



Submitted by-  
M/s Maruti Suzuki India Limited,  
Gurugram Plant, Palam Gurugram Road  
Gurugram-122015, Haryana

**MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA**

**Ref: Environment clearance letter from MOEF - No. J-13012/06/2009-IA-II (T) dated :03-June- 2011**

<b>S. No.</b>	<b>Stipulated Condition in Environment Clearance</b>	<b>Compliance status</b>
<b>A. Specific conditions</b>		
i.	In case fuel for running the power plant is proposed to be changed from natural gas to other fuel (liquid or solid) the project proponent shall apply for such a change in environmental clearance along with necessary documents as required under EIA notification, 2006 (and its amendments. In such a case the necessity for holding public hearing again or otherwise will be determined by the Ministry in consultation with the Expert Appraisal Committee (Thermal Power).	Natural Gas is used as primary fuel. HSD is used as pilot and standby fuel.
ii.	Mass Spectrometer based Helium detector to detect the gas leakage shall be installed.	Installed.
iii.	Concentration for photochemical oxidants shall be monitored along with NOx and permanent monitoring stations shall be installed at appropriate location in consultation with the Central / State pollution Control Board.	Permanent monitoring stations installed.
iv.	COC of 5.0 shall be adopted	Closed cycle air cooled cooling towers are used.
v.	No ground water shall be extracted for the project work at any stage.	Canal water supply is used for the proposed project.
vi.	It shall be ensured that the area drainage is not disturbed due to the proposed expansion.	Maruti Suzuki India Ltd is located in the industrial area and the proposed thermal power plant is located in this premises and area drainage has not been disturbed.
vii.	The treated effluents conforming to the prescribed standards only shall be reused to the extent possible and excess discharged. Arrangements shall be made that effluents and storm water do not get mixed.	There is no effluent generation as closed cycle air cooled cooling tower is used.
viii.	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt / plantation. Continuous monitoring of effluent discharge shall be undertaken, and it shall be ensured that when discharge enters the natural drain	Sewage treatment plant of adequate capacity is already installed. The treated sewage is recycled for manufacturing process and horticulture.

	the temperature of effluent shall be at ambient.	
ix.	Monitoring of ground and surface water quality (if any nearby) shall be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	There is no surface water source. All borewells in MSIL Gurgaon are closed now and intimation in this regard is already submitted to Central Ground Water Authority (CGWA) and Haryana Water Resources (Conservation, Regulation and Management) Authority (HWRA). Intimation letter is attached as <b>Annexure 1</b> .
x.	A well-designed rainwater harvesting shall be put in place. Central Groundwater Authority/ Board shall be consulted for finalization or appropriate rainwater harvesting technology within a period of three month from the date issue of clearance and details shall be furnished. Status of implementation shall be submitted to the Regional Office of the Ministry.	Rainwater harvesting structures are already constructed in premises.
xi.	Adequate safety measures shall be provided in the plant area to check / minimize spontaneous fires especially during summer season. Measures taken with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Safety measures provided in the EIA report are being implemented continuously.
xii.	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA at 1m from the source of noise. For people working in the high noise area, requisite personal protective equipment like earplugs/ ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy / less noisy areas.	Noise level is monitored in the area. Reports are attached in <b>Annexure 2</b> . PPE like earplugs / earmuffs are provided to person working in high noise area. Periodic audiometric records of persons working in area are maintained.
xiii.	NOx emission from each Gas Turbine shall not exceed 50 ppm.	Complied. Reports for stack emission monitoring are attached as <b>Annexure 3</b> .
xiv.	Stacks of 70 m shall be provided with continuous online monitoring equipment's. Exit velocity of flue gases shall not be less than 22 m/sec.	70 m Chimney installed with continuous online monitoring equipment's. Reports for stack emission monitoring are attached as <b>Annexure 3</b> .

xv.	Regular monitoring of ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , RSPM (PM <sub>10</sub> & PM <sub>2.5</sub> ) etc. shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. the location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the regional Office of this Ministry. The data shall also be put on the website of the company.	Ambient air quality is monitored quarterly by NABL approved third party, and reports are placed at <a href="#">Annexure 4</a> .
xvi.	An amount of Rs 0.12 Crores shall be earmarked as one-time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 0.024 Crores per annum till the life of the plant shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.	Detailed report of CSR is placed at <a href="#">Annexure 5</a> .
xvii.	CSR scheme shall be identified based on need-based assessment in and around the village within 5 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR prior identification of local employable youth and eventual employment in project after imparting relevant training shall be also undertaken. As part of CSR vocational training programme for possible self-employment and jobs shall be imparted to identify villagers free of cost.	
xviii.	It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.	
xix.	Green Belt consisting of 3 tiers of plantations around the plant with adequate tree density not less than 2500 per ha and survival rate not less than 80% shall be developed. The green	The green belt of power plant area is placed at <a href="#">Annexure 6</a> .



	belt developed shall not be less than 33% of the total area.	
<b>B. General Conditions</b>		
i.	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/ LSHS (if any) shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	For stand by fuel, existing HSD storage tanks 300 KL x 2 Nos are utilized. A license is available for these storage tanks.
ii.	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Adequate arrangements were provided during the construction phase.
iii.	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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	No construction labour stayed at the site during construction.
iv.	The project proponent shall advertise in at least two local newspapers widely circulated in region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	Advertised in two local newspapers. Copy of the notice attached herewith at <b>Annexure 7</b> .
v.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal corporation, urban local body and the Local NGO, if any, from whom suggestions/ representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied.

vi.	An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the organization.	A separate Environment Management department has been created.
vii.	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.	Provided.
viii.	The project proponent shall also submit six monthly reports on the status of the stipulated EC conditions including results of monitored data (both in hard copies as well by e-mail) to the respective Regional Office of MOEF, the respective Zonal OFFICE of CPCB and the SPCB.	Six monthly compliance reports are submitted by June and December of every year.
ix.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment, and forests.	
x.	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to	Provided.

	time at least six-monthly basis. Criteria pollutants levels including NO <sub>x</sub> (from stack & ambient air) shall be displayed at the main gate of the power plant and in public domain.	
xi.	Separate funds shall be allocated for implementation of environmental protection measures measured along with item-wise break-up. These costs shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Dedicated funds are allocated specifically for environmental protection measures and are utilized exclusively for those purposes.
xii.	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	Maruti Suzuki India Ltd is in the industrial area and the proposed thermal power plant is located inside the premises. No Land development is required. Plant has been commissioned.
xiii.	Full cooperation shall be extended to the Scientists/Officers from the Ministry/ Regional Office of the Ministry at Bangalore / CPCB / SPCB who would be monitoring the compliance of environmental status.	Full co-operation will be extended to the officers from MoEFCC/CPCB/SPCB.

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE  
NORTHERN REGIONAL OFFICE  
CHANDIGARH

**DATA SHEET**

1.	Project Type (River Valley/Mining/Industry /Refinery/Transportation Tourism / Thermal / Nuclear/Construction Projects)	Thermal
2.	Name of the Project:	Expansion of captive thermal power plant from 77.5 MW to 83.5 MW at Maruti Suzuki India Limited, Gurugram
3.	Clearance letter (s)/ O.M No. & dates:	J-13012/06/2009-IA. II(T) dated 03.06.2011
4.	Location: a) District (s) b) State (s) c) Latitudes/Longitudes	District: Gurugram State: Haryana Latitude: 28°29'42.9" N Longitude: 77°04'28.9" E
5.	Address for correspondence: a) Address for Correspondence         b) Address of executive Project In-charge	Mr. Paresh Mani Sharma Deputy General Manager – Environment Maruti Suzuki India Limited Palam Gurgaon Road Gurugram, Haryana Email: <a href="mailto:Pareshmani.shamra@maruti.co.in">Pareshmani.shamra@maruti.co.in</a> Phone 0124 – 4393583  Mr. Bhavish Mohan Assistant Vice President – EMU Maruti Suzuki India Limited Palam Gurugram Road Gurugram, Haryana Email: <a href="mailto:Bhavish.Mohan@maruti.co.in">Bhavish.Mohan@maruti.co.in</a> Phone 0124 – 2346721 ~ 30
6.	Salient Features: a) of the project b) of the environmental management plans	Salient Features of the project and Environmental Management Plant details are enclosed in <b>Annexure A.</b>
7.	Break up of the project area: a) Submergence area: Forest & Non-forest b) Others	Not Applicable  The project will be located within MSIL premises in the industrial area.
8.	Break up of the project affected population with enumeration of those losing house /dwelling units only, agricultural land only both dwelling	

	<p>units and agricultural land and landless laborers/artisans.</p> <p>a) SC/ST/Adivasis</p> <p>b) Others</p> <p>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures. If a survey has been carried out, give details and year of survey)</p>	Not Applicable
9.	<p>Financial details:</p> <p>a) Project cost as originally planned and subsequent revised estimates and the year or price reference.</p> <p>b) Allocations made for environmental management plans with item wise and year wise break up.</p> <p>c) Benefit cost ratio/Internal Rate of Return and the year of assessment.</p> <p>d) Whether (c) includes the cost of environment management as shown in b) above.</p> <p>e) Actual expenditure incurred on the project so far.</p> <p>f) Actual expenditure incurred on the environmental management plans so far:</p>	<p>Original: 30 Cr.</p> <p>Included above</p> <p>-</p> <p>-</p> <p>-</p> <p>Rs. 6.67 Cr.</p>
10.	<p>Forest land requirement:</p> <p>a) The status of approval for diversion of forest land for non-forestry use.</p> <p>b) The status of clear felling.</p> <p>c) The status of compensatory afforestation of clear felling. If any.</p> <p>d) Comments on the viability &amp; sustainability of compensatory afforestation programmes in the light of actual field experience so far.</p>	Not Applicable
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach road) if any, with quantitative information.	Not Applicable
12.	<p>Status of construction.</p> <p>a) date of commencement (actual and/ or planned)</p> <p>b) Date of completion (actual and / or planned)</p>	<p>Jun'11</p> <p>Jan'13</p>
13.	Reasons for the delay if the project is yet to start:	Not Applicable



**SALIENT FEATURES OF PROJECT**

- |                        |  |
|------------------------|--|
| 1. Name of the Project | : Gas Engine at Maruti Suzuki India Limited,<br>Gurgaon, Haryana |
| 2. Capacity            | : 6 MW   |
| 3. Location            | : Maruti Suzuki India Limited, Gurgaon.                          |
| 4. Total project cost  | : Rs. 30 Crores  |
| 5. Land Area           | : 680 sq m   |

**ENVIRONMENTAL MANAGEMENT PLAN**

***Water Pollution control:***

- The Gas Engine is air cooled hence the waste water generated shall be very minimum. Existing ETP will treat the effluent arising out of the plant operation and the treated waste water will be reused.

***Air Pollution control:***

- Stack of the Gas Engine shall be maintained at 70m.
- The NO<sub>x</sub> emissions will be below 50 ppm.

***Noise Pollution Control:***

- The noise from Gas Engine will be controlled by acoustic enclosures. The noise level at the periphery of factory/premises will not exceed the ambient noise level.

***Ground Water:***

- Rain water harvesting lagoons have been constructed to take care of surface run off and recharge the aquifers.

***Green belt development:***

- Adequate green area with local area species having capacities to reduce SPM and noise levels.

# Closure letter to HWRA and CGWB

MSIL: 21-22/EMU/015

Date: 22/10/2021

To,  
The Chairperson,  
Haryana Water Resource Authority (HWRA),  
Sinchai Bhawan, Sector 5  
Panchkula, Haryana 134109.

**Sub:** Request for obtaining the certificate for closure of borewells (12 Nos) in the premises of Maruti Suzuki India Ltd. (MSIL), Palam Gurgaon Road, Gurgaon (Haryana).

**Ref:** 1) Online NOC application no: 21-4/1978/HR/IND/2019 dated: 22/07/2019.  
2) Query raised by CGWA on the online application on 22-Oct-2020 via email.  
3) Reply to the query via letter no. EMU/EMM-G2/02/20-21 dated 09-Nov-2020.  
4) Query raised by CGWA on the online application on 27-Nov-2020 via email.  
5) MSIL request letter for closure of all borewells via letter no. EMU/EMM-G2/03/20-21 dated 24-Mar-21  
6) HWRA communication on email dated 06 Oct 2021

Dear Sir,

With reference to the HWRA communication with subject "Notice to cases pending with CGWA" dated, we wish submit to your kind office that we had applied an online application for obtaining "NOC" for extracting ground water in our premises of Maruti Suzuki India Ltd, Palam Gurgaon Road, District Gurugram, Haryana.


However, considering the availability of canal water from govt. supply, it was decided to close all the 12 tube wells. In this regards, an intimation letter was already submitted to Central Ground Water Board, Chandigarh on 24 March 2021 (attached as Annexure A).

As per the notification of CGWA 2020, all tube wells (12 Nos) were properly filled upto the ground level and sealed. The photographic evidence of closed tube wells is attached as Annexure B.

Therefore, we request your good office to close our Online NOC application No: 21-4/1978/HR/IND/2019 dated: 22/07/2019 and issue a certificate for confirming the closure of tube wells in MSIL premises.

In case any further information is required in this regard, we request your good office to let us know and we shall submit the same.

Yours Sincerely,  
For Maruti Suzuki India Ltd.

  
**Bineet Arora**  
General Manager (EMUL Division)  
**BINEET ARORA**  
**GENERAL MANAGER**  
**MARUTI SUZUKI INDIA LTD.**  
**GURUGRAM-122015 (HR.)**

Enclosure: Annexure A – Letter of intimation for closure of tube wells  
Annexure B – Photographs for tube wells closure.

**MARUTI SUZUKI INDIA LIMITED**

Head Office:  
Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India.  
Tel: 011- 46781000, Fax: 011-46150275/46150276  
E-mail id: contact@maruti.co.in, www.marutisuzuki.com

Gurgaon Plant:  
Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India.  
Tel: 0124-2346721, Fax: 0124-2341304

Manesar Plant:  
Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199

MSIL: EMU/EMM-G2/ 03/20-21

Date: 24/03/2021

To,

Regional Director,  
Central Ground Water Board,  
North Western Region,  
Bhujal Bhawan, Plot # 3-B,  
Sector 27-A, Madhya Marg,  
Chandigarh- 160019.

**Sub:** Request for closure of online application "NOC" for extracting ground water at our Maruti Suzuki Palam Gurgaon Road, Gurgaon & District Gurgaon, Haryana.

**Ref:** 1) Online NOC application no: 21-4/1978/HR/IND/2019 dated: 22/07/2019.  
2) Query raised by CGWA on the online application on 22-Oct-2020 via email.  
3) Reply to the query via letter no. EMU/EMM-G2/02/20-21 dated 09-Nov-2020.  
4) Query raised by CGWA on the online application on 27-Nov-2020 via email.

Dear Sir,

With reference to above, we had applied an online application for obtaining "NOC" for extracting ground water in our premises of Maruti Suzuki India Ltd, Palam Gurgaon Road, District Gurugram, Haryana.

However, considering the availability of canal water from govt. supply, it is decided to close all the 12 registered tube wells as per the application.

So we request you to close the Online NOC application No: 21-4/1978/HR/IND/2019 dated: 22/07/2019.

We also request you to consider this letter as intimation for the closure of all 12 tube wells of MSIL Gurgaon Plant.

Yours Sincerely,

For Maruti Suzuki India Ltd.

*Naresh*  
**Naresh Kumar Garg**

Asst. Gen. Manager (EMM-M2)

MSIL/HR(Cash)Fax:22/0

Track on [www.indiapost.gov.in](http://www.indiapost.gov.in)



EN613493380IN INR:6972613493380

SP PALAM ROAD SO (122015)

Counter No:3.25/03/2021.13:39

To:REGIONAL DIRECTOR,C

Pin:160019, Sector 19 Chandigarh SO

From:MS I LTD,G

Wt:50gms

Aut:01.30(Cash)Taxes:0.34

Enclosure: Online application 21-4/1978/HR/IND/2019 dated: 22/07/2019.

**MARUTI SUZUKI INDIA LIMITED**

**Head Office**

Maruti Suzuki India Limited,

1, Nelson Mandela Road, Vasant Kunj

New Delhi - 110070, India

Tel: 011-46781000, Fax: 011-46150275/46150276

E-mail id: [contact@maruti.co.in](mailto:contact@maruti.co.in), [www.marutisuzuki.com](http://www.marutisuzuki.com)

CIN: L34103DL1981PLC011375

**Gurgaon Plant**

Maruti Suzuki India Limited,

Old Palam Gurgaon Road,

Gurgaon - 122015, Haryana, India

Tel: 0124-2346721, Fax: 0124-2341304

**Manesar Plant**

Maruti Suzuki India Limited,





































Plot no.1, Phase - 3A, IMT Manesar

Gurgaon - 122051, Haryana, India

Tel: 0124-4884000, Fax: 0124-4884199



# Tubewell List "Annexure-B"

Sr No.	Tube well	Location	Before Dismantling Picture	After Dismantling Picture	After Civil Work Complete	Remarks
1	Tube well# 1	Front Diesel Shop Park				Closed
2	Tube well# 2	Near Main gate				Closed
3	Tube well# 3	SND near Car washing area				Closed
4	Tube well# 4	Gas Turbine				Closed
5	Tube well# 5	Coil Store				Closed
6	Tube well# 6	Near Raw water tank-4				Closed
7	Tube well# 7	ED Paint Shop				Closed
8	Tube well# 8	South Drain				Closed
9	Tube well# 9	Contactor Yard Park				Closed
10	Tube well# 10	Material Gate				Closed
11	Tube well# 11	Canteen-1				Closed
12	Tube well# 12	North drain				Closed



# Noise Level Monitoring Reports







# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

Report No. : HTH/EP/250906020

ULR No. : TC781125100017751F

Party's Ref No. : Nil

Booking Date : 06/09/2025

Period of Testing : 06/09/2025 To 13/09/2025

Reporting Date : 13/09/2025

Sample Description : Noise Level Monitoring- NG DG Noise (6 MW)

Type of Industry : Automobile Industry  
Sample Location : NG DG Set  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2026)  
Date of measurement : 05/09/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline – Chemical, Group – Atmospheric Pollution -							
1	1.0 m Away from NG DG Set (Acoustic Enclosure Open)	99.8	97.5	101.4	100.1	98.4	102.8
2	1.0 m Away from NG DG Set (Acoustic Enclosure Close)	70.8	72.1	69.9	72.4	73.0	71.7

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")		
		Lmin	Lmax	Leq
1	1.0 m Away from NG DG Set (Acoustic Enclosure Open)	97.5	102.8	100.4
2	1.0 m Away from NG DG Set (Acoustic Enclosure Close)	69.9	73.0	71.8
	Insertion Loss	-	-	28.6*
3	Background Noise	-	-	63.7

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

Remarks : At the time of measurement DG Sets were in operation.

\* As per EPA 1986, Insertion loss should be 25 dB (A) (min.) on acoustic enclosure and acoustic treatment for stationary DG Sets.

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1

# Stack Emission Monitoring Reports





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



TC-7811



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd.

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

Report No. : HTH/CV/250515005

ULR No. : TC781125500000258F

Party's Ref No. : Nil

Booking Date : 15/05/2025

Period of Testing : 15/05/2025 To 20/05/2025

Reporting Date : 20/05/2025

### Sample Description

Type of Industry : Automobile Industry  
Name of Plant/ Section : NG DG Section  
Date of sampling : 15/05/2025  
Source of Emission : Stack Attached to Natural Gas DG (Wartsilla Finland)  
Instrument used : Stack Sampler VSS1 (Sr.No 247 DTK 2019)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Type of Chimney : Metal  
Type of Fuel used : Natural Gas  
Stack height (from the ground level) : 70 meter  
Stack diameter (at the sampling point) : 1.114 meter  
Sample Location : As Per Standard Norms  
Purpose of sampling : Monitoring  
Sample collected by : By our Lab. Representative

### A Observations

1. Stack gas temperature, °C : 136.0
2. Temperature at Metering point, °C : 39.0
3. Avg. stack gas velocity, m/sec : 25.01
4. Sampling flow rate, Lt./min. : 10.0
5. Period of sampling, Minutes : 30.0
6. Volumetric flow rate, Nm<sup>3</sup>/ Hr : 61440.32

### B Results

S.N.	Test Parameters	Units	Results	Standard Limit	Test Method
Discipline: Chemical, Group: Atmospheric Pollution					
1	Particulate Matter (PM)	mg/Nm <sup>3</sup>	42.39	-	IS 11255 (Part-I) : 1985
2	Nitrogen Dioxide (NO <sub>2</sub> )	ppmv	35.26	50 Max	HTH/AP/STP-01
3	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	62.15	-	HTH/AP/STP-01
4	Non-Methyl Hydro Carbon (NMHC)	mg/Nm <sup>3</sup>	3.32	-	HTH/INS-02/STP-26

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

Remarks : PM, NO<sub>2</sub> & CO value Corrected @ 15 % O<sub>2</sub>.

As per MOEF&CC L.no-j13012/06/2009-IA-II (T), Dated : June 3, 2011 issued to MSIL Gurgaon Plant Palam Gurgaon Road.

Kimti

Review by

Rishabh Dua

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

Report No. : HTH/EP/250906033

ULR No. : TC781125100017749F

Party's Ref No. : Nil

Booking Date : 06/09/2025

Period of Testing : 06/09/2025 To 13/09/2025

Reporting Date : 13/09/2025

### Sample Description

Type of Industry : Automobile Industry  
Name of Plant/ Section : NG DG Section  
Date of sampling : 05/09/2025  
Source of Emission : Stack Attached to Natural Gas DG (Wartsilla Finland)  
Instrument used : Stack Sampler VSS1 (Sr.No 247 DTK 2019)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Type of Chimney : Metal  
Type of Fuel used : Natural Gas  
Stack height (from the ground level) : 70 meter  
Stack diameter (at the sampling point) : 1.114 meter  
Sample Location : As Per Standard Norms  
Purpose of sampling : Monitoring  
Sample collected by : By our Lab. Representative

### A Observations

1. Stack gas temperature, °C : 149.0  
2. Temperature at Metering point, °C : 34.0  
3. Avg. stack gas velocity, m/sec : 25.84  
4. Sampling flow rate, Lt./min. : 36.0  
5. Period of sampling, Minutes : 30.0  
6. Volumetric flow rate, Nm<sup>3</sup>/ Hr : 61523.80

### B Results

S.N.	Test Parameters	Units	Results	Standard Limit	Test Method
Discipline: Chemical, Group: Atmospheric Pollution					
1	Particulate Matter (PM)	mg/Nm <sup>3</sup>	40.29	-	IS 11255 (Part-I) : 1985
2	Nitrogen Dioxide (NO <sub>2</sub> )	mg/Nm <sup>3</sup>	38.28	50 Max	HTH/AP/STP-01
3	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	65.26	-	HTH/AP/STP-01
4	Non-Methyl Hydro Carbon (NMHC)	mg/Nm <sup>3</sup>	26.90	-	HTH/INS-02/STP-26

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

Remarks : PM, NO<sub>2</sub> & CO value Corrected @ 15 % O<sub>2</sub>.

As per MOEF&CC L.no-j13012/06/2009-IA-II (T), Dated : June 3, 2011 issued to MSIL Gurgaon Plant Palam Gurgaon Road.

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1

Note : 1. Test report shall not be reproduce in whole or in part and cannot be used as an evidence in the court of Law.

2. The results contained in this test report pertains only to the sample tested not for the whole lot.

3. This report is only for your guidance, and not for legal purposes, commercial decision, and for advertisement.

4. Total liability of Haryana Test House is limited to the invoiced amount only.

5. Samples will be destroyed after one month from the date of issue of test report unless otherwise specified.

6. Sample not drawn by HTH unless otherwise specified.

7. The details received from customer on its own responsibility. Lab does not confirm about it and hence does not taken any responsibility whatsoever.

**MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA**  
**Ambient Air Monitoring Report**

Four number ambient air quality monitoring stations were selected based on the modelling done by M/s PCRI BHEL Haridwar.

MSIL have procured required equipments for measuring Ambient air quality (AAQ) and Inhouse sampling for AAQ started from third quarter in 2004-05. However, AAQ monitoring is also being carried out by NABL approved third party quarterly. The reports are given below:





(Formerly Known as Haryana Test House)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : [www.haryanatesthouse.net](http://www.haryanatesthouse.net), e-mail : [haryanatesthouseecs@gmail.com](mailto:haryanatesthouseecs@gmail.com), [testing@hthlabs.com](mailto:testing@hthlabs.com)



## TEST REPORT

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

Party's Ref No. : Nil

Reporting Date : 16/05/2025

**Sample Description** : Ambient Air Quality Monitoring

Type of Industry	: Automobile Industry
Date & time of sampling	: 07/05/2025 (09:50 Hrs) to 08/05/2025 (09:50 Hrs)
Sample Location	: <b>Near DM Plant</b>
Instrument used	: RDS Model APM- 460 BL (Sr. No. 2305 DTB 2018)
Instrument Calibration Status	: Calibrated (upto 15.12.2025)
Purpose of analysis	: Monitoring
Sampling Method	: HTH/AP/SAP-01
Sample collected/ supplied by	: By our Lab. Representative

1. Sampling flow rate (Avg.) : 1.21 m<sup>3</sup>/min
2. Total volume of air sampled : 1742.40 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m3	89.53	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m3	48.24	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO2)	µg/ m3	22.74	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO2)	µg/ m3	38.88	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH3)	µg/ m3	28.37	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O3)	µg/ m3	22.51	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m3	0.802	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C6H6)	µg/ m3	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m3	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m3	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m3	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m3	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33
13	Hydrocarbon (NMHC)	mg/m3	BLQ (LOQ:1)	--	IS 5182 (Part 21): 2001

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

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Kimti  
Review by

## Rishabh Dua

Digitally signed by Rishabh Dasa  
DN: cn=R, o=Personal, ou=8066, pseudonym=kgg8q1rybf6zwyaw5e9m7c4zvh3t,  
2.5.4.20=4687917479758305036344675752ed2148a22ef8a5fa444bca012ed8128,  
postalCode=132103, st=Haryana,  
serialNumber=5158a296a04925545855455a5f5d5a5e12a6f6757b3b7999a04c5f7  
c, sn=Rishabh Dasa  
Date: 2025.07.03 22:55:46 +0530

Md. Asfak Ansari  
Sr. Manager (Env)

Page No.: 1 of 1

Note : 1. Test report shall not be reproduce in whole or in part and cannot be used as an evidence in the court of Law. 2. The results contained in this test report pertains only to the sample tested not for the whole lot.  
3. This report is only for your guidance, and not for legal purposes, commercial decision, and for advertisement. 4. Total liability of Haryana Test House is limited to the invoiced amount only.  
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7. The details received from customer on its own responsibility. Lab does not confirm about it and hence does not taken any responsibility whatsoever.





DOC No. HTH/QF/7.8

# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169

Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousesecs@gmail.com, testing@hthlabs.com



TC-7811



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

**Issued To:****Maruti Suzuki India Ltd**

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

**Report No.** : HTH/EP/250909025**ULR No.** : TC781125100017769F**Party's Ref No.** : Nil**Booking Date** : 09/09/2025**Period of Testing** : 09/09/2025 To 15/09/2025**Reporting Date** : 15/09/2025**Sample Description** : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
 Date & time of sampling : 08/09/2025 (09:20 Hrs) to 09/09/2025 (09:20 Hrs)  
 Sample Location : Near DM Plant  
 Instrument used : Air Sampler GTI-311 (Sr. No. 09 DTH 25)  
 Instrument Calibration Status : Calibrated (upto 15.08.2026)  
 Purpose of analysis : Monitoring  
 Sampling Method : HTH/AP/SAP-01  
 Sample collected/ supplied by : By our Lab. Representative

**A. Observations:**

1. Sampling flow rate (Avg.) : 1.20 m<sup>3</sup>/min
2. Total volume of air sampled : 1728.00 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits	Test Method
<b>Discipline - Chemical, Group - Atmospheric Pollution</b>					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	84.49	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	42.42	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	18.70	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	35.56	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	25.32	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.13	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.916	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33
13	Hydrocarbon (NMHC)	mg/m <sup>3</sup>	BLQ (LOQ:1)	--	IS 5182 (Part 21): 2001

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

**Remarks** : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by



Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1

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(Formerly Known as Haryana Test House)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : [www.haryanatesthouse.net](http://www.haryanatesthouse.net), e-mail : [haryanatesthouseecs@gmail.com](mailto:haryanatesthouseecs@gmail.com), [testing@hthlabs.com](mailto:testing@hthlabs.com)



## TEST REPORT

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

Party's Ref No. : Nil

Reporting Date : 16/05/2025

**Sample Description** : Ambient Air Quality Monitoring

Type of Industry	: Automobile Industry
Date & time of sampling	: 08/05/2025 (10:10 Hrs) to 09/05/2025 (10:10 Hrs)
Sample Location	: <b>Near Machine Shop No. 1&amp;2</b>
Instrument used	: RDS Model APM- 460 BL (Sr. No. 2305 DTB 2018)
Instrument Calibration Status	: Calibrated (upto 15.12.2025)
Purpose of analysis	: Monitoring
Sampling Method	: HTH/AP/SAP-01
Sample collected/ supplied by	: By our Lab. Representative

1. Sampling flow rate (Avg.) : 1.28 m<sup>3</sup>/min
2. Total volume of air sampled : 1843.20 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m3	91.69	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m3	50.32	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO2)	µg/ m3	23.90	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO2)	µg/ m3	41.12	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH3)	µg/ m3	27.72	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O3)	µg/ m3	20.75	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m3	1.260	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C6H6)	µg/ m3	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m3	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m3	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m3	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m3	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33
13	Hydrocarbon (NMHC)	mg/m3	BLQ (LOQ:1)	--	IS 5182 (Part 21): 2001

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

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

## Rishabh Dua

Digitally signed by Rishabh Dasa  
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 2.5.4.20=8687917497587051050b344d7572e2d7148a22e88a9f4441e8c12ed8128,  
 postalCode=132103, st=Haryana,  
 serialNumber=518e92956e409581438a554c93a33dcaad512a6d757b8d3990a4c6:5F7  
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 Date: 2025.07.01 07:55:49 +0530

Md. Asfak Ansari  
Sr. Manager (Env)

Page No.: 1 of 1

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# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

Report No. : HTH/EP/250910025

ULR No. : TC781125100017770F

Party's Ref No. : Nil

Booking Date : 10/09/2025

Period of Testing : 10/09/2025 To 15/09/2025

Reporting Date : 15/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 09/09/2025 (09:20 Hrs) to 10/09/2025 (09:20 Hrs)  
Sample Location : Machine Shop No. 1&2  
Instrument used : Air Sampler GTI-311 (Sr. No. 10 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.22 m<sup>3</sup>/min
2. Total volume of air sampled : 1756.80 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	86.52	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	45.33	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	20.94	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	37.53	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	27.72	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	20.75	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.573	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33
13	Hydrocarbon (NMHC)	mg/m <sup>3</sup>	BLQ (LOQ:1)	--	IS 5182 (Part 21): 2001

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

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(Formerly Known as Haryana Test House)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd.

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

Report No. : HTH/EP/250510021

ULR No. : TC781125100014061F

Party's Ref No. : Nil

Booking Date : 10/05/2025

Period of Testing : 10/05/2025 To 16/05/2025

Reporting Date : 16/05/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 06/05/2025 (09:40 Hrs) to 07/05/2025 (09:40 Hrs)  
Sample Location : Near Sewage Pump House  
Instrument used : RDS Model APM- 860 (Sr. No. 230 DTK 2016)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.27 m<sup>3</sup>/min
2. Total volume of air sampled : 1828.80 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	87.49	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	45.33	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	18.89	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	36.97	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	27.44	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	21.40	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	1.031	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33
13	Hydrocarbon (NMHC)	mg/m <sup>3</sup>	BLQ (LOQ:1)	--	IS 5182 (Part 21): 2001

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Kimti  
Review by

Rishabh Dua

Digitally signed by Rishabh Dua  
DN: cn=Rishabh Dua, o=HTH Laboratories Pvt. Ltd.,  
2.5.4.20=Haryana, email=Rishabh.Dua@hthlabs.com, c=IN  
Date: 2025.07.03 10:53:49 +05'30'

Md. Asfak Ansari  
Sr. Manager (Env.)



Page No.: 1 of 1

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## TEST REPORT

**Issued To:****Maruti Suzuki India Ltd**

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

**Report No. : HTH/EP/250906013****ULR No. : TC781125100017758F****Party's Ref No. : Nil****Booking Date : 06/09/2025****Period of Testing : 06/09/2025 To 13/09/2025****Reporting Date : 13/09/2025****Sample Description : Ambient Air Quality Monitoring**

Type of Industry : Automobile Industry  
Date & time of sampling : 05/09/2025 (09:40 Hrs) to 06/09/2025 (09:40 Hrs)  
Sample Location : Near Sewage Pump House  
Instrument used : Air Sampler GTI-311 (Sr. No. 10 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

**A. Observations:**

1. Sampling flow rate (Avg.) : 1.26 m<sup>3</sup>/min
2. Total volume of air sampled : 1814.40 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits	Test Method
<b>Discipline - Chemical, Group - Atmospheric Pollution</b>					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	85.43	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	43.66	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	22.06	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	39.11	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	28.30	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.13	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.687	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33
13	Hydrocarbon (NMHC)	mg/m <sup>3</sup>	BLQ (LOQ:1)	--	IS 5182 (Part 21): 2001

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

**Remarks :** Standard limits are as per CPCB notification Nov. 2009

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Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)



Page No.: 1 of 1

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## TEST REPORT

**Issued To:****Maruti Suzuki India Ltd.**

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

**Report No. : HTH/EP/250510020****ULR No. : TC781125100014062F****Party's Ref No. : Nil****Booking Date : 10/05/2025****Period of Testing : 10/05/2025 To 16/05/2025****Reporting Date : 16/05/2025****Sample Description : Ambient Air Quality Monitoring**

Type of Industry : Automobile Industry  
Date & time of sampling : 05/05/2025 (09:20 Hrs) to 06/05/2025 (09:20 Hrs)  
Sample Location : Near STP Plant  
Instrument used : RDS Model APM- 860 (Sr. No. 230 DTK 2016)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

**A. Observations:**

1. Sampling flow rate (Avg.) : 1.28 m<sup>3</sup>/min
2. Total volume of air sampled : 1836.00 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits	Test Method
<b>Discipline - Chemical, Group - Atmospheric Pollution</b>					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	82.79	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	41.58	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	16.19	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	34.06	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	26.49	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	20.75	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.916	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33
13	Hydrocarbon (NMHC)	mg/m <sup>3</sup>	BLQ (LOQ:1)	--	IS 5182 (Part 21): 2001

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

**Remarks :** Standard limits are as per CPCB notification Nov. 2009

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Kimti  
Review by

Rishabh Dua

(Digitally signed by Rishabh Dua  
DN: cn=Rishabh Dua, o=HTH Laboratories Pvt. Ltd., email=Rishabh.Dua@hthlabs.com, serial=12345, c=IN  
Date: 2025.05.16 11:53:45 +05'30')Md. Asfak Ansari  
Sr. Manager (Env.)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd

Sector-18, Old Palam Gurgaon Road, Gurgaon (Hr)

Report No. : HTH/EP/250906012

ULR No. : TC781125100017757F

Party's Ref No. : Nil

Booking Date : 06/09/2025

Period of Testing : 06/09/2025 To 13/09/2025

Reporting Date : 13/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 04/09/2025 (09:20 Hrs) to 05/09/2025 (09:20 Hrs)  
Sample Location : Sewage Treatment Plant  
Instrument used : Air Sampler GTI-311 (Sr. No. 09 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.30 m<sup>3</sup>/min
2. Total volume of air sampled : 1872.00 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	80.66	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	41.58	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	18.70	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	36.35	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	27.71	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	21.87	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.344	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33
13	Hydrocarbon (NMHC)	mg/m <sup>3</sup>	BLQ (LOQ:1)	--	IS 5182 (Part 21): 2001

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

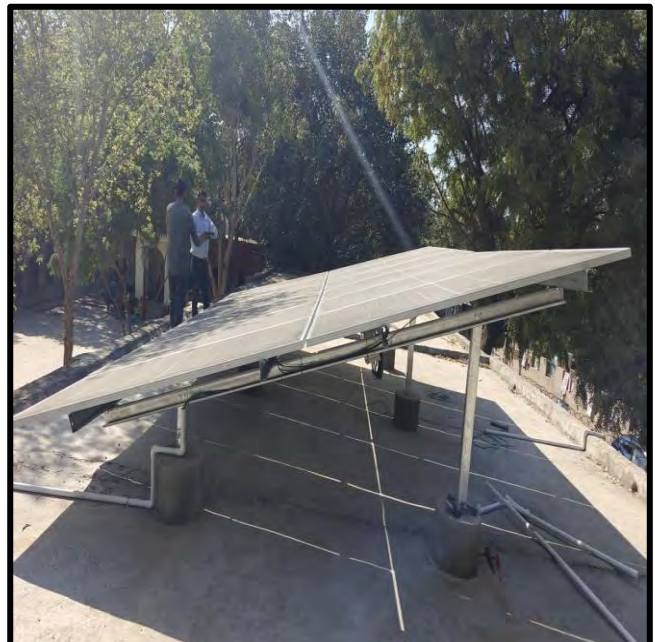
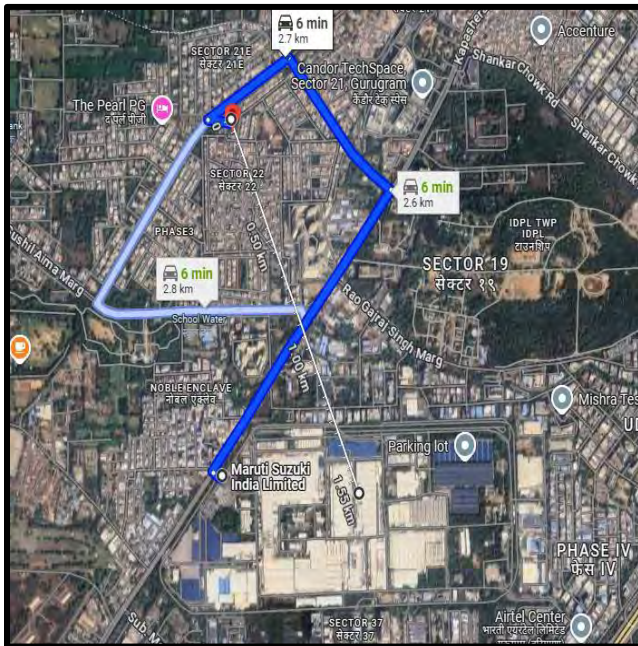
Page No.: 1 of 1



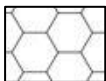
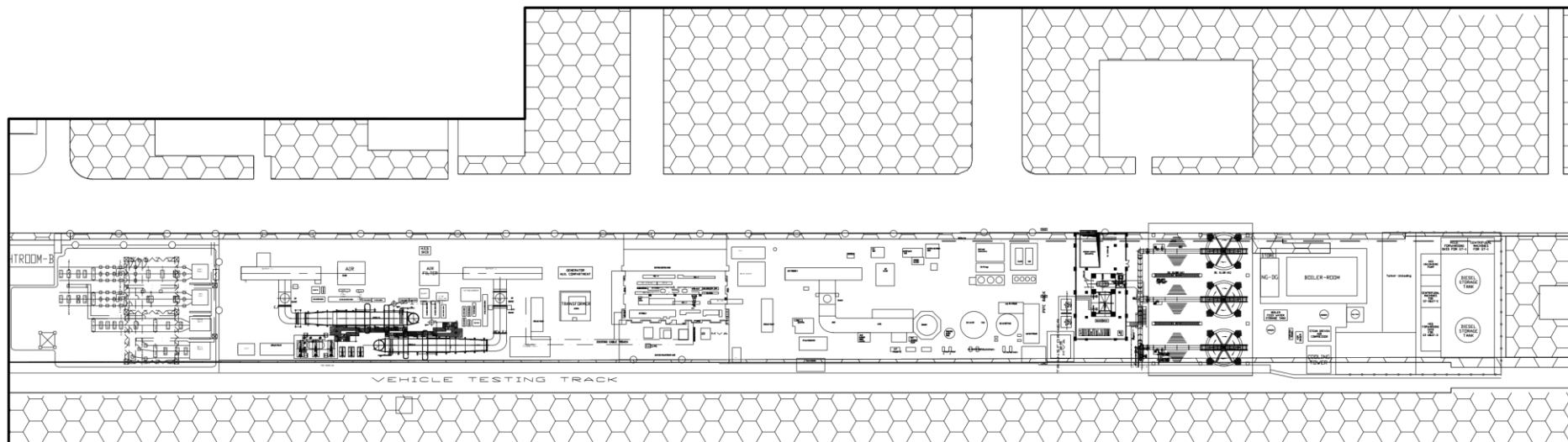
**CSR initiative around MSIL Gurugram plant in FY 25-26:**

Installation of off-grid solar power plant with battery backup for Govt High School, Molahera, Gurgaon.

- Budget Utilized in 2024-2025: 247,098 Rs.
- Capacity Installed in 2024-2025: 3.3 (550\*6) KWp
- Budget utilized in 2025-2026 (till Sept'25): 247,098 Rs.
- Capacity Installed in 2025-2026: 3.3 (550\*6) KWp
- Total budget utilized & Installed capacity: 494,195 Rs. & 6.6 KWp
- Location: Government High School (GHS), Molahera, Gurgaon



**MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA**  
**Green Area Layout for power plant area**




Green Area

**MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA**  
**Advertisement in Newspapers**

**Advertisement 1:**

TIMES OF INDIA

**PUBLIC NOTICE**

 **MARUTI SUZUKI**

Maruti Suzuki India Limited,  
 Regd. Office: 1, Nelson Mandela Road,  
 Vasant Kunj, New Delhi-110070.


Ministry of Environment and Forests has accorded environment clearance for the proposed expansion of thermal (captive) power plant at Maruti Suzuki India Limited, Gurgaon Plant. The copies of the clearance letters are available with the Haryana State Pollution Control board and the same can also be seen on the website of Ministry of Environment & Forest at <http://envfor.nic.in>.

Date: 10<sup>th</sup> June, 2011. Maruti Suzuki India Limited

**Advertisement 2:**

AMAR UJALA

**सूचना**

 **MARUTI SUZUKI**

Maruti Suzuki India Limited,  
 Regd. Office: 1, Nelson Mandela Road,  
 Vasant Kunj, New Delhi-110070.

पर्यावरण एवं वन मंत्रालय द्वारा मारुति सुजुकी इंडिया लिमिटेड के गुडगांव प्लांट में पावर प्लांट के विस्तार हेतु पर्यावरणीय अनुमोदन प्रदान कर दिया गया है। अनुमोदन पत्र की प्रतियां हरियाणा राज्य प्रदूषण नियंत्रण बोर्ड के पास उपलब्ध है। अनुमोदन पत्र को पर्यावरण एवं वन मंत्रालय की वेबसाइट <http://envfor.nic.in> पर भी देखा जा सकता है।

दिनांक: 10 जून, 2011 मारुति सुजुकी इंडिया लिमिटेड



**STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY HARYANA**  
**Bay No. 55-58, Prayatan Bhawan, Sector-2, PANCHKULA.**

No. SEIAA/HR/2012 **237 A**

Dated: **30-8-12**.....

To

M/S Maruti Suzuki India Limited,  
 Regd. Office: Plot No. 1, Nelson Mandela Road,  
 Vasant Kunj, New Delhi- 110070

**Subject: Environmental Clearance for 57 MW Captive Power Plant  
 (expansion) at Maruti Suzuki India Limited, Manesar, Gurgaon.**

Dear Sir,

This has reference to your application no. PRDS-EGM-10-11 dated 8.10.2010 addressed to MS, SEIAA and received on 12.10.2010 and subsequent letter dated 3.03.2011 seeking prior environmental clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 on the basis of the mandatory documents enclosed with the application viz., Form-1 pre-feasibility project report, proposed TOR and the additional clarifications furnished in response to the observations of the State Expert Appraisal Committee (SEAC) constituted by MOEF, GOI vide their Notification 21.4.2008/23.3.2012 in its meetings held on 10.12.2010 & 28.06.2012.

[2] It is inter-alia noted that the project is for setting up of 57 MW natural Gas based power project under expansion at Maruti Suzuki India Limited, Manesar, Gurgaon. The existing capacity of captive power plant is 86.2 MW which is based on natural gas and the MOEF, GOI vide letter dated 05-02-2008 has accorded environmental clearance to the project. The power plant is proposed to convert to combined cycle power plant with the addition of 37 MW steam



turbine and it is also proposed to add a gas turbine of 20 MW and after expansion the total capacity of the power plant will be 143.2 MW. It has also been proposed to use HSD as standby fuel. The project proponent intimated that the GAIL has given assurance for supply of 7500 cubic of natural gas through pipeline for the proposed project. The GT stack height will be 30 mtrs. It was noticed that project is covered under item no.1 (d) of EIA notification dated 14.9.06 and SEAC has appraised this project as category B-I project. The TOR's were approved on 10.12.10. The public hearing in this case is not required as the project is located in an Industrial Area. The project proponent on the basis on approved TOR's submitted EIA/EMP on 28-02-2011.

[3] The State Expert Appraisal Committee, Haryana after due consideration of the relevant documents submitted by the project proponent and additional clarification furnished in response to its observations have recommended the grant of environmental clearance for the project mentioned above subject to compliance with the stipulated conditions. Accordingly, the State Environment Impact Assessment Authority in its meeting held on 29.8.2012 decided to agree with the recommendation of SEAC ~~and~~ to accord necessary environmental clearance for the project under Category 1(d) of EIA Notification 2006 subject to the strict compliance with the specific and general conditions mentioned below:-

- i) No additional land shall be acquired.
- ii) NOC from BARC shall be obtained prior to start of construction of the project due to the proximity of the project to BARC Observatory.
- iii) Gas shall only be used as fuel, however, HSD may be used as standby fuel for not more than 30 days in a year when gas is not available.


- iv) Dry Low NO<sub>x</sub> burners shall be provided and it shall be ensured that NO<sub>x</sub> emissions from the stack is less than 100 ppm.
- v) The height of the stack shall be as per the standards prescribed under the Environment (Protection) Act in this regard or 30 m, which ever is more with continuous online monitoring system. Exit velocity shall not be less than 29 m/s.
- vi) Air cooled condensers shall be installed.
- vii) Water should be conserved, treated, reused and recycled in order to minimize water consumption. The necessary prior permission for withdrawal of requisite quantity of groundwater for the project as applicable shall be obtained from the Competent Authority before the start of expansion.
- viii) Treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant area. No effluents shall be discharged outside the plant boundary.
- ix) Rainwater harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority and a copy of the same shall be submitted within three months to the SEIAA. Care shall be taken to avoid contamination of ground water through RWH pit.
- x) Leq of Noise level shall be limited to 75 dBA and regular maintenance of equipments shall be undertaken. For people working in high noise areas, personal protection devices shall be provided.
- xi) A greenbelt shall be developed around the plant boundary with tree density of around 2500 trees per ha. The area under greenbelt shall be atleast  $\frac{1}{3}^{\text{rd}}$  of the total area.
- xii) First aid and sanitation arrangements shall be made for the drivers and other regular or contract workers during construction phase.

- xiii) Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with the Haryana State Pollution Control Board. Periodic reports shall be submitted to the Regional Office of the Ministry at Chandigarh.
- xiv) The project proponent shall advertise in atleast two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board and on project proponent's website.
- xv) A separate environment management cell with qualified staff shall be set up for the implementation of the stipulated environmental safeguards.
- xvi) Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to the SEIAA/ Regional Office, MOEF, Chandigarh and HSPCB.
- xvii) Regional Office of the Ministry of Environment & Forests located at Chandigarh will monitor the implementation of the stipulated conditions. A complete set of documents including Environment Impact Assessment Report and Environment Management Plan alongwith the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.
- xviii) Separate funds shall be allocated for implementation of environmental protection measures alongwith item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposed and year-wise expenditure shall be reported to the SEIAA, Panchkula and Regional Office, MoEF, Chandigarh.
- xix) Full cooperation shall be extended to the Scientists/Officers from the Regional Office of the Ministry at Chandigarh/HSPCB who would be monitoring the compliance of environmental status.

- xx) The project proponent shall take adequate preparation for fire and other kind of disaster including chemical disaster. On-site and Off-site emergency plan should be rehearsed through regular mock drills.
  - xxi) The project Proponent shall initiate a long term study through a reputed institution to assess the cumulative impact of the power plants on the AAQ of the area. The study shall in particular assess the impact of emission of the gas power plant on the chemistry of upper atmosphere and the impact on radiation budget. It shall be ensured that the study takes into account the worst seasonal atmospheric conditions.
  - xxii) The Project Proponent shall ensure that all possible hazards due to the power plant are contained within the plant premises.
  - xxiii) An Environmental Cell shall be created at the project site itself and shall be headed by qualified officer, who is well versed with the environmental aspects of gas based power plant. It shall be ensured that the Head of the Cell shall directly report to the Head of the Organization.
  - xxiv) The project Proponent shall also submit the detailed data of last one year during which the HSD was used as standby fuel in the existing captive power plant.
  - xxv) These conditions of expansion project are in addition to conditions imposed by MoEF in original project.
  - xxvi) Standards for discharge of environmental pollutants as enshrined in various schedules of rule 3 of environment protection rule 1986 shall be complied with.
  - xxvii) Harnessing solar power within the premises of the plants particularly ~~and~~ at available roof tops shall be made and the status of implementation shall be submitted every six months to the SEIAA/MoEF, GoI.
4. The SEIAA reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the SEIAA.
  5. The environmental clearance accorded shall be valid for a period of 5 years to start of production operation by the power plant.
  6. In case of any deviation or alteration in the project proposed from that submitted to the SEIAA for clearance, a fresh reference shall be made to the SEIAA to assess the adequacy of the condition (s) imposed and to incorporate additional environmental protection measures required, if any.



7. The above stipulations shall be enforced alongwith others as under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1986, The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989, Hazardous Waste (Management and Handling) Rules, 1989, the Public Liability Insurance Act, 1991 and rules there under.
8. The project proponent shall put in place Corporate Environment Policy as mentioned in MoEF, GoI OM No. J-11013/41/2006-IA II (I) dated 26.4.2012


  
**Member Secretary,  
 State Level Environment Impact  
 Assessment Authority, Haryana, Panchkula.**

Endst. No. SEIAA/HR/2011

  
 Dated:.....

A copy of the above is forwarded to the following:

1. The Additional Director (IA Division), MOEF, GOI, CGO Complex, Lodi Road, New Delhi.
2. The Regional office, Ministry of Environment & Forests, Govt. of India, Sector 31, Chandigarh.
3. The Chairman, Haryana State Pollution Control Board, Pkl.

  
**Member Secretary,  
 State Level Environment Impact  
 Assessment Authority, Haryana, Panchkula.**

MSIL:CUIP:ESEC:ENV:2025-26:107

26-Nov-2025

To  
Ministry of Environment, Forest, and Climate Change  
Integrated Regional Office  
Bays No 24-25, Sector – 31 A,  
Dakshin Marg  
Chandigarh - 160030

**Sub:** Half yearly report for the Compliance of conditions given in the Environment Clearance for  
57 MW Captive Power Plant-Gas turbine, Manesar.

**Ref:** Environment Clearance Letter from MoEF- No. **SEIAA/HR/2012/237A**, dated **30.08.2012**.

Dear Sir,

Enclosed please find herewith the half yearly compliance report for the period of April'25 to  
September'25 related to Environment Clearance issued for our Gas turbine (57 MW), Manesar.

Thanking You.

Yours Faithfully

  
**Paresh Mani Sharma**  
**DGM (Environment)**  
**Maruti Suzuki India Limited**

Paresh Mani Sharma  
Deputy General Manager (Environment)  
Maruti Suzuki India Limited, Gurgaon

CC: 1. Haryana State Pollution Control Board, Panchkula  
2. State Environment Impact Assessment Authority, Haryana

**MARUTI SUZUKI INDIA LIMITED**

Head Office:  
Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India.  
Tel: 011- 46781000, Fax: 011-46150275/46150276  
E-mail id: contact@maruti.co.in, www.marutisuzuki.com

Gurgaon Plant:  
Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India.  
Tel: 0124-2346721, Fax: 0124-2341304

Manesar Plant:  
Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199

# **“Six Monthly Compliance Report”**

April'25 to September'25

For the conditions stipulated in  
Environmental Clearance of 57 MW  
Captive Power Plant, Manesar



Submitted by-  
M/s Maruti Suzuki India Limited,  
Gurugram Plant, Palam Gurugram Road  
Gurugram-122015, Haryana

**MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA**

**Ref: Environment Clearance letter from MoEF no. SEIAA/HR/2012/237A dt. 30.8.2012**

<b>Sr. No.</b>	<b>Stipulated Conditions in Environment Clearance</b>	<b>Compliance Status</b>
1	No additional land shall be acquired.	The project will be located within Maruti Suzuki India Limited premises at IMT Manesar, and the power plant will be set within 9440 sq. mtrs. area.
2	NOC from BARC shall be obtained prior to start of construction of the project due to the proximity of the project to BARC observatory.	NOC obtained from BARC is placed at <b>Annexure-1.</b>
3	Gas shall only be used as fuel, however, HSD may be used as standby fuel for not more than 30 days in a year when gas is not available.	Natural gas supply has commenced at Manesar plant.
4	Dry Low NO <sub>x</sub> burners shall be provided, and it shall be ensured that NO <sub>x</sub> emission from the stack is less than 100 ppm.	NO <sub>x</sub> emissions are less than 100 ppm. The stack monitoring report is placed at <b>Annexure-2.</b>
5	The height of the stack shall be as per the standards prescribed under the Environment (Protection) Act in this regard or 30 m, whichever is more with continuous online monitoring system. Exit velocity shall not be less than 29 m/s.	All the stacks of the installed Gas Turbines are 30 mtrs. height and Continuous online monitoring system installed.
6	Air cooled condensers shall be installed.	Air cooled condenser installed for the Gas Turbines
7	Water should be conserved, treated, reused and recycled in order to minimize water consumption. The necessary prior permission for withdrawal of requisite quantity of groundwater for the project as applicable shall be obtained from the Competent Authority before the start of expansion.	As air-cooled condenser is installed for the Gas Turbines, the daily water requirement is very negligible. Current water withdrawal is maintained within the quantity permitted by the Competent Authority from canal water.
8	Treated effluents conforming to the prescribed standards shall be recirculated and reused with in the plant	The treated effluents confirm the prescribed standards and are reused for the process



	area, No effluents shall be discharged outside the plant boundary.	requirements after recycling. The report is placed in <a href="#">Annexure-3</a> .
9	Rainwater harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with central Ground water Authority and a copy of the same shall be submitted within three months to the SEIAA. Care shall be taken to avoid contamination of ground water through RWH pit.	Rainwater harvesting lagoons have been constructed to take care of surface runoff and recharge the aquifers. The location of the lagoon is attached to <a href="#">Annexure-4</a> .
10	Leq of Noise level shall be limited to 75 dBA and regular maintenance of equipments should be undertaken. For people working in high noise areas, personal protection devices shall be provided.	Gas Turbines are provided with the acoustic enclosure to limit the noise level within 75 dBA at plant boundary. The people working in high-noised areas are provided with personal protection devices (PPEs). The monitoring report is placed at <a href="#">Annexure-2</a> .
11	A greenbelt shall be developed around the plant boundary with tree density of around 2500 trees per ha. The area under greenbelt shall be at least 1/3 <sup>rd</sup> of the total area.	Details of the Green Belt are placed at <a href="#">Annexure-4</a> .
12	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	First aid and necessary sanitation arrangements were provided for the drivers and other contract workers during construction phase.
13	Regular monitoring of the ambient quality shall be carried out in and around the power plant and records maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with the state pollution Control Board. Periodic reports shall be submitted to the Regional Office of this Ministry at Chandigarh.	Ambient Air quality is being monitored quarterly at the locations fixed based on the modelling results from MoEFCC authorized laboratory and the reports are placed at <a href="#">Annexure-5</a> .
14	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the	Notice was published in Amar Ujala (Hindi) and Times of India (English). Copy of the same is attached as <a href="#">Annexure-6</a> .

	vernacular language of the locality concerned within seven days from the issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board and on project proponent's website.	
15	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A separate Environment Management Department has been set up.
16	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to the SEIAA/Regional Office, MOEF, Chandigarh and HSPCB.	We are submitting the half yearly compliance reports to concerned offices on or before June and Dec of every year.
17	Regional office of the Ministry of Environment & forests located at Chandigarh will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.	Noted.
18	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure shall be reported to the SEIAA, Panchkula and Regional Office, MoEF, Chandigarh.	Funds for EMP have been included in the project cost itself. It shall be utilized for this purpose only.

19	Full cooperation shall be extended to the Scientist/Officers from the Ministry/ Regional Office of the Ministry at Chandigarh/the CPCB/THE SPCB who would be Monitoring the Compliance of Environmental status.	Full Cooperation will be extended to the officials from SPCB / CPCB and MoEFCC.
20	The project proponent shall take adequate preparation for fire and other kind of disaster including chemical disaster. On-site and Off-site emergency plan should be rehearsed through regular mock drills.	Noted, emergency mock drills are conducted at defined frequency.
21	The project proponent shall initiate a long-term study through a reputed institution to assess the cumulative impact of the power plants on the AAQ of the area. The study shall in particular assess the impact of emission of the gas power plant on the chemistry of upper atmosphere and the impact on radiation budget. It shall be ensured that the study takes into account the worst seasonal atmospheric conditions.	The study report is placed at <b>Annexure-7</b> .
22	The project proponent shall ensure that all possible hazards due to the power plant are contained within the plant premises.	Noted.
23	An Environment Cell shall be created at the project site itself and shall be headed by qualified officer, who is well versed with the environmental aspects of gas-based power plant. It shall be ensured that the Head of the Cell shall directly report to the Head of the Organization.	A separate Environment Management Department has been set up.
24	The project proponent shall also submit the detailed data of last one year during which the HSD was used as standby fuel in the existing captive power plant.	9.717 KL HSD was used in captive power plants for the period Apr'25 to Sept'25 in FY 25-26.
25	These conditions of expansion project are in addition to conditions imposed by MoEF in original project.	Noted.

26	Standards for discharge of environmental pollutants as enshrined in various schedules of rule 3 of environment protection rule 1986 shall be complied with.	Air and water quality are being monitored regularly through a MoEFCC recognized lab.
27	Harnessing solar power within the premises of the plants particularly at available roof tops shall be made and the status of implementation shall be submitted every six months to the SEIAA/MoEF, Gol.	Inhouse solar power plant is installed for production of renewable energy.



GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE  
NORHTERN REGIONAL OFFICE  
CHANDIGARH

**DATA SHEET**

1.	Project Type: River Valley/ Mining / Industry/Refinery/Transportation/Tourisms/Thermal /Nuclear/Other (Specify)	Thermal
2.	Name of the Project:	57 MW Captive Power Plant (expansion) at Maruti Suzuki India Limited, Manesar, Gurugram, Haryana
3.	Clearance letter (s)/O.M No. & dates:	No. SEIAA/HR/2012/237A dated 30-8-2012
4.	Location: a) District (s) b) State (s) c) Latitudes/longitudes	District: Gurugram State: Haryana Latitude: 28° 22' 08" N Longitude: 76° 52' 45" E
5.	Address for correspondence: a) Address for Correspondence       b) Address of executive Project In-charge	Paresh Mani Sharma Deputy General Manager, Environment Management Maruti Suzuki India Limited Gurugram, Haryana Email: <a href="mailto:PareshMani.Sharma@maruti.co.in">PareshMani.Sharma@maruti.co.in</a> Phone 0124 – 2346721 ~ 30 Extn: 3583  Mr. Bhavish Mohan Assistant Vice President – EMU Maruti Suzuki India Limited Palam Gurugram Road Gurugram, Haryana Email: <a href="mailto:Bhavish.Mohan@maruti.co.in">Bhavish.Mohan@maruti.co.in</a> Phone 0124 – 2346721 ~ 30
6.	Salient features: a) Of the project b) Of the environmental management plans	Salient features of the project and Environment Management plan details are enclosed in Annexure A.
7.	Breakup of the project area: a) Submergence area: Forest & Non-forest. b) Others	Not Applicable The project will be located within MSIL premises in the industrial area
8.	Break up of project affected population with enumeration of those losing houses /dwelling units and agricultural land only both dwelling units and agricultural land and landless labourers/artisans. a) SC/ST/Adivasis b) Others	Not Applicable

	(Please Indicate whether these figures are based on any scientific and systematic survey carried out only provisional figures. If a survey has been carried out , give details and year of survey)	
9.	<p>Financial details:</p> <p>a) Project cost as originally planned and subsequent revised estimates and the year of price reference.</p> <p>b) Allocations made for environmental management plans with item wise and year wise breakup.</p> <p>c) Benefit cost ratio /internal Rate of Return and the year of assessment.</p> <p>d) Whether (c) includes the cost of environmental management as shown in b) above.</p> <p>e) Actual expenditure incurred on the project so far.</p> <p>f) Actual expenditure incurred on the environment management plans so far.</p>	<p>Project Cost: Rs. 314 Crores</p> <p>Rs. 3.7 Crores</p> <p>-</p> <p>-</p> <p>Rs. 324 Crores (approx.)</p> <p>Rs. 4.2 Crores</p>
10.	<p>Forest land requirement:</p> <p>a) The status of approval for diversion of forest land for non- forestry use.</p> <p>b) The status of clear felling.</p> <p>c) The status of compensatory afforestation if any.</p> <p>d) Comments on the viability &amp; sustainability of compensatory afforestation program in the light of actual field experience so far.</p>	Not Applicable
11.	The Status of clear felling in the non-forest areas (Such as submergence area of non-reservoir, approach road) if any, with quantitative information.	Not Applicable
12.	<p>Status of Construction:</p> <p>a) Date of Commencement (actual and /or planned)</p> <p>b) Date of completion (actual and /or planned)</p>	<p>20 MW is in operation.</p> <p>37 MW (Steam Turbine) is being decommissioned.</p>
13.	Reasons for the delay if the project is yet to start:	Not applicable

**SALIENT FEATURES OF PROJECT:**

1. Name of the Project : Gas turbine at Maruti Suzuki India Limited, Manesar, Haryana
2. Capacity : 57 MW
3. Location : Maruti Suzuki India Limited, IMT Manesar.
4. Total project cost : Rs. 314 Crores
5. Land Area : 9440 sq m

**ENVIRONMENTAL MANAGEMENT PLAN**

***Water Pollution control:***

- The Gas Turbine is air cooled, hence the wastewater generated shall be very minimum. Existing ETP will treat the effluent arising out of the plant operation and the treated wastewater will be reused.

***Air Pollution control:***

- Stacks of the GT shall be maintained at 30m.
- NO<sub>x</sub> emissions will be below 100ppm.
- SPM and SO<sub>2</sub> emissions will be very low as natural gas (clean fuel) is being used for the operation. HSD (ultra-low Sulphur diesel) shall only be used initially or in case of emergency operation.

***Noise Pollution Control:***

- The noise from Gas Turbines is controlled by acoustic enclosures. The noise level at the periphery of factory/premises will not exceed the ambient noise level of 75 dBA.

***Ground Water:***

- Rainwater harvesting lagoons have been constructed to take care of surface run off and recharge the aquifers.

***Green belt development:***

- Adequate green area was developed with local area species having capacities to reduce SPM and noise levels.

# NOC from BARC (Bhabha Atomic Research Centre)



दूरभाष/Tel.: 022 - 2550 5354  
फैक्स/Fax: 022 - 2550 5151  
022 - 2550 5353  
ई-मेल/e-mail: ndsharma@barc.gov.in



सत्यमेव जयते

भारत सरकार  
GOVERNMENT OF INDIA  
भाभा परमाणु अनुसंधान केंद्र  
BHABHA ATOMIC RESEARCH CENTRE

न. द. शर्मा  
नियंत्रक  
N. D. Sharma  
Controller

228  
Fax  
सेंट्रल कॉम्प्लेक्स,  
ट्रॉम्बे, मुंबई - 400 085.  
Central Complex,  
Trombay,  
Mumbai - 400 085.

Ref: 14/8/91/Admn-I / 3281

April 16, 2008

Maruti Suzuki India Limited,  
Palam Gurgaon Road,  
Gurgaon, Haryana - 122 015

Kind Attn: Mr Vinay Varshney, Chief General Manager (Production Services)

Sub: NOC for Expansion of Power Plant at MSIL, IMT Manesar

Sir,

With reference to your letter MSIL:PRDS:EM2:1728 dated 18<sup>th</sup> February, 2008, we confirm that BARC has no objection in expansion of your power plant at IMT Manesar.

Thanking You,

Yours faithfully,

(N. D. Sharma)  
Controller

16/04/08

संचार अनुभाग / Communication Section  
फैक्स परिपत्र / Fax Transmission

संदेश सं. / Message No. 6072  
दिनांक 27/5/08  
Transmitted on ..... at ..... hrs.  
यदि भेज दिया गया।

# Stack Emission Monitoring Reports



# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250531062

ULR No. : TC781125100015098F

Party's Ref No. : Nil

Booking Date : 31/05/2025

Period of Testing : 31/05/2025 To 06/06/2025

Reporting Date : 06/06/2025

### Sample Description

Type of Industry : Automobile Industry  
Name of Plant/ Section : Gas Turbine 9 (20 MW)  
Date of sampling : 27/05/2025  
Source of Emission : Stack Attached to Gas Turbine  
Instrument used : Stack Sampler APM 160 (Sr.No. 88 DTL 2016)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Type of Chimney : Mild Steel  
Type of Fuel used : Natural Gas  
Stack height (from the ground level) : 30 meter  
Stack diameter (at the sampling point) : 3 meter  
Sample Location : As Per Standard Norms  
Purpose of sampling : Monitoring  
Sample collected by : By our Lab. Representative

### A Observations

1. Stack gas temperature, °C : 181.0
2. Temperature at Metering point, °C : 40.0
3. Avg. stack gas velocity, m/sec : 31.49
4. Sampling flow rate, Lt./min. : 12.0
5. Period of sampling, Minutes : 30.0
6. Volumetric flow rate, Nm<sup>3</sup>/ Hr : 505419.51

### B Results

S.N.	Test Parameters	Units	Results	Standard Limit	Test Method
Discipline: Chemical, Group: Atmospheric Pollution					
1	Particulate Matter (PM)	mg/Nm <sup>3</sup>	43.34	-	IS 11255 (Part-I) : 1985
2	Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	7.85	-	HTH/AP/STP-01
3	Nitrogen Dioxide (NO <sub>2</sub> )	ppmv	44.70	100 Max	HTH/AP/STP-01
4	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	51.20	-	HTH/AP/STP-01
5	Carbon Dioxide (CO <sub>2</sub> )	% V/V	13.40	-	HTH/AP/STP-01
6	Total Hydrocarbon (HC)	mg/Nm <sup>3</sup>	3.30	-	IS 11255 : Part 15 : 2019

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

Remarks : PM, NO<sub>2</sub> & CO value Corrected @ 15 % O<sub>2</sub>.

As per MoEF&CC and SEIAA L.No. SEIAA/HA/2012/237-A, Dated: August 30, 2012 issued to MSIL Manesar, Gurgaon.

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

<b>Issued To:</b> <b>Maruti Suzuki India Ltd. (Vehicle Plant)</b> Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)	<b>Report No.</b> : HTH/EP/250528062 <b>ULR No.</b> : TC781125100014769F <b>Party's Ref No.</b> : Nil  <b>Booking Date</b> : 28/05/2025 <b>Period of Testing</b> : 28/05/2025 To 06/06/2025 <b>Reporting Date</b> : 06/06/2025
<b>Sample Description</b> : Noise Level Monitoring- GT Noise	

Type of Industry : Automobile Industry  
Sample Location : GT-9  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2025)  
Date of measurement : 27/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline – Chemical, Group – Atmospheric Pollution -							
1	0.5 m Away from (Acoustic Encloser Open)	96.9	98.2	99.9	100.2	101.2	97.6
2	0.5 m Away from (Acoustic Encloser Closed)	69.1	68.4	70.1	70.9	71.2	73.4

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")		
		Lmin	Lmax	Leq
1	0.5 m Away from (Acoustic Encloser Open)	96.9	101.2	99.3
2	0.5 m Away from (Acoustic Encloser Closed)	68.4	73.4	70.8
	Insertion Loss	-	-	28.5*
3	Background Noise	-	-	64.8

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

Rishabh Dua  
Rishabh Dua (Digitally Signed)  
Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250826030

ULR No. : TC781125100017505F

Party's Ref No. : Nil

Booking Date : 26/08/2025

Period of Testing : 26/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

### Sample Description

Type of Industry : Automobile Industry  
Name of Plant/ Section : Gas Turbine 9 (20 MW)  
Date of sampling : 26/08/2025  
Source of Emission : Stack Attached to Gas Turbine  
Instrument used : Stack Sampler VSS1 (Sr.No. 247 DTK 2019)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Type of Chimney : Mild Steel  
Type of Fuel used : Natural Gas  
Stack height (from the ground level) : 30 meter  
Stack diameter (at the sampling point) : 3 meter  
Sample Location : As Per Standard Norms  
Purpose of sampling : Monitoring  
Sample collected by : By our Lab. Representative

### A Observations

1. Stack gas temperature, °C : 220.0
2. Temperature at Metering point, °C : 34.0
3. Avg. stack gas velocity, m/sec : 31.97
4. Sampling flow rate, Lt./min. : 11.0
5. Period of sampling, Minutes : 30.0
6. Volumetric flow rate, Nm<sup>3</sup>/ Hr : 472531.66

### B Results

S.N.	Test Parameters	Units	Results	Standard Limit	Test Method
Discipline: Chemical, Group: Atmospheric Pollution					
1	Particulate Matter (PM)	mg/Nm <sup>3</sup>	42.97	-	IS 11255 (Part-I) : 1985
2	Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	5.24	-	HTH/AP/STP-01
3	Nitrogen Dioxide (NO <sub>2</sub> )	ppmv	41.12	100 Max	HTH/AP/STP-01
4	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	50.18	-	HTH/AP/STP-01
5	Carbon Dioxide (CO <sub>2</sub> )	% V/V	14.30	-	HTH/AP/STP-01
6	Total Hydrocarbon (HC)	mg/Nm <sup>3</sup>	2.99	-	IS 11255 : Part 15 : 2019

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

Remarks : PM, NO<sub>2</sub> & CO value Corrected @ 15 % O<sub>2</sub>.

As per MoEF&CC and SEIAA L.No. SEIAA/HA/2012/237-A, Dated: August 30, 2012 issued to MSIL Manesar, Gurgaon.

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)  
Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250826043

ULR No. : TC781125100017523F

Party's Ref No. : Nil

Booking Date : 26/08/2025

Period of Testing : 26/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Noise Level Monitoring- GT Noise

Type of Industry : Automobile Industry  
Sample Location : GT-9  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2026)  
Date of measurement : 26/08/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline – Chemical, Group – Atmospheric Pollution							
1	0.5 m Away from (Acoustic Encloser Open)	99.1	98.2	101.5	102.0	100.0	98.9
2	0.5m Away from (Acoustic Encloser Closed)	67.6	69.1	70.2	72.4	73.1	71.9

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")		
		Lmin	Lmax	Leq
1	0.5 m Away from (Acoustic Encloser Open)	98.2	102.0	100.2
2	0.5 m Away from (Acoustic Encloser Closed)	67.6	73.1	71.1
	Insertion Loss	-	-	29.1
3	Background Noise	-	-	61.3

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

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1

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6. Sample not drawn by HTH unless otherwise specified.  
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# Effluent Treatment Plant Monitoring Reports





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250527037

ULR No. : TC781125100014599F

Party's Ref No. : Nil

Booking Date : 27/05/2025

Period of Testing : 27/05/2025 To 02/06/2025

Reporting Date : 02/06/2025

Sample Description : Effluent Water Sample (ETP-Outlet)

Type of Industry : Automobile Industry  
Sample type : Effluent Water Sample (ETP-Outlet)  
Date of sampling : 26/05/2025  
Date of receipt of sample : 27/05/2025  
Sample Location : ETP-Outlet  
Sample quantity : 5 Ltr.  
Purpose of analysis : Monitoring  
Sampling Method : HTH/EP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Test Parameters	Unit	Result	Limit as per EP Act. 1986, Schedule-VI (Inland Surface Water)	Test Method
Discipline: Chemical, Group: Pollution & Environment					
1	Temperature	°C	26.0	--	IS 3025 (Part 9): 2023
2	Colour	Hazen	BLQ(LOQ 1.0)	--	IS 3025 (Part 4) : 2021
3	Odour	--	Odourless	--	IS 3025 (Part 5): 2018
4	pH	--	7.50	5.5 - 9.0	IS 3025 (Part 11): 2022
5	Total Suspended Solids	mg/l	BLQ(LOQ 1.0)	100 Max.	IS 3025 (Part 17): 2022
6	Biochemical Oxygen Demand (BOD) 3 Days at 27°C	mg/l	3.8	30 Max.	IS 3025 (Part 44): 2023
7	Chemical Oxygen Demand(COD)	mg/l	29.0	250 Max.	IS 3025 (Part 58): 2023
8	Oil & Grease	mg/l	BLQ(LOQ 4.0)	10 Max.	IS 3025 (Part 39): 2021
9	Free Ammonia (as NH3)	mg/l	BLQ(LOQ 0.1)	5.0 Max.	APHA (24th Edition)4500-NH3 C: 2023
10	Ammonical Nitrogen (as N)	mg/l	BLQ(LOQ 5.0)	50 Max.	IS 3025 (Part 34/Sec-1): 2023
11	Nitrate Nitrogen (as N)	mg/l	0.75	10 Max.	IS 3025 (Part 34/Sec-1): 2023
12	Total Kjeldahl Nitrogen (as N)	mg/l	18.7	100 Max.	IS 3025 (Part 34/Sec-1): 2023
13	Total Residual Chlorine	mg/l	BLQ(LOQ 0.05)	1.0 Max.	IS 3025 (Part 26): 2021
14	Cyanide (as CN)	mg/l	BLQ(LOQ 0.02)	0.2 Max.	IS 3025 (Part 27/Sec-1): 2021
15	Dissolved Phosphate (as P)	mg/l	BLQ(LOQ 0.05)	5.0 Max.	IS 3025 (Part 31/Sec-1): 2022
16	Fluoride (as F)	mg/l	1.2	2.0 Max.	APHA (24th Edition) 4500F-2023
17	Hexavalent Chromium (as Cr+6)	mg/l	BLQ(LOQ 0.05)	0.1 Max.	IS 3025 (Part 52): 2003
18	Phenolic Compound (C6H5OH)	mg/l	BLQ(LOQ 0.05)	1.0 Max.	IS 3025 (Part 43/Sec-1): 2022
19	Sulphide (H2S)	mg/l	BLQ(LOQ 0.5)	2.0 Max.	IS 3025 (Part 29):2022
20	Arsenic (as As)	mg/l	BLQ(LOQ:0.01)	0.2 Max.	HTH/INS-03/STP-29

Rishabh Dua



Page No.: 1 of 2

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## TEST REPORT

<b>Issued To:</b> <b>Maruti Suzuki India Ltd. (Vehicle Plant)</b> Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)			<b>Report No.</b> : HTH/EP/250527037 <b>ULR No.</b> : TC781125100014599F <b>Party's Ref No.</b> : Nil  <b>Booking Date</b> : 27/05/2025 <b>Period of Testing</b> : 27/05/2025To 02/06/2025 <b>Reporting Date</b> : 02/06/2025		
S.N.	Test Parameters	Unit	Result	Limit as per EP Act. 1986, Schedule-VI (Inland Surface Water)	Test Method
21	Cadmium (as Cd)	mg/l	BLQ(LOQ:0.01)	2.0 Max.	HTH/INS-03/STP-29
22	Chromium (as Cr)	mg/l	BLQ(LOQ:0.1)	2.0 Max.	HTH/INS-03/STP-29
23	Copper (as Cu)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
24	Iron (as Fe)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
25	Lead (as Pb)	mg/l	BLQ(LOQ:0.01)	0.1 Max.	HTH/INS-03/STP-29
26	Manganese (as Mn)	mg/l	BLQ(LOQ:0.1)	2.0 Max.	HTH/INS-03/STP-29
27	Mercury (as Hg)	mg/l	BLQ(LOQ:0.001)	0.01 Max.	HTH/INS-03/STP-29
28	Nickel (as Ni)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
29	Selenium (as Se)	mg/l	BLQ(LOQ:0.01)	0.05 Max.	HTH/INS-03/STP-29
30	Vanadium (as V)	mg/l	BLQ(LOQ:0.1)	0.2 Max.	HTH/INS-03/STP-29
31	Zinc (Zn)	mg/l	BLQ(LOQ:0.1)	5.0 Max.	HTH/INS-03/STP-29

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

**Remarks :** BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari  
Sr. Manager (Env.)

Page No.: 2 of 2

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250825005

ULR No. : TC781125100017461F

Party's Ref No. : Nil

Booking Date : 25/08/2025

Period of Testing : 25/08/2025 To 01/09/2025

Reporting Date : 01/09/2025

Sample Description : Effluent Water Sample (ETP-Outlet)

Type of Industry : Automobile Industry  
Sample type : Effluent Water Sample (ETP-Outlet)  
Date of sampling : 25/08/2025  
Date of receipt of sample : 25/08/2025  
Sample Location : ETP-Outlet  
Sample quantity : 5 Ltr.  
Purpose of analysis : Monitoring  
Sampling Method : HTH/EP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Test Parameters	Unit	Result	Limit as per EP Act. 1986, Schedule-VI (Inland Surface Water)	Test Method
Discipline: Chemical, Group: Pollution & Environment					
1	Temperature	°C	25.0	--	IS 3025 (Part 9): 2023
2	Colour	Hazen	BLQ(LOQ 1.0)	--	IS 3025 (Part 4) : 2021
3	Odour	--	Odourless	--	IS 3025 (Part 5): 2018
4	pH	--	8.12	5.5 - 9.0	IS 3025 (Part 11): 2022
5	Total Suspended Solids	mg/l	4.0	100 Max.	IS 3025 (Part 17): 2022
6	Biochemical Oxygen Demand (BOD) 3 Days at 27°C	mg/l	2.5	30 Max.	IS 3025 (Part 44): 2023
7	Chemical Oxygen Demand(COD)	mg/l	30.0	250 Max.	IS 3025 (Part 58): 2023
8	Oil & Grease	mg/l	BLQ(LOQ 4.0)	10 Max.	IS 3025 (Part 39): 2021
9	Free Ammonia (as NH3)	mg/l	BLQ(LOQ 0.1)	5.0 Max.	APHA (24th Edition)4500-NH3 C: 2023
10	Ammonical Nitrogen (as N)	mg/l	BLQ(LOQ 5.0)	50 Max.	IS 3025 (Part 34/Sec-1): 2023
11	Nitrate Nitrogen (as N)	mg/l	BLQ(LOQ 0.5)	10 Max.	IS 3025 (Part 34/Sec-1): 2023
12	Total Kjeldahl Nitrogen (as N)	mg/l	3.7	100 Max.	IS 3025 (Part 34/Sec-1): 2023
13	Total Residual Chlorine	mg/l	BLQ(LOQ 0.05)	1.0 Max.	IS 3025 (Part 26): 2021
14	Cyanide (as CN)	mg/l	BLQ(LOQ 0.02)	0.2 Max.	IS 3025 (Part 27/Sec-1): 2021
15	Dissolved Phosphate (as P)	mg/l	0.08	5.0 Max.	IS 3025 (Part 31/Sec-1): 2022
16	Fluoride (as F)	mg/l	0.69	2.0 Max.	APHA (24th Edition) 4500F-2023
17	Hexavalent Chromium (as Cr+6)	mg/l	BLQ(LOQ 0.05)	0.1 Max.	IS 3025 (Part 52): 2003
18	Phenolic Compound (C6H5OH)	mg/l	BLQ(LOQ 0.05)	1.0 Max.	IS 3025 (Part 43/Sec-1): 2022
19	Sulphide (H2S)	mg/l	BLQ(LOQ 0.5)	2.0 Max.	IS 3025 (Part 29):2022
20	Arsenic (as As)	mg/l	BLQ(LOQ:0.01)	0.2 Max.	HTH/INS-03/STP-29

Rishabh Dua



Page No.: 1 of 2

- Note : 1. Test report shall not be reproduce in whole or in part and cannot be used as an evidence in the court of Law.  
2. The results contained in this test report pertains only to the sample tested not for the whole lot.  
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4. Total liability of Haryana Test House is limited to the invoiced amount only.  
5. Samples will be destroyed after one month from the date of issue of test report unless otherwise specified.  
6. Sample not drawn by HTH unless otherwise specified.  
7. The details received from customer on its own responsibility. Lab does not confirm about it and hence does not taken any responsibility whatsoever.





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Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@htlabs.com



TC-7811



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## TEST REPORT

<b>Issued To:</b> <b>Maruti Suzuki India Ltd. (Vehicle Plant)</b> Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)		<b>Report No.</b> : HTH/EP/250825005 <b>ULR No.</b> : TC781125100017461F <b>Party's Ref No.</b> : Nil  <b>Booking Date</b> : 25/08/2025 <b>Period of Testing</b> : 25/08/2025To 01/09/2025 <b>Reporting Date</b> : 01/09/2025			
S.N.	Test Parameters	Unit	Result	Limit as per EP Act. 1986, Schedule-VI (Inland Surface Water)	Test Method
21	Cadmium (as Cd)	mg/l	BLQ(LOQ:0.01)	2.0 Max.	HTH/INS-03/STP-29
22	Chromium (as Cr)	mg/l	BLQ(LOQ:0.1)	2.0 Max.	HTH/INS-03/STP-29
23	Copper (as Cu)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
24	Iron (as Fe)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
25	Lead (as Pb)	mg/l	0.087	0.1 Max.	HTH/INS-03/STP-29
26	Manganese (as Mn)	mg/l	BLQ(LOQ:0.1)	2.0 Max.	HTH/INS-03/STP-29
27	Mercury (as Hg)	mg/l	BLQ(LOQ:0.001)	0.01 Max.	HTH/INS-03/STP-29
28	Nickel (as Ni)	mg/l	0.350	3.0 Max.	HTH/INS-03/STP-29
29	Selenium (as Se)	mg/l	BLQ(LOQ:0.01)	0.05 Max.	HTH/INS-03/STP-29
30	Vanadium (as V)	mg/l	BLQ(LOQ:0.1)	0.2 Max.	HTH/INS-03/STP-29
31	Zinc (Zn)	mg/l	BLQ(LOQ:0.1)	5.0 Max.	HTH/INS-03/STP-29

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

**Remarks :** BLQ : Below limit of Quantification / LOQ : Limit of Quantification

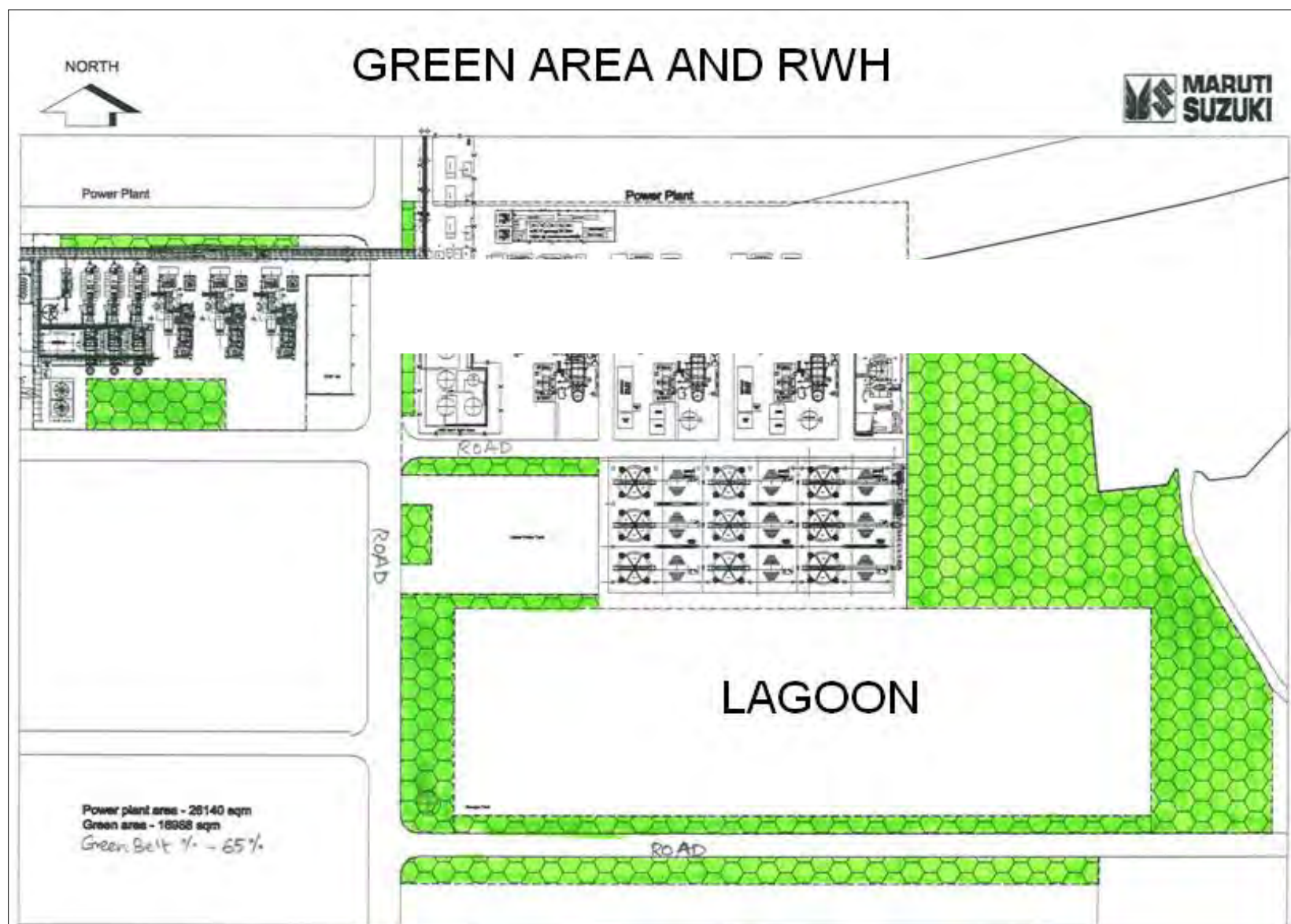
Rishabh Dua  
Rishabh Dua (Digitally Signed)  
Review by


Md. Asfak Ansari  
Sr. Manager (Env.)

Page No.: 2 of 2

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Maruti Suzuki India Limited, Manesar, Haryana  
Green Area and RWH details



 Green Area



# Ambient Air Quality Monitoring Reports



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250524107

ULR No. : TC781125100014766F

Party's Ref No. : Nil

Booking Date : 24/05/2025

Period of Testing : 24/05/2025 To 31/05/2025

Reporting Date : 31/05/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 23/05/2025 (09:50 Hrs) to 24/05/2025 (09:50 Hrs)  
Sample Location : Cop Lab Area  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.16 m<sup>3</sup>/min
2. Total volume of air sampled : 1695.08 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	82.59	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	40.82	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	16.18	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	36.23	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	23.47	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.83	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	1.031	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

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Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828016

ULR No. : TC781125100017506F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 26/08/2025 (09:30 Hrs) to 27/08/2025 (09:30 Hrs)  
Sample Location : COP Lab Area  
Instrument used : Air Sampler GTI-311 (Sr. No. 09 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.23 m<sup>3</sup>/min
2. Total volume of air sampled : 1764.00 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	70.86	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	35.35	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	11.22	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	27.26	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	21.45	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	14.25	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.344	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

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Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250529071

ULR No. : TC781125100014767F

Party's Ref No. : Nil

Booking Date : 29/05/2025

Period of Testing : 29/05/2025 To 05/06/2025

Reporting Date : 05/06/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 26/05/2025 (09:30 Hrs) to 27/05/2025 (09:30 Hrs)  
Sample Location : JV Gate Area  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.26 m<sup>3</sup>/min
2. Total volume of air sampled : 1812.89 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	87.71	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	45.27	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	19.72	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	38.25	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	25.73	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	21.27	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.916	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

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Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828017

ULR No. : TC781125100017507F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 26/08/2025 (09:30 Hrs) to 27/08/2025 (09:30 Hrs)  
Sample Location : JV Gate Area  
Instrument used : Air Sampler GTI-311 (Sr. No. 10 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.21 m<sup>3</sup>/min
2. Total volume of air sampled : 1742.40 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	79.78	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	41.17	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	13.09	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	28.45	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	22.64	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	16.63	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.916	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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Review by

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250529072

ULR No. : TC781125100014768F

Party's Ref No. : Nil

Booking Date : 29/05/2025

Period of Testing : 29/05/2025 To 05/06/2025

Reporting Date : 05/06/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 27/05/2025 (10:30 Hrs) to 28/05/2025 (10:30 Hrs)  
Sample Location : **SND Gate**  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.27 m<sup>3</sup>/min
2. Total volume of air sampled : 1830.32 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
<b>Discipline - Chemical, Group - Atmospheric Pollution</b>					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	89.06	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	48.12	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	21.29	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	39.90	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	24.49	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.76	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	1.146	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

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Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

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Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

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Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousesecs@gmail.com, testing@hthlabs.com



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828018

ULR No. : TC781125100017508F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 27/08/2025 (10:00 Hrs) to 28/08/2025 (10:00 Hrs)  
Sample Location : SND Gate  
Instrument used : Air Sampler GTI-311 (Sr. No. 09 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.15 m<sup>3</sup>/min
2. Total volume of air sampled : 1648.80 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	75.81	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	39.50	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	15.33	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	31.21	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	23.54	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.14	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.458	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250524106

ULR No. : TC781125100014765F

Party's Ref No. : Nil

Booking Date : 24/05/2025

Period of Testing : 24/05/2025 To 31/05/2025

Reporting Date : 31/05/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 22/05/2025 (09:30 Hrs) to 23/05/2025 (09:30 Hrs)  
Sample Location : STP Area  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.16 m<sup>3</sup>/min
2. Total volume of air sampled : 1595.29 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	84.62	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	44.22	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	18.86	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	35.81	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	26.49	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	21.01	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.687	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1





DOC No. HTH/QF/7.8

# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

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TC-7811



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## TEST REPORT

**Issued To:****Maruti Suzuki India Ltd. (Vehicle Plant)**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

**Report No. : HTH/EP/250828019****ULR No. : TC781125100017509F****Party's Ref No. : Nil****Booking Date : 28/08/2025****Period of Testing : 28/08/2025 To 03/09/2025****Reporting Date : 03/09/2025****Sample Description : Ambient Air Quality Monitoring**

Type of Industry : Automobile Industry  
Date & time of sampling : 27/08/2025 (10:00 Hrs) to 28/08/2025 (10:00 Hrs)  
Sample Location : STP Area  
Instrument used : Air Sampler GTI-311 (Sr. No. 10 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

**A. Observations:**

1. Sampling flow rate (Avg.) : 1.09 m<sup>3</sup>/min
2. Total volume of air sampled : 1562.40 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
<b>Discipline - Chemical, Group - Atmospheric Pollution</b>					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	72.32	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	37.43	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	14.58	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	33.58	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	25.62	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	15.49	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.573	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

**Remarks :** Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1

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SEIAA Haryana has accorded environment clearance for the proposed expansion of thermal (captive) power plant at Maruti Suzuki India Limited, Manesar Plant. The copies of the clearance letters are available with the Haryana State Pollution Control Board and the same can also be seen on the MSIL website <http://www.marutisuzuki.com/ec.html>

Date : 27 September 2012      Maruti Suzuki India Limited

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SEIAA हरियाणा द्वारा मारुति सुजुकी इंडिया लिमिटेड के मानेसर प्लांट में पावर प्लांट के विस्तार हेतु पर्यावरणीय अनुमोदन प्रदान कर दिया गया है। अनुमोदन पत्र की प्रतियाँ हरियाणा राज्य प्रदूषण नियंत्रण बोर्ड के पास उपलब्ध हैं। अनुमोदन पत्र को मारुति सुजुकी इंडिया लिमिटेड की वेबसाइट [www.marutisuzuki.com/ec.html](http://www.marutisuzuki.com/ec.html) पर भी देखा जा सकता है।

दिनांक : 27 सितम्बर 2012      मारुति सुजुकी इंडिया लिमिटेड

# Long term study report to assess the Cumulative Impact of the Power plant on Ambient Air Quality

Long term study  
to  
Assess  
The Cumulative Impact  
of  
the Power Plant (57 MW)  
on  
Ambient Air Quality (AAQ)

Project Proponent



Maruti Suzuki India Ltd.

*Institute :*



Pollution Control Research Institute,  
BHEL, Ranipur, Haridwar – 249 403  
Uttarakhand



## ACKNOWLEDGEMENT

The Institute, Pollution Control Research Institute, Bharat Heavy Electricals Limited, Haridwar convey their deep sense of gratitude and appreciation to the officials of Maruti Suzuki India Limited (MSIL) for the valuable guidance and unstinted co-operation continuously extended to them for carrying out this assignment. Valuable assistance from officials of MSIL in providing relevant data and support have contributed immensely towards the smooth progress of study and have added value to this entire exercise, culminating in the preparation of this report.

We wish to thank officials of MSIL at Gurgaon for the courtesy and help extended to our team from time to time during their work for smooth conduct of this assignment.

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## **Background**

In the year 2012, State Environment Impact Assessment Authority accorded Environment Clearance for the expansion of captive power plant at Maruti Suzuki India Limited, Manesar.

In the Condition no. 21 of the said clearance, the SEIAA has asked to initiate a long term study through a reputed institution to assess the impact of the power plant on the AAQ of the area, on the chemistry of upper atmosphere and radiation budget.

MSIL has engaged Pollution Control Research Institute (BHEL) to conduct the study on the AAQ of the plant.

## **Objective**

The objective of this study is to conduct a long term study to assess the impact of power plant on the AAQ of the area, on the upper chemistry of upper atmosphere and radiation budget.

## **Power Plant Emissions**

The flue gases from Power Project will be discharged through stack of 30 m height. The data has been monitored since from the inception of the project and shall be continued on regular intervals. The major pollutant in the flue gas are PM, SO<sub>2</sub>, NO<sub>x</sub>, and Ozone.

## **Content of the study** – Impact of power plant operation on the following:

a) **Ambient Air Quality** – The AAQ standard as per National Ambient Air Quality Standard (NAAQS) prescribed under Environment Protection Rule are attached as Annexure A. The parameters are:

1. Sulphur Dioxide (SO<sub>2</sub>)
2. Nitrogen Dioxide (NO<sub>2</sub>)
3. Particulate Matter (PM<sub>10</sub>)
4. Particulate Matter (PM<sub>2.5</sub>)

5. Ozone ( $O_3$ )
6. Lead (Pb)
7. Carbon Monoxide (CO)
8. Ammonia ( $NH_3$ )
9. Benzene ( $C_6H_6$ )
10. Benzo(a) Pyrene (BaP)
11. Arsenic (As)
12. Nickel (Ni)

**So it is proposed to measure the parameters quarterly to include all seasons at well distributed four locations around power plant.**

b) **Upper Atmosphere Chemistry** – The atmospheric chemistry studies the chemical composition of the natural atmosphere, the way gases, liquids, and solids in the atmosphere interact with each other and with the earth's surface and associated biota, and how human activities may be changing the chemical and physical characteristics of the atmosphere.

Certain man made gases interacting with each other and formed environmental pollutants in the upper atmosphere. These gases are mainly:

1. Oxides of Sulphur ( $SO_x$ )
2. Ozone ( $O_3$ )
3. Oxides of Nitrogen ( $NO_x$ )

Thus it is proposed to measure the trend of the above parameters for studying the impact on the chemistry of upper atmosphere in long term study due to gas emission.

c) **Radiation Budget** - The Earth can be considered as a physical system with an energy budget. The shortwave radiation net flow of energy into Earth and the longwave radiation out to Space determine the Earth's radiation budget.



There are various parameters which are affecting the earth's radiation budget. Particulate matter and SO<sub>2</sub> is the major contributor for affecting Sun radiation on earth.

Particulate matter (PM) – are tiny pieces of solid or liquid matter associated with the Earth's atmosphere. They are suspended in the atmosphere as atmospheric aerosol. The aerosol effect consists of any change to the earth's radiative budget due to the modification of clouds by atmospheric aerosols, and consists of several distinct effects.

Sulphur Dioxide (SO<sub>2</sub>) - Sulphur dioxide is a major air pollutant and has significant impacts upon human health. Sulphur dioxide emissions are a precursor to acid rain and atmospheric particulates. It can be reduced by using Diesel of low Sulphur content or Natural Gas for running the gas turbines.

Thus it is proposed to measure the above parameters for long term study on the impact on radiation budget.

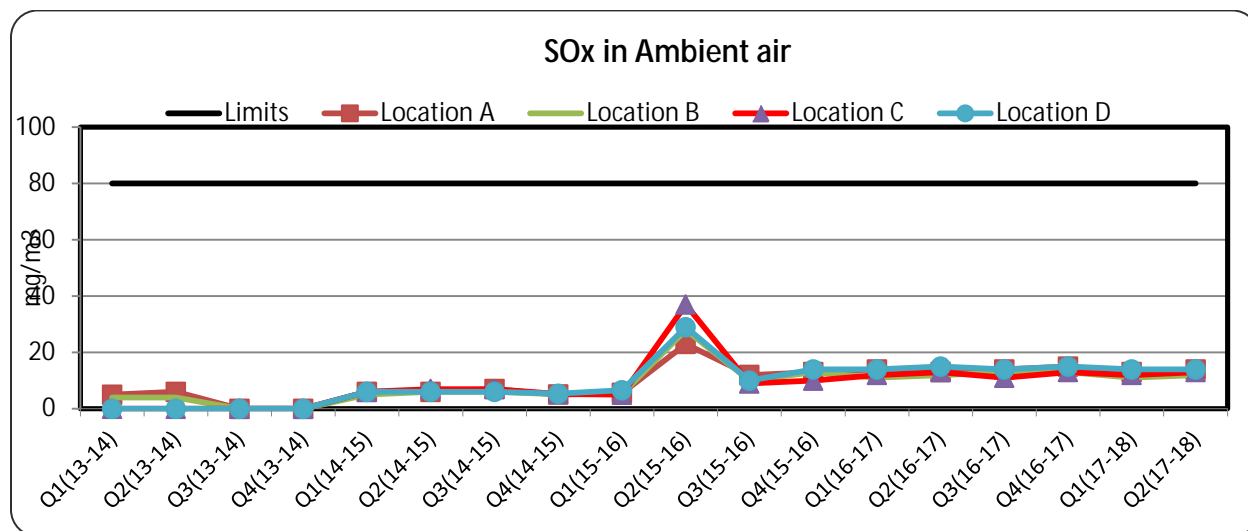
**Measures results and graphs** – The study commenced from April 2013 onwards. The Results are attached as below:

<b>AMBIENT AIR MONITORING DATA 1st Qrt</b>									
	S. No	Location	Starting Date	End Date	SO <sub>2</sub>	NO <sub>x</sub>	Ozone	PM <sub>2.5</sub>	PM <sub>10</sub>
2013-14	1	Site A	26.06.2013	27.06.2013	5	22	105	26	65
	2	Site B	26.06.2013	27.06.2013	4	20	110	26	58
	3	Site C	26.06.2013	27.06.2013	BDL	19	100	22	58
	4	Site D	26.06.2013	27.06.2013	BDL	18	105	23	51
2014-15	5	Site A	29.05.2014	30.05.2014	6	21	106	29	67
	6	Site B	29.05.2014	30.05.2014	5	22	109	27	61
	7	Site C	29.05.2014	30.05.2014	6	23	100	22	24
	8	Site D	29.05.2014	30.05.2014	6	21	105	26	55
2015-16	9	Site A	28.06.2015	29.06.2015	6	20	48	22	39
	10	Site B	28.06.2015	29.06.2015	5	22	60	26	40
	11	Site C	28.06.2015	29.06.2015	5	17	46	23	36
	12	Site D	28.06.2015	29.06.2015	7	23	67	23	45
2016-17	13	Site A	02.06.2016	03.06.2016	14	24	118	42	76
	14	Site B	02.06.2016	03.06.2016	11	24	115	45	75
	15	Site C	02.06.2016	03.06.2016	12	21	111	39	72
	16	Site D	02.06.2016	03.06.2016	14	23	120	43	75
2017-18	17	Site A	02.06.2017	03.06.2017	13	23	107	40	100
	18	Site B	02.06.2017	03.06.2017	11	23	110	41	79
	19	Site C	02.06.2017	03.06.2017	12	23	109	36	78
	20	Site D	02.06.2017	03.06.2017	14	24	111	41	76

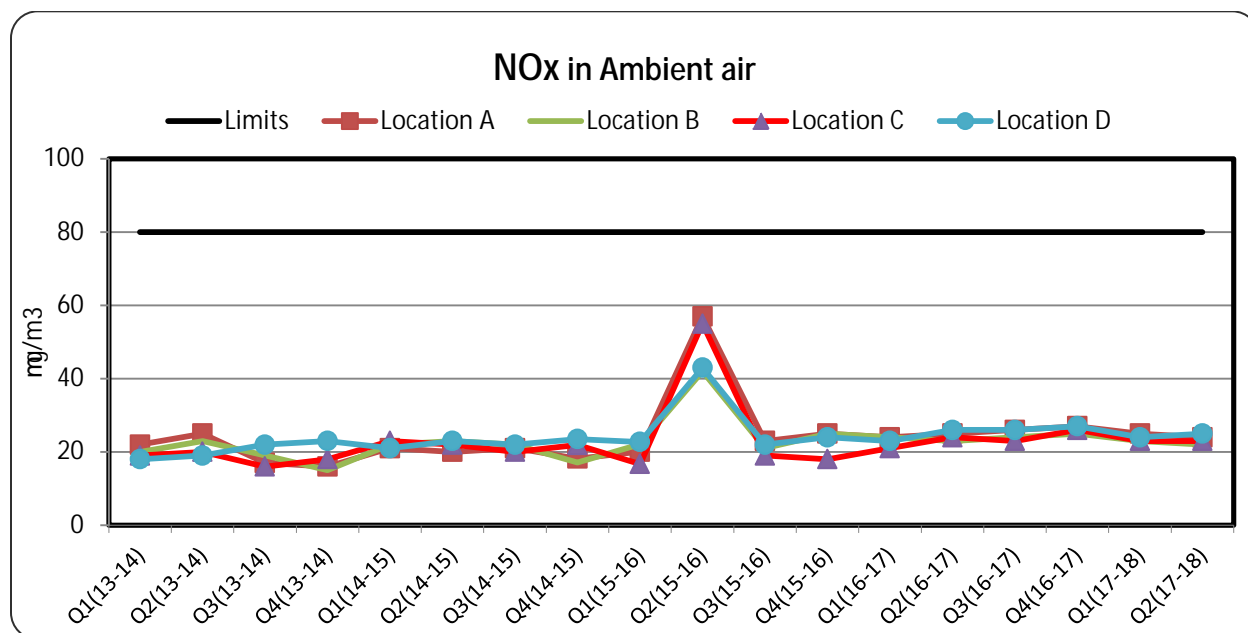
<b>AMBIENT AIR MONITORING DATA IIInd Qrt</b>									
	S.No	Location	Starting Date	End Date	SO <sub>2</sub>	NO <sub>x</sub>	Ozone	PM <sub>2.5</sub>	PM <sub>10</sub>
2013-14	1	Site A	26.08.2013	27.08.2013	6	25	110	27	68
	2	Site B	26.08.2013	27.08.2013	4	23	108	26	65
	3	Site C	26.08.2013	27.08.2013	BDL	20	103	23	62
	4	Site D	26.08.2013	27.08.2013	BDL	19	107	25	55
2014-15	5	Site A	12.09.2014	13.09.2014	6	20	115	30	69
	6	Site B	12.09.2014	13.09.2014	6	23	110	28	64
	7	Site C	12.09.2014	13.09.2014	7	22	108	31	67
	8	Site D	12.09.2014	13.09.2014	6	23	105	27	65
2015-16	9	Site A	25.08.2015	26.08.2015	23	57	37	29	64
	10	Site B	25.08.2015	26.08.2015	28	42	82	31	72
	11	Site C	25.08.2015	26.08.2015	37	55	42	23	58
	12	Site D	26.08.2015	27.08.2015	29	43	66	31	47
2016-17	13	Site A	03.09.2016	04.09.2016	14	24	118	42	76
	14	Site B	03.09.2016	04.09.2016	12	23	112	44	76
	15	Site C	03.09.2016	04.09.2016	13	24	116	38	77
	16	Site D	03.09.2016	04.09.2016	15	26	113	40	74
2017-18	17	Site A	24.08.2017	25.08.2017	14	24	107	40	79
	18	Site B	24.08.2017	25.08.2017	12	22	110	41	77
	19	Site C	24.08.2017	25.08.2017	13	23	109	36	78
	20	Site D	24.08.2017	25.08.2017	14	25	111	41	76

The obtained values are compared with the standard prescribed by Central Pollution Control Board (CPCB)/ MoEFCC. The interpretation of these data is as follows:

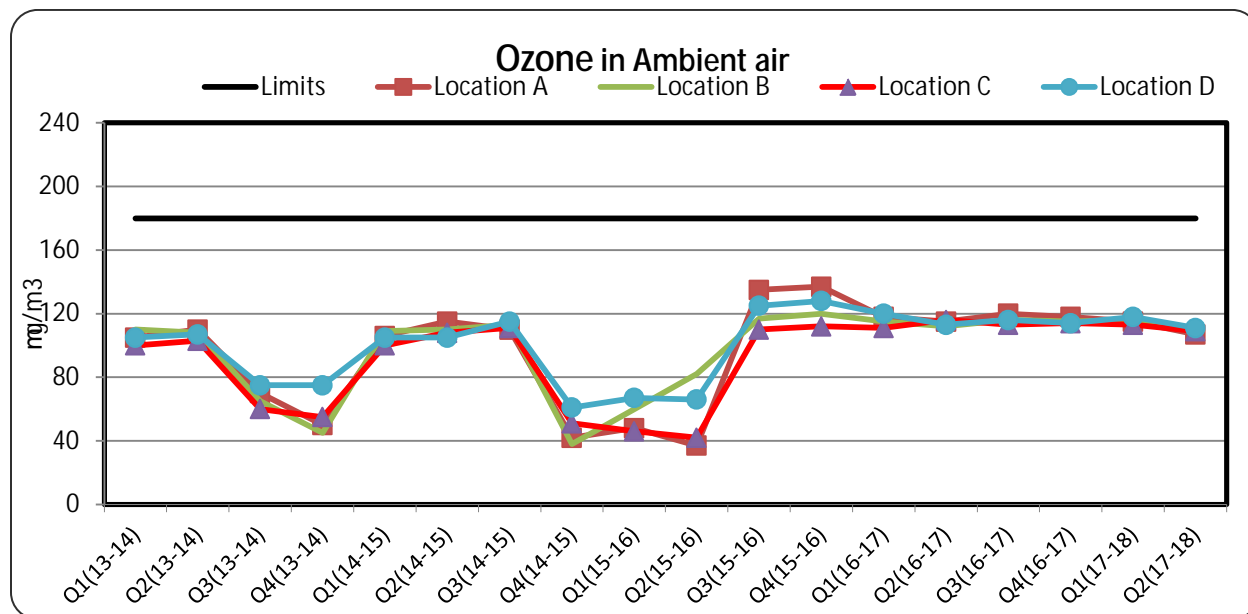
**Sulphur Dioxide (SO<sub>2</sub>):** 24 hourly monitoring concentrations at various locations varied between 0 to 37 µg/m<sup>3</sup>. It reflects that their no increase in pollution load in AAQ of the area.



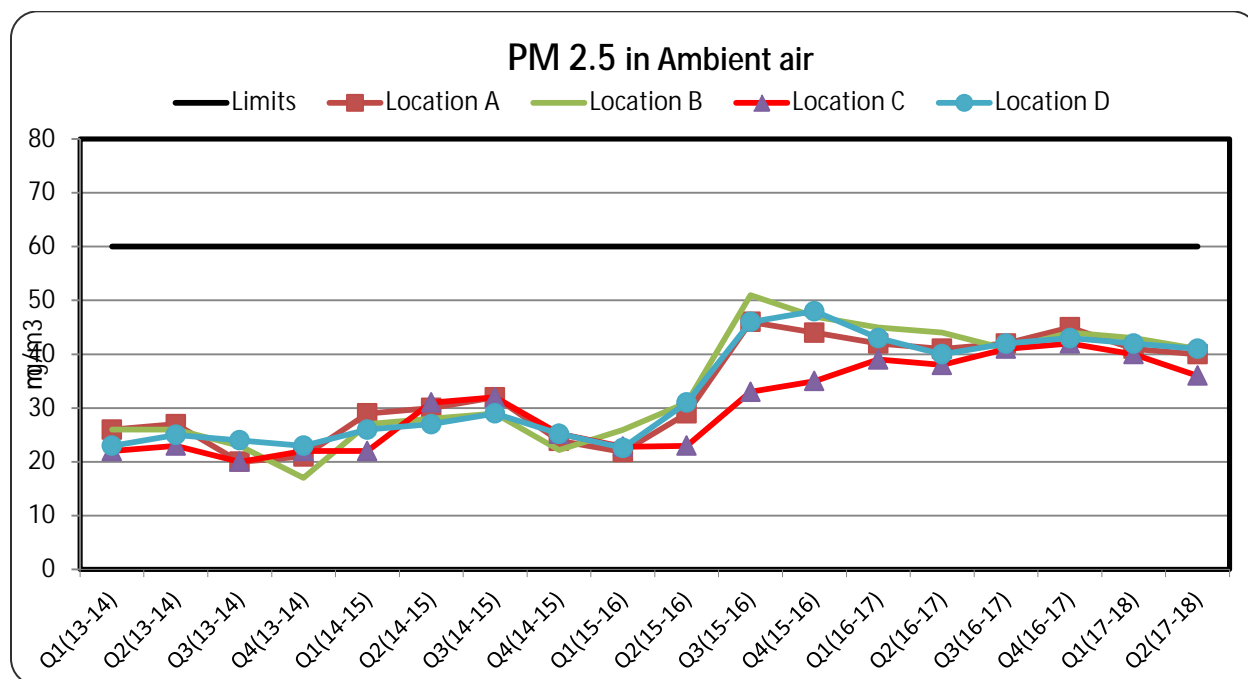
**Nitrogen Oxide (NO<sub>x</sub>):** 24 hourly monitoring concentrations at various locations varied between 15 to 57 µg/m<sup>3</sup>. It reflects that their no increase in pollution load in AAQ of the area.



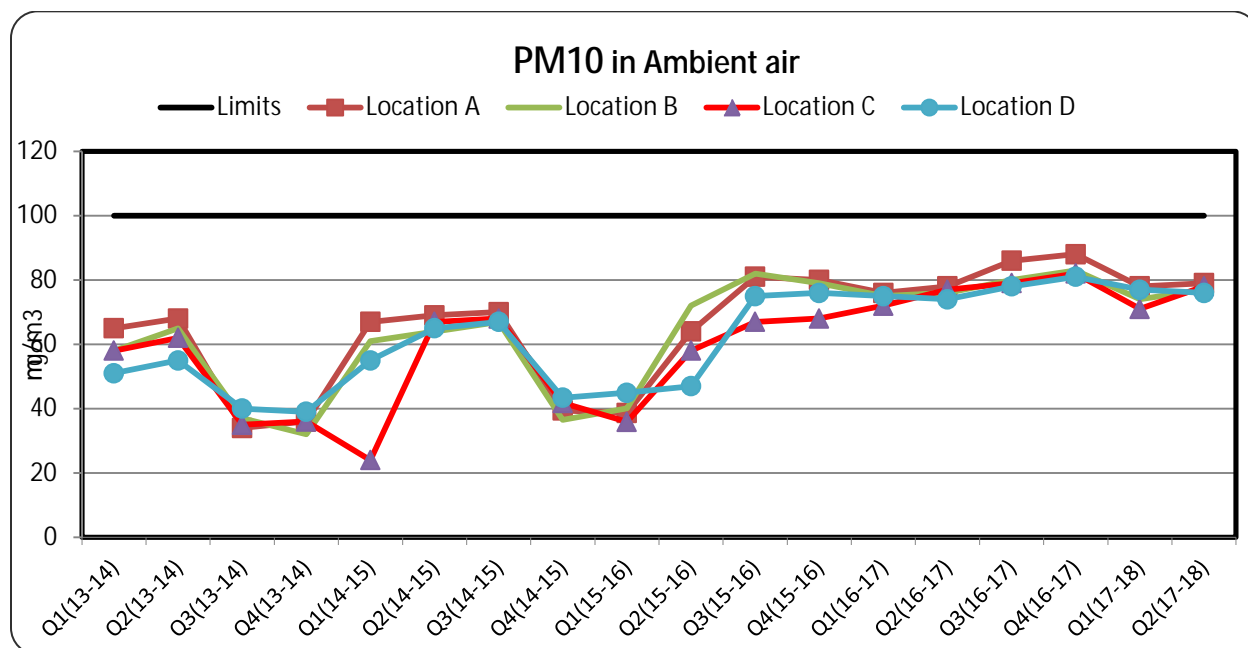
**Ozone(O<sub>3</sub>):** The concentrations are various locations varied between 37 to 137 µg/m<sup>3</sup>. The study reflects that the effect on surrounding area due to the power plant emission is negligible.



PM<sub>(2.5)</sub>: 24 hourly monitoring concentrations at various locations varied between 17 to 51  $\mu\text{g}/\text{m}^3$ . It shows that the increase of pollution load is negligible in AAQ of the area.



PM<sub>(10)</sub>: 24 hourly monitoring concentrations at various locations varied between 24 to 88  $\mu\text{g}/\text{m}^3$ . It shows that the increase of pollution load is negligible in AAQ of the area.





### **Conclusion:**

The total concentrations are compared with National Ambient Air Quality Standards as notified by Central Pollution Control Board. It is concluded that there is no appreciable increase in the concentration of criterion pollutant namely Particulate matter, SO<sub>x</sub>, NO<sub>x</sub> and Ozone, so there is negligible impact on AAQ, chemistry of upper atmosphere and radiation budget.

## NATIONAL AMBIENT AIR QUALITY STANDARDS (2009)

Pollutants	Time Weighted Average	Concentration in Ambient Air		Methods of Measurement
		Industrial, Residential, Rural and other Areas	Ecologically Sensitive Area (Notified by Central Government)	
<b>Sulphur Dioxide (SO<sub>2</sub>), µg/m<sup>3</sup></b>	Annual * 24 Hours **	50 80	20 80	-Improved West and Gaeke Method -Ultraviolet Fluorescence
<b>Nitrogen Dioxide (NO<sub>2</sub>), µg/m<sup>3</sup></b>	Annual * 24 Hours **	40 80	30 80	-Jacob & Hochheiser modified (NaOH-NaAsO <sub>2</sub> ) Method -Gas Phase Chemiluminescence
<b>Particulate Matter (Size less than 10µm) or PM<sub>10</sub>, µg/m<sup>3</sup></b>	Annual * 24 Hours **	60 100	60 100	-Gravimetric -TEOM -Beta attenuation
<b>Particulate Matter (Size less than 2.5µm) or PM<sub>2.5</sub>, µg/m<sup>3</sup></b>	Annual * 24 Hours **	40 60	40 60	-Gravimetric -TEOM -Beta attenuation
<b>Ozone (O<sub>3</sub>) µg/m<sup>3</sup></b>	8 Hours * 1 Hour **	100 180	100 180	-UV Photometric -Chemiluminescence -Chemical Method
<b>Lead (Pb) µg/m<sup>3</sup></b>	Annual * 24 Hours **	0.50 1.0	0.50 1.0	-AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper -ED-XRF using Teflon filter
<b>Carbon Monoxide(CO), mg/m<sup>3</sup></b>	8 Hours ** 1 Hour **	02 04	02 04	-Non dispersive Infrared (NDIR) Spectroscopy
<b>Ammonia (NH<sub>3</sub>), µg/m<sup>3</sup></b>	Annual * 24 Hours **	100 400	100 400	-Chemiluminescence -Indophenol blue method
<b>Benzene (C<sub>6</sub>H<sub>6</sub>), µg/m<sup>3</sup></b>	Annual *	05	05	-Gas Chromatography (GC) based continuous analyzer -Adsorption and desorption followed by GC analysis
<b>Benzo(a)Pyrene (BaP) Particulate phase only, ng/m<sup>3</sup></b>	Annual *	01	01	-Solvent extraction followed by HPLC/GC analysis
<b>Arsenic (As), ng/m<sup>3</sup></b>	Annual *	06	06	-AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper
<b>Nickel (Ni), ng/m<sup>3</sup></b>	Annual *	20	20	-AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper

\* Annual Arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

\*\* 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

**NOTE:** Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigations.

**TEST REPORT**  
**AMBIENT AIR MONITORING**

Lab. Ref.:PCRI: Air & Noise: 2017-2018 :0116  
Date: 17.06.2017

**A. GENERAL INFORMATION:**

1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0062-0-791
3.	Date of sampling	:	02.06.2017 to 03.06.2017
4.	Location of Sampling	:	A:Near Material Gate
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999, NDIR, Jacob & Hochheiser Modified (Na-Arsenite) Method, FID, NDIR & Gas Detection System, IS-5182( Part-9), APHA-819, AAS and PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

**B. RESULTS OF AMBIENT AIR MONITORING:**

Sl. No.	Parameter	Unit	Obtained Value	Allowable Limit**
1.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	13	80
2.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	25	80
3.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	78	100
4.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	41	60
5.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	115	180
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	2.3	4
8.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	12	20

BDL: Below Detectable Limit,

\*\* : National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

*R. S. Yadav*  
( R S Yadav )  
Dy. Manager (PCRI)  
राजेश सिंह यादव/ R. S. Yadav  
उप प्रबंधक/ Dy Manager

Services Offered : Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of 1986 and CPCB Notification N. Delhi, the 18 Nov. 2009. Also providing Test reports, Environmental Impact Assessment, Environmental Audits reports

Remarks :- (1) This report refers only to the particular sample/job submitted for testing.  
(2) This report is not to be reproduced wholly or partly and can not be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.  
(3) Samples will be disposed off after one month from the date of issue of Test Certificate

## TEST REPORT

### AMBIENT AIR MONITORING

Lab. Ref.:PCRI: Air & Noise: 2017-2018 :0117

Date: 17.06.2017

#### A. GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0062-O-791
3.	Date of sampling	:	02.06.2017 to 03.06.2017
4.	Location of Sampling	:	B:Gate No. 1
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999 , NDIR, Jacob & Hochheiser Modified (Na-Arsenite) Method, FID, NDIR & Gas Detection System, IS-5182( Part-9) , APHA-819, AAS and PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

#### B. RESULTS OF AMBIENT AIR MONITORING:

Sl. No.	Parameter	Unit	Obtained Value	Allowable Limit**
1.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	11	80
2.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	23	80
3.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	74	100
4.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	43	60
5.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	116	180
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	2.5	4
8.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	13	20

BDL: Below Detectable Limit,

\*\* : National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

*R. S. Yadav*  
( R S Yadav )

Dy. Manager ( PCRI )

प्रमुख निरीक्षक R. S. Yadav

उप प्रमुख/Dy. Manager

Services Offered : Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & SPQR and providing Test reports, Environmental Impact Assessment, Environmental Audits reports

Remarks :- (1) This report refers only to the particular sample/job submitted for testing.  
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(3) Samples will be disposed off after one month from the date of issue of Test Certificate

प्रदूषण नियन्त्रण अनुसंधान संस्थान  
BHEL, Ranipur, Haridwar



(Approved Lab under Environment (Protection) Act, 1986: EIA Consultancy by NABET, QCI)

## TEST REPORT

### AMBIENT AIR MONITORING

Lab. Ref.:PCRI: Air & Noise: 2017-2018 :0118

Date: 17.06.2017

#### A. GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0062-O-791
3.	Date of sampling	:	02.06.2016 to 03.06.2016
4.	Location of Sampling	:	C:SND Gate
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999 , NDIR, Jacob & Hochheiser Modified ( Na-Arsenite) Method, FID, NDIR & Gas Detection System, IS-5182( Part-9) , APHA-819, AAS, and PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

#### B. RESULTS OF AMBIENT AIR MONITORING:

Sl. No.	Parameter	Unit	Obtained Value	Allowable Limit**
1.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	12	80
2.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	23	80
3.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	71	100
4.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	40	60
5.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	113	180
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	1.9	4
8.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	11	20

**BDL:** Below Detectable Limit,

**\*\*:** National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

  
 ( R S Yadav )  
 Dy. Manager (PCRI)  
 प्रदूषण नियन्त्रण अनुसंधान संस्थान  
 BHEL, Ranipur, Haridwar

**Services Offered :** Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & Pollution Control Boards. Test reports, Environmental Impact Assessment, Environmental Audits reports

- Remarks :-
- (1) This report refers only to the particular sample/job submitted for testing.
  - (2) This report is not to be reproduced wholly or partly and can not be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.
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**TEST REPORT**  
**AMBIENT AIR MONITORING**

Lab. Ref.: PCRI: Air & Noise: 2017-2018 :0119  
Date: 17.06.2017

**A. GENERAL INFORMATION:**

1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0062-O-791
3.	Date of sampling	:	02.06.2016 to 03.06.2016
4.	Location of Sampling	:	D:Near Incinerator
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999, NDIR, Jacob & Hochheiser Modified ( Na-Arsenite) Method, FID, NDIR & Gas Detection System, IS-5182( Part-9), APHA-819, AAS and PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

**B. RESULTS OF AMBIENT AIR MONITORING:**

Sl. No.	Parameter	Unit	Obtained Value	Allowable Limit**
1.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	14	80
2.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	24	80
3.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	77	100
4.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	42	60
5.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	118	180
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	2.0	4
8.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	13	20

BDL: Below Detectable Limit,

\*\* : National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

*R. S. Yadav*  
( R S Yadav )  
Dy. Manager ( PCRI )  
रवीश किशोर/ R. S. Yadav  
उप प्रमुख/ Dy. Manager  
Pollution Control Research Institute  
Ranipur, Haridwar

**Services Offered :** Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & N.P.C.B and providing Test reports, Environmental Impact Assessment, Environmental Audits reports

Remarks :- (1) This report refers only to the particular sample/job submitted for testing.  
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(Approved Lab under Environment (Protection) Act, 1986: EIA Consultancy by NABET, QCI)

## TEST REPORT AMBIENT AIR MONITORING

**Lab. Ref.:**PCRI: Air & Noise:2017-2018 :0533  
**Date:** 14.09.2017

### A. GENERAL INFORMATION:


1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0135-0-791
3.	Date of sampling	:	24.08.2017 to 25.08.2017
4.	Location of Sampling	:	A:Near Material Gate
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999, NDIR, Jacob & Hochheiser Modified(Na-Arsenite) Method, FID, NDIR & Gas Detection System, IS-5182( Part-9), APHA-819, AAS and PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

### B. RESULTS OF AMBIENT AIR MONITORING:

Sl. No.	Parameter	Unit	Obtained Value	Allowable Limit**
1.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	14	80
2.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	24	80
3.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	79	100
4.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	40	60
5.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	107	180
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	2.2	4
8.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	10	20

BDL: Below Detectable Limit,

\*\* : National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009.

  
 ( R S Yadav )  
 Dy. Manager ( PCRI )  
 राजेन्द्र सिंह यादव/ R. S. Yadav  
 उप प्रबन्धक/ Dy Manager  
 Pollution Control Research Institute  
 प्रदूषण नियन्त्रण अनुसंधान संस्थान  
 BHEL, Ranipur, Haridwar

**Services Offered :** Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & SPCB and providing Test reports, Environmental Impact Assessment, Environmental Audits reports

Remarks :- (1) This report refers only to the particular sample/job submitted for testing.  
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**TEST REPORT**  
**AMBIENT AIR MONITORING**

Lab. Ref.:PCRI: Air & Noise:2017-2018 :0534  
Date: 14.09.2017

**A. GENERAL INFORMATION:**

1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0135-0-791
3.	Date of sampling	:	24.08.2017 to 25.08.2017
4.	Location of Sampling	:	B:Gate No. 1
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999, NDIR, Jacob & Hochheiser Modified (Na-Arsenite) Method, FID, NDIR & Gas Detection System, IS-5182(Part-9), APHA-819, AAS and PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

**B. RESULTS OF AMBIENT AIR MONITORING:**

Sl. No.	Parameter	Unit	Obtained Value	Allowable Limit**
1.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	12	80
2.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	22	80
3.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	77	100
4.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	41	60
5.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	110	180
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	2.4	4
8.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	12	20

BDL: Below Detectable Limit,

\*\* : National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

*R. S. Yadav*  
( R S Yadav )  
Dy. Manager ( PCRI )  
राजेश सिंह यादव/R. S. Yadav  
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BHEL, Ranipur, Haridwar

Services Offered : Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & SPBES and providing Test reports, Environmental Impact Assessment, Environmental Audits reports

Remarks :- (1) This report refers only to the particular sample/job submitted for testing.  
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**TEST REPORT**  
**AMBIENT AIR MONITORING**

Lab. Ref.:PCRI: Air & Noise:2017-2018 :0535  
Date: 14.09.2017

**A. GENERAL INFORMATION:**

1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0135-O-791
3.	Date of sampling	:	24.08.2017 to 25.08.2017
4.	Location of Sampling	:	C:SND Gate
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999, NDIR, Jacob & Hochheiser Modified ( Na-Arsenite) Method, FID, NDIR & Gas Detection System, IS-5182( Part-9), APHA-819, AAS and PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

**B. RESULTS OF AMBIENT AIR MONITORING:**

Sl. No.	Parameter	Unit	Obtained Value	Allowable Limit**
1.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	13	80
2.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	23	80
3.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	78	100
4.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	36	60
5.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	109	180
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	1.85	4
8.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	11	20

BDL: Below Detectable Limit,

\*\* : National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

*Ryadav*  
( R S Yadav )  
Dy. Manager ( PCRI )  
राजेन्द्र सिंह यादव/ R. S. Yadav  
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Pollution Control Research Institute  
प्रदूषण नियन्त्रण अनुसंधान संस्थान  
Bharat Heavy Electricals Limited, Haridwar

Services Offered : Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & SP Act and providing Test reports, Environmental Impact Assessment, Environmental Audits reports

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(Approved Lab under Environment (Protection) Act, 1986: EIA Consultancy by NABET, QCI)

**TEST REPORT**  
**AMBIENT AIR MONITORING**

Lab. Ref.: PCRI: Air & Noise: 2017-2018: 0536

Date: 14.09.2017

**A. GENERAL INFORMATION:**

1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0135-O-791
3.	Date of sampling	:	24.08.2017 to 25.08.2017
4.	Location of Sampling	:	D:Near Incinerator
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999, NDIR, Jacob & Hochheiser Modified (Na-Arsenite) Method, FID, NDIR & Gas Detection System, IS-5182( Part-9), APHA-819, AAS and PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

**B. RESULTS OF AMBIENT AIR MONITORING:**

Sl. No.	Parameter	Unit	Obtained Value	Allowable Limit**
1.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	14	80
2.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	25	80
3.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	76	100
4.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	41	60
5.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	111	180
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	2.1	4
8.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	12	20

BDL: Below Detectable Limit,

\*\* : National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009.

*R. S. Yadav*  
( R S Yadav )  
Dy. Manager ( PCRI )  
राजेन्द्र सिंह यादव/ R. S. Yadav  
उप प्रबन्धक/ Dy Manager  
Pollution Control Research Institute  
प्रदूषण नियन्त्रण अनुसंधान संस्थान  
BHEL, Ranipur, Haridwar

Services Offered : Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & SPCB and performing tests, Environmental Impact Assessment, Environmental Audits reports

Remarks :- (1) This report refers only to the particular sample/job submitted for testing.  
(2) This report is not to be reproduced wholly or partly and can not be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.  
(3) Samples will be disposed off after one month from the date of issue of Test Certificate

**By Speed Post**

No. J-13011/71/2007-IA.II(T)  
Government of India  
Ministry of Environment & Forests

Prayavaran Bhawan  
CGO Complex, Lodi Road  
New Delhi-110 003

Dated: 5<sup>th</sup> February, 2008

To

M/s Maruti Suzuki India Ltd.  
Palam – Gurgaon Road,  
Gurgaon- 122 015  
Haryana.

**Sub: 10x7 MW Gas turbine at Manesar, Gurgaon, Haryana by M/s Maruti Suzuki India Ltd - Environmental Clearance regarding.**

The undersigned is directed to refer your communication no. MUL: PRDS: EM2:1654 dated 3<sup>rd</sup> Oct, 2007 on the subject mentioned above. Subsequent information furnished vide letter no. MSIL:PRDS:EM2:1707 dated 7.1.2008 has also been considered.

2. It is noted that the proposal is for grant of environmental clearance under the provisions of EIA Notification, 2006 for expansion of existing 16.2 MW power plant by adding 10x7 MW units. The power plant is captive power plant. The land requirement is 8500 m<sup>2</sup>. The coordinates of the proposed project site are latitude 27° 39' N to 28° 32' N and Longitude 76° 39' E to 77° 20' E. Gas will be used as fuel, however, HSD will be used as standby fuel in emergency when gas is not available. Gas requirement will be 1580 m<sup>3</sup>/day. Water requirement will be 2451 KL/day, which will be sourced from bore well. The project was exempted from public hearing being located in a notified industrial estate. Cost of the project is Rs 389.00 crores, which includes Rs 42.5 crores for environmental protection measures.

3. The proposal has been considered and Ministry of Environment & Forests hereby accords environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions:-

- (i) No additional land shall be acquired in excess of 8500 m<sup>2</sup> for any utilities/ facilities relating to the proposed project.

- (ii) NOC from BARC shall be obtained prior to start of construction of the project due to the proximity of the project to BARC Observatory.
- (iii) Gas shall only be used as fuel, however, HSD may be used as standby fuel for not more than 30 days in a year when gas is not available. However, the 3 turbines scheduled to be installed during 2008 may be operated on HSD till January, 2009 when gas would become available. Thereafter, gas shall be used as fuel.
- (iv) Dry Low NO<sub>x</sub> burners shall be provided and it shall be ensured that NO<sub>x</sub> emissions from the stack is less than 100 ppm.
- (v) The height of the stack shall be as per the standards prescribed under the Environment (Protection) Act in this regard or 30 m, whichever is more with continuous online monitoring system. Exit velocity shall not be less than 29 m/s.
- (vi) Air cooled condensers shall be installed.
- (vii) Water requirement shall not exceed the 2451 KL/day and shall be met from existing bore wells. The necessary prior permission for drawl of requisite quantity of groundwater for the project as applicable shall be obtained from the Competent Authority.
- (viii) Treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant area. No effluents shall be discharged outside the plant boundary.
- (ix) Rainwater harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority/ State Ground Water Board and a copy of the same shall be submitted within three months to this Ministry.
- (x) Leq of Noise level shall be limited to 75 dBA and regular maintenance of equipments should be undertaken. For people working in high noise areas, personal protection devices should be provided.
- (xi) A greenbelt shall be developed around the plant boundary with tree density of around 2500 trees per ha. The area under greenbelt shall be at least 1/3<sup>rd</sup> of the total area.
- (xii) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.



- (xiii) Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with the State Pollution Control Board. Periodic reports shall be submitted to the Regional Office of this Ministry at Chandigarh.
  - (xiv) The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>.
  - (xv) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
  - (xvi) Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry, the Regional Office, and the CPCB/SPCB.
  - (xvii) Regional Office of the Ministry of Environment & Forests located at Chandigarh will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring
  - (xviii) Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure shall be reported to the Ministry.
  - (xix) Full cooperation shall be extended to the Scientists/Officers from the Ministry/ Regional Office of the Ministry at Chandigarh /the CPCB/the SPCB who would be monitoring the compliance of environmental status.
4. The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.
  5. The environmental clearance accorded shall be valid for a period of 5 years to start of production operation by the power plant.
  6. In case of any deviation or alteration in the project proposed from that submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess

the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

7. The above stipulations shall be enforced along with others as under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989, Hazardous Wastes (Management and Handling) Rules, 1989, the Public Liability Insurance Act, 1991 and rules there under.



(Dr. S.K. AGGARWAL)  
Director

**Copy to:-**

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi - 110001.
2. The Secretary (Environment), Deptt. of Environment, Haryana Civil Secretariat, Government of Haryana, Chandigarh.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Haryana State Pollution Control Board, C-11, Sector-6, Panchkula, Haryana - **with a request to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days.**
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. The Chief Conservator of Forests, Northern Regional Office, Ministry of Environment & Forests, SCO 132-133, Sector 34-A, Chandigarh-160022.
7. The Director (EI), MOEF.
8. Guard file.
9. Monitoring file.



(Dr. S.K. AGGARWAL)  
Director

MSIL:CUIP:ESEC:ENV:2025-26:108

26-Nov-2025

To  
Ministry of Environment, Forest, and Climate Change  
Integrated Regional Office  
Bays No 24-25, Sector – 31 A  
Dakshin Marg,  
Chandigarh - 160030

**Sub:** Half yearly report for the Compliance of conditions given in the Environment Clearance of 70MW Captive Power Plant-Gas turbine, Manesar.

**Ref:** Environment Clearance Letter from MoEF – No. J-13011/71/2007-IA-II (T), dated 05.02.2008.

Dear Sir,

Enclosed please find herewith the half yearly compliance report for the period of April'25 to September'25 related to Environment Clearance issued for our Gas turbine (70 MW).

Thanking You.

Yours Faithfully

  
**Paresh Mani Sharma**  
**DGM (Environment)**  
**Maruti Suzuki India Limited**  
Paresh Mani Sharma  
Deputy General Manager (Environment)  
Maruti Suzuki India Limited, Gurgaon

CC: 1. Haryana State Pollution Control Board, Panchkula  
2. Central Pollution Control Board, Lucknow

**MARUTI SUZUKI INDIA LIMITED**

Head Office:  
Maruti Suzuki India Limited,  
1, Nelson Mandela Road, Vasant Kunj,  
New Delhi - 110070, India.  
Tel: 011- 46781000, Fax: 011-46150275/46150276  
E-mail id: contact@maruti.co.in, www.marutisuzuki.com

Gurgaon Plant:  
Maruti Suzuki India Limited,  
Old Palam Gurgaon Road,  
Gurgaon - 122015, Haryana, India.  
Tel: 0124-2346721, Fax: 0124-2341304

Manesar Plant:  
Maruti Suzuki India Limited,  
Plot no.1, Phase - 3A, IMT Manesar,  
Gurgaon - 122051, Haryana, India.  
Tel: 0124-4884000, Fax: 0124-4884199

CIN: L34103DL1981PLC011375

# **“Six Monthly Compliance Report”**

April'25 to September'25

For the conditions stipulated in  
Environmental Clearance of 70 MW  
Captive Power Plant, Manesar



Submitted by-  
M/s Maruti Suzuki India Limited,  
Gurugram Plant, Palam Gurugram Road  
Gurugram-122015, Haryana



**MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA**

**Ref: Environment Clearance letter from MoEF no - J-13011/71/2007-IA.II (T) dated 5.2.2008**

<b>S. No.</b>	<b>Clearance Conditions</b>	<b>Compliance Status</b>
1	No additional land shall be acquired in excess of 8500 m <sup>2</sup> for any utilities / facilities relating to the project.	The project is located within Maruti Suzuki India Limited premises at IMT Manesar, and the power plant is set within 8500 sq. mtrs. area.
2	NOC from BARC shall be obtained prior to start of construction of the project due to the proximity of the project to BARC observatory.	NOC obtained from BARC is placed at <b>Annexure-1.</b>
3	Gas shall only be used as fuel; however, HSD may be used as standby fuel for not more than 30 days in a year when gas is not available. However, the 3 turbines scheduled to be installed during 2008 may be operated on HSD till January, 2009 when gas would become available. Thereafter, gas shall be used as fuel.	Natural gas supplies have commenced at Manesar plant
4	Dry Low NO <sub>x</sub> burners shall be provided, and it shall be ensured that NO <sub>x</sub> emission from the stack is less than 100 ppm.	NO <sub>x</sub> emissions are less than 100 ppm. The stack monitoring reports are placed at <b>Annexure-2.</b>
5	The height of the stack shall be as per the standards prescribed under the Environment (Protection) Act in this regard or 30 m, whichever is more with continuous online monitoring system. Exit velocity shall not be less than 29 m/s.	All the stacks of the installed Gas Turbines are of 30 mts height and Continuous online monitoring system installed.
6	Air cooled condensers shall be installed.	Air cooled condenser installed for the Gas Turbines.
7	Water requirement shall not exceed the 2451 KL/day and shall be met from existing bore wells. The necessary prior permission for drawl of requisite quantity of groundwater for the project as applicable shall be obtained from the Competent Authority.	As air-cooled condenser is installed for the Gas Turbines, the daily water requirement is very negligible. Current water withdrawal is maintained within the quantity permitted by the Competent Authority from canal water.
8	Treated effluents conforming to the prescribed standards shall be recirculated and reused within the plant area, No effluents shall be discharged outside the plant boundary.	The treated effluents confirm the prescribed standards and are reused for the process requirements after recycling. The monitoring reports are attached as <b>Annexure-3.</b>

9	Rainwater harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with central Ground water Authority/ State Ground Water Board and a copy of the same shall be submitted within three months to this Ministry.	Rainwater harvesting lagoons have been constructed to take care of surface runoff and recharge the aquifers. The location of the lagoon is attached as <b>Annexure-4</b> .
10	Leq of Noise level shall be limited to 75 dBA and regular maintenance of equipments should be undertaken. For people working in high noise areas, personal protection devices should be provided.	Gas Turbines are provided with the acoustic enclosure to limit the noise level within 75 dBA at plant boundary. The people working in high-noise areas are provided with personal protection equipment (PPEs). The monitoring reports are placed at <b>Annexure-2</b> .
11	A greenbelt shall be developed around the plant boundary with tree density of around 2500 trees per ha. The area under greenbelt shall be at least 1/3 <sup>rd</sup> of the total area.	Details of the Green Belt are placed at <b>Annexure-4</b> .
12	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	First aid and necessary sanitation arrangements were provided for the drivers and other contract workers during the construction phase.
13	Regular monitoring of the ambient quality shall be carried out in and around the power plant and records maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with the state pollution Control Board. Periodic reports shall be submitted to the Regional Office of this Ministry at Chandigarh.	Ambient Air quality is being monitored quarterly at the locations fixed based on the modelling results from MoEFCC authorized Laboratory and the reports are placed at <b>Annexure-5</b> .
14	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forest at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	Notice was published in Amar Ujala (Hindi) and Tribune (English). Copy of the same is attached as <b>Annexure-6</b> .
15	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A separate Environment Management Department has been set up.

16	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry,the Regional Office and the CPCB/SPCB.	We are submitting the half yearly compliance reports to concerned offices on or before June and Dec of every year.
17	Regional office of the Ministry of Environment & forests located at Chandigarh will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.	Complied.
18	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure shall be reported to the Ministry.	Funds for EMP have been included in the project cost itself. It is utilised for this purpose only.
19	Full cooperation shall be extended to the Scientist/Officers from the Ministry/ Regional Office of the Ministry at Chandigarh/the CPCB/THE SPCB who would be Monitoring the Compliance of Environmental status.	Full Cooperation will be extended to the officials from SPCB / CPCB and MoEFCC.

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE  
NORTHERN REGIONAL OFFICE  
CHANDIGARH

**DATA SHEET**

1.	Project Type: River Valley/Mining/Industry /Transportation Tourism/Thermal/Nuclear/Other (Specify)	Thermal
2.	Name of the Project:	70 MW Gas turbine at Maruti Suzuki India Limited, Manesar, Gurugram, Haryana
3.	Clearance letter (s)/ O.M No. & dates:	No. J-13011/71/2007-IA.II(T) Dated: 5 <sup>th</sup> February, 2008
4.	Location: a) District (s) b) State (s) c) Latitudes/Longitudes	District: Gurugram (South) State: Haryana Latitude: 27° 39' N to 28° 32' N Longitude: 76° 39' E to 77° 20' E
5.	a) Address of Correspondence (with Pin Code/ Tel No./Telex/Fax No./E mail address)  b) Address of executive Project Engineer/ Manager (with Pin Code/ Tel No./Telex/Fax No./Email address)	Mr. Paresh Mani Sharma Deputy General Manager, Environment Management Maruti Suzuki India Limited Gurugram, Haryana Email: <a href="mailto:PareshMani.Sharma@maruti.co.in">PareshMani.Sharma@maruti.co.in</a> Phone: 0124 – 2346721 ~ 30 Extn: 3583  Mr. Bhavish Mohan Assistant Vice President – EMU Maruti Suzuki India Limited Palam Gurgaon Road Gurugram, Haryana Email: <a href="mailto:Bhavish.Mohan@maruti.co.in">Bhavish.Mohan@maruti.co.in</a> Phone :0124 – 2346721 ~ 30
6.	Salient Features: a) of the project b) of the environmental management plans	Salient Features of the project and Environmental Management Plant details are enclosed in <b>Annexure A.</b>
7.	Breakup of the project area: a) Submergence area: Forest & Non-forest b) Others	The project is located within MSIL premises in the Industrial Area.
8.	Breakup of the project affected population with enumeration of those losing house /dwelling units only, agricultural land only both dwelling units and agricultural land and landless laborers/artisans. a) SC/ST/Adivasis	Not Applicable



	<p>b) Others</p> <p>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures. If a survey has been carried out, give details and year of survey)</p>	
9.	<p>Financial details:</p> <p>a) Project cost as originally planned and subsequent revised estimates and the year or price reference.</p> <p>b) Allocations made for environmental management plans with item wise and year wise break up.</p> <p>c) Benefit cost ratio/Internal Rate of Return and the year of assessment.</p> <p>d) Whether (c) includes the cost of environment management as shown in b) above.</p> <p>e) Actual expenditure incurred on the project so far.</p> <p>f) Actual expenditure incurred on the environmental management plans so far:</p>	<p>Rs. 389 Crores</p> <p>-</p> <p>-</p> <p>-</p> <p>Rs. 319 Crores</p> <p>Rs. 52.4 Crores</p>
10.	<p>Forest land requirement:</p> <p>a) The status of approval for diversion of forest land for non-forestry use.</p> <p>b) The status of clear felling.</p> <p>c) The status of compensatory afforestation of clear felling. If any.</p> <p>d) Comments on the viability &amp; sustainability of compensatory afforestation programmes in the light of actual field experience so far.</p>	Not Applicable
11.	The status of clear feeling in non-forest areas (such as submergence area of reservoir, approach road) if any, with quantitative information.	Not Applicable
12.	<p>Status of construction.</p> <p>1. date of commencement (actual and/ or planned)</p> <p>2. Date of completion (actual and / or planned)</p>	<p>2X20MW GT are under operation.</p> <p>3X10 MW GT has been dismantled.</p>
13.	Reasons for the delay if the project is yet to start:	Not Applicable

**SALIENT FEATURES OF PROJECT**

- |                        |   |   |
|------------------------|---|---|
| 1. Name of the Project | : | Gas turbine at Maruti Suzuki India Limited,<br>Manesar, Gurugram, Haryana |
| 2. Capacity            | : | 70 MW   |
| 3. Location            | : | Maruti Suzuki India Limited, IMT Manesar.                                 |
| 4. Total project cost  | : | Rs. 389 Crores  |
| 5. Land Area           | : | 8500 sq m   |

**ENVIRONMENTAL MANAGEMENT PLAN**

***Water Pollution control:***

- The Gas Turbine is air cooled hence the wastewater generated shall be very minimum. Existing ETP will treat the effluent arising out of the plant operation and the treated wastewater will be reused.

***Air Pollution control:***

- Stacks of the GT shall be maintained at 30 m.
- NO<sub>x</sub> emissions will be below 100 ppm.
- SPM and SO<sub>2</sub> emissions will be very low as natural gas (clean fuel) is being used for the operation. HSD (ultra-low Sulphur diesel) shall only be used initially or in case of emergency operation.

***Noise Pollution Control:***

- The noise from Gas Turbines is controlled by acoustic enclosures. The noise level at the periphery of factory/premises will not exceed the ambient noise level of 75dBA.

***Ground Water:***

- Rainwater harvesting lagoons have been constructed to take care of surface run off and recharge the aquifers.

***Green belt development:***

- Adequate green area was developed with local area species having capacities to reduce SPM and noise levels.

# NOC from BARC (Bhabha Atomic Research Centre)

दूरभाष/Tel.: 022 - 2550 5354  
फैक्स/Fax: 022 - 2550 5151  
022 - 2550 5353  
ई-मेल/e-mail: ndsharma@barc.gov.in



भारत सरकार

GOVERNMENT OF INDIA

भाभा परमाणु अनुसंधान केंद्र

BHABHA ATOMIC RESEARCH CENTRE

न. द. शर्मा  
नियंत्रक  
N. D. Sharma  
Controller

228 Fax  
सेंट्रल कॉम्प्लेक्स,  
ट्रॉम्बे, मुंबई - 400 085.  
Central Complex,  
Trombay,  
Mumbai - 400 085.

Ref: 14/8/91/Admn-I / 3281

April 16, 2008

Maruti Suzuki India Limited,  
Palam Gurgaon Road,  
Gurgaon, Haryana - 122 015

Kind Attn: Mr Vinay Varshney, Chief General Manager (Production Services)

Sub: NOC for Expansion of Power Plant at MSIL, IMT Manesar

Sir,

With reference to your letter MSIL:PRDS:EM2:1728 dated 18<sup>th</sup> February, 2008, we confirm that BARC has no objection in expansion of your power plant at IMT Manesar.

Thanking You,

Yours faithfully,

*N. D. Sharma*

(N. D. Sharma)  
Controller

16/04/08

संचार अनुभाग / Communication Section  
फैक्स परिपत्र / Fax Transmission

संदेश सं. / Message No. 6072  
दिनांक 27/5/08  
Transmitted on ..... at ..... hrs.  
यदि भेज दिया गया।



# Stack Emission Monitoring Reports



# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



TC-7811



An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Laboratory

## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250531059

ULR No. : TC781125100015101F

Party's Ref No. : Nil

Booking Date : 31/05/2025

Period of Testing : 31/05/2025 To 06/06/2025

Reporting Date : 06/06/2025

### Sample Description

Type of Industry : Automobile Industry  
Name of Plant/ Section : Gas Turbine 7 (20 MW)  
Date of sampling : 27/05/2025  
Source of Emission : Stack Attached to Gas Turbine  
Instrument used : Stack Sampler APM 160 (Sr.No. 88 DTL 2016)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Type of Chimney : Mild Steel  
Type of Fuel used : Natural Gas  
Stack height (from the ground level) : 30 meter  
Stack diameter (at the sampling point) : 3 meter  
Sample Location : As Per Standard Norms  
Purpose of sampling : Monitoring  
Sample collected by : By our Lab. Representative

### A Observations

1. Stack gas temperature, °C : 210.0  
2. Temperature at Metering point, °C : 40.0  
3. Avg. stack gas velocity, m/sec : 31.16  
4. Sampling flow rate, Lt./min. : 11.0  
5. Period of sampling, Minutes : 30.0  
6. Volumetric flow rate, Nm<sup>3</sup>/Hr : 470094.87

### B Results

S.N.	Test Parameters	Units	Results	Standard Limit	Test Method
Discipline: Chemical, Group: Atmospheric Pollution					
1	Particulate Matter (PM)	mg/Nm <sup>3</sup>	39.33	-	IS 11255 (Part-I) : 1985
2	Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	10.47	-	HTH/AP/STP-01
3	Nitrogen Dioxide (NO <sub>2</sub> )	ppmv	41.39	100 Max	HTH/AP/STP-01
4	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	50.44	-	HTH/AP/STP-01
5	Carbon Dioxide (CO <sub>2</sub> )	% V/V	9.30	-	HTH/AP/STP-01
6	Total Hydrocarbon (HC)	mg/Nm <sup>3</sup>	2.98	-	IS 11255 : Part 15 : 2019

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

Remarks : PM, NO<sub>2</sub> & CO value Corrected @ 15 % O<sub>2</sub>.

As per MoEF&CC L.No. J-13012/71/2007-IA.II(T) Dated: February 05, 2008 issued to MSIL Manesar, Gurgaon.

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)  
Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250528057  
ULR No. : TC781125100014772F  
Party's Ref No. : Nil  
Booking Date : 28/05/2025  
Period of Testing : 28/05/2025 To 06/06/2025  
Reporting Date : 06/06/2025

Sample Description : Noise Level Monitoring- GT Noise (20 MW)

Type of Industry : Automobile Industry  
Sample Location : GT-7  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2025)  
Date of measurement : 26/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline – Chemical, Group – Atmospheric Pollution -							
1	0.5 m Away from (Acoustic Encloser Open)	99.8	98.6	97.9	100.2	99.4	96.7
2	0.5 m Away from (Acoustic Encloser Closed)	68.3	69.1	70.4	72.1	73.3	74.4

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")		
		Lmin	Lmax	Leq
1	0.5 m Away from (Acoustic Encloser Open)	96.7	98.6	97.9
2	0.5 m Away from (Acoustic Encloser Closed)	68.3	74.4	71.8
	Insertion Loss	-	-	27.1*
3	Background Noise	-	-	65.8

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

Rishabh Dua  
Rishabh Dua (Digitally Signed)  
Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250826028

ULR No. : TC781125100017502F

Party's Ref No. : Nil

Booking Date : 26/08/2025

Period of Testing : 26/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

### Sample Description

Type of Industry : Automobile Industry  
Name of Plant/ Section : Gas Turbine 7 (20 MW)  
Date of sampling : 26/08/2025  
Source of Emission : Stack Attached to Gas Turbine  
Instrument used : Stack Sampler VSS1 (Sr.No. 247 DTK 2019)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Type of Chimney : Mild Steel  
Type of Fuel used : Natural Gas  
Stack height (from the ground level) : 30 meter  
Stack diameter (at the sampling point) : 3 meter  
Sample Location : As Per Standard Norms  
Purpose of sampling : Monitoring  
Sample collected by : By our Lab. Representative

### A Observations

1. Stack gas temperature, °C : 215.0
2. Temperature at Metering point, °C : 34.0
3. Avg. stack gas velocity, m/sec : 32.57
4. Sampling flow rate, Lt./min. : 11.0
5. Period of sampling, Minutes : 30.0
6. Volumetric flow rate, Nm<sup>3</sup>/ Hr : 486332.32

### B Results

S.N.	Test Parameters	Units	Results	Standard Limit	Test Method
Discipline: Chemical, Group: Atmospheric Pollution					
1	Particulate Matter (PM)	mg/Nm <sup>3</sup>	46.72	-	IS 11255 (Part-I) : 1985
2	Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	5.24	-	HTH/AP/STP-01
3	Nitrogen Dioxide (NO <sub>2</sub> )	ppmv	38.44	100 Max	HTH/AP/STP-01
4	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	40.96	-	HTH/AP/STP-01
5	Carbon Dioxide (CO <sub>2</sub> )	% V/V	14.10	-	HTH/AP/STP-01
6	Total Hydrocarbon (HC)	mg/Nm <sup>3</sup>	3.12	-	IS 11255 : Part 15 : 2019

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

Remarks : PM, NO<sub>2</sub> & CO value Corrected @ 15 % O<sub>2</sub>.

As per MoEF&CC L.No. J-13012/71/2007-IA.II(T) Dated: February 05, 2008 issued to MSIL Manesar, Gurgaon.

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1





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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

### Report No.

: HTH/EP/250826041

### ULR No.

: TC781125100017519F

### Party's Ref No.

: Nil

### Booking Date

: 26/08/2025

### Period of Testing

: 26/08/2025 To 03/09/2025

### Reporting Date

: 03/09/2025

**Sample Description** : Noise Level Monitoring- GT Noise (20 MW)

Type of Industry : Automobile Industry  
Sample Location : GT-7  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2026)  
Date of measurement : 26/08/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline – Chemical, Group – Atmospheric Pollution							
1	0.5 m Away from (Acoustic Encloser Open)	97.5	98.2	103.5	96.4	99.5	98.1
2	0.5 m Away from (Acoustic Encloser Closed)	70.1	72.5	73.0	73.4	73.6	73.9

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")		
		Lmin	Lmax	Leq
1	0.5 m Away from (Acoustic Encloser Open)	96.4	103.5	99.6
2	0.5 m Away from (Acoustic Encloser Closed)	70.1	73.9	72.9
	Insertion Loss	-	-	26.7*
3	Background Noise	-	-	62.8

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

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250531061

ULR No. : TC781125100015097F

Party's Ref No. : Nil

Booking Date : 31/05/2025

Period of Testing : 31/05/2025 To 06/06/2025

Reporting Date : 06/06/2025

### Sample Description

Type of Industry : Automobile Industry  
Name of Plant/ Section : Gas Turbine 8 (20 MW)  
Date of sampling : 27/05/2025  
Source of Emission : Stack Attached to Gas Turbine  
Instrument used : Stack Sampler APM 160 (Sr.No. 88 DTL 2016)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Type of Chimney : Mild Steel  
Type of Fuel used : Natural Gas  
Stack height (from the ground level) : 30 meter  
Stack diameter (at the sampling point) : 3 meter  
Sample Location : As Per Standard Norms  
Purpose of sampling : Monitoring  
Sample collected by : By our Lab. Representative

### A Observations

1. Stack gas temperature, °C : 172.0  
2. Temperature at Metering point, °C : 40.0  
3. Avg. stack gas velocity, m/sec : 30.76  
4. Sampling flow rate, Lt./min. : 12.0  
5. Period of sampling, Minutes : 30.0  
6. Volumetric flow rate, Nm<sup>3</sup>/Hr : 503687.89

### B Results

S.N.	Test Parameters	Units	Results	Standard Limit	Test Method
Discipline: Chemical, Group: Atmospheric Pollution					
1	Particulate Matter (PM)	mg/Nm <sup>3</sup>	37.07	-	IS 11255 (Part-I) : 1985
2	Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	5.24	-	HTH/AP/STP-01
3	Nitrogen Dioxide (NO <sub>2</sub> )	ppmv	35.57	100 Max	HTH/AP/STP-01
4	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	43.74	-	HTH/AP/STP-01
5	Carbon Dioxide (CO <sub>2</sub> )	% V/V	9.20	-	HTH/AP/STP-01
6	Total Hydrocarbon (HC)	mg/Nm <sup>3</sup>	3.01	-	IS 11255 : Part 15 : 2019

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

Remarks : PM, NO<sub>2</sub> & CO value Corrected @ 15 % O<sub>2</sub>.

As per MoEF&CC L.No. J-13012/71/2007-IA.II(T) Dated: February 05, 2008 issued to MSIL Manesar, Gurgaon.

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar

Sr. Analyst (Environment)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)  
Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250528058

ULR No. : TC781125100014773F

Party's Ref No. : Nil

Booking Date : 28/05/2025

Period of Testing : 28/05/2025 To 06/06/2025

Reporting Date : 06/06/2025

Sample Description : Noise Level Monitoring- GT Noise (20 MW)

Type of Industry : Automobile Industry  
Sample Location : GT-8  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2025)  
Date of measurement : 26/05/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline – Chemical, Group – Atmospheric Pollution							
1	0.5 m Away from (Acoustic Encloser Open)	97.6	99.4	96.9	100.3	97.2	96.8
2	0.5 m Away from (Acoustic Encloser Closed)	69.1	68.3	68.9	69.1	70.4	70.1

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")		
		Lmin	Lmax	Leq
1	0.5 m Away from (Acoustic Encloser Open)	96.8	100.3	98.3
2	0.5 m Away from (Acoustic Encloser Closed)	68.3	70.4	69.4
	Insertion Loss	-	-	28.9*
3	Background Noise	-	-	68.3

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

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar

Sr. Analyst (Environment)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250826029

ULR No. : TC781125100017504F

Party's Ref No. : Nil

Booking Date : 26/08/2025

Period of Testing : 26/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

### Sample Description

Type of Industry : Automobile Industry  
Name of Plant/ Section : Gas Turbine 8 (20 MW)  
Date of sampling : 26/08/2025  
Source of Emission : Stack Attached to Gas Turbine  
Instrument used : Stack Sampler VSS1 (Sr.No. 247 DTK 2019)  
Instrument Calibration Status : Calibrated (upto 15.12.2025)  
Type of Chimney : Mild Steel  
Type of Fuel used : Natural Gas  
Stack height (from the ground level) : 30 meter  
Stack diameter (at the sampling point) : 3 meter  
Sample Location : As Per Standard Norms  
Purpose of sampling : Monitoring  
Sample collected by : By our Lab. Representative

### A Observations

1. Stack gas temperature, °C : 195.0  
2. Temperature at Metering point, °C : 34.0  
3. Avg. stack gas velocity, m/sec : 31.78  
4. Sampling flow rate, Lt./min. : 11.0  
5. Period of sampling, Minutes : 30.0  
6. Volumetric flow rate, Nm<sup>3</sup>/ Hr : 494815.43

### B Results

S.N.	Test Parameters	Units	Results	Standard Limit	Test Method
Discipline: Chemical, Group: Atmospheric Pollution					
1	Particulate Matter (PM)	mg/Nm <sup>3</sup>	43.63	-	IS 11255 (Part-I) : 1985
2	Sulphur Dioxide (SO <sub>2</sub> )	mg/Nm <sup>3</sup>	7.85	-	HTH/AP/STP-01
3	Nitrogen Dioxide (NO <sub>2</sub> )	ppmv	39.94	100 Max	HTH/AP/STP-01
4	Carbon Monoxide (CO)	mg/Nm <sup>3</sup>	41.59	-	HTH/AP/STP-01
5	Carbon Dioxide (CO <sub>2</sub> )	% V/V	14.20	-	HTH/AP/STP-01
6	Total Hydrocarbon (HC)	mg/Nm <sup>3</sup>	3.16	-	IS 11255 : Part 15 : 2019

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

Remarks : PM, NO<sub>2</sub> & CO value Corrected @ 15 % O<sub>2</sub>.

As per MoEF&CC L.No. J-13012/71/2007-IA.II(T) Dated: February 05, 2008 issued to MSIL Manesar, Gurgaon.

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

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DOC No. HTH/QF/7.8

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250826042

ULR No. : TC781125100017522F

Party's Ref No. : Nil

Booking Date : 26/08/2025

Period of Testing : 26/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Noise Level Monitoring- GT Noise (20 MW)

Type of Industry : Automobile Industry  
Sample Location : GT-8  
Instrument used : Sound Level Meter (HTH/AP/12/SLM-01)  
Instrument Calibration Status : Calibrated (upto 02.07.2026)  
Date of measurement : 26/08/2025  
Purpose of analysis : Monitoring  
Sample collected/ supplied by : By our Lab. Representative

### OBSERVATION

S.N.	Point of Measurement	I	II	III	IV	V	VI
Discipline – Chemical, Group – Atmospheric Pollution							
1	0.5 m Away from (Acoustic Encloser Open)	99.8	100.1	102.9	101.0	104.2	97.4
2	0.5 m Away from (Acoustic Encloser Closed)	68.9	70.2	73.1	74.2	73.5	74.6

### TEST RESULTS

S.N.	Point of Measurement	Noise Level (dB "A")		
		Lmin	Lmax	Leq
1	0.5 m Away from (Acoustic Encloser Open)	97.4	104.2	101.4
2	0.5 m Away from (Acoustic Encloser Closed)	68.9	74.6	72.9
	Insertion Loss	-	-	28.5*
3	Background Noise	-	-	60.7

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

Rishabh Dua

Rishabh Dua (Digitally Signed)

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Sr. Manager (Env.)

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# Effluent Treatment Plant Monitoring Reports





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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250527037

ULR No. : TC781125100014599F

Party's Ref No. : Nil

Booking Date : 27/05/2025

Period of Testing : 27/05/2025 To 02/06/2025

Reporting Date : 02/06/2025

Sample Description : Effluent Water Sample (ETP-Outlet)

Type of Industry : Automobile Industry  
Sample type : Effluent Water Sample (ETP-Outlet)  
Date of sampling : 26/05/2025  
Date of receipt of sample : 27/05/2025  
Sample Location : ETP-Outlet  
Sample quantity : 5 Ltr.  
Purpose of analysis : Monitoring  
Sampling Method : HTH/EP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Test Parameters	Unit	Result	Limit as per EP Act. 1986, Schedule-VI (Inland Surface Water)	Test Method
Discipline: Chemical, Group: Pollution & Environment					
1	Temperature	°C	26.0	--	IS 3025 (Part 9): 2023
2	Colour	Hazen	BLQ(LOQ 1.0)	--	IS 3025 (Part 4) : 2021
3	Odour	--	Odourless	--	IS 3025 (Part 5): 2018
4	pH	--	7.50	5.5 - 9.0	IS 3025 (Part 11): 2022
5	Total Suspended Solids	mg/l	BLQ(LOQ 1.0)	100 Max.	IS 3025 (Part 17): 2022
6	Biochemical Oxygen Demand (BOD) 3 Days at 27°C	mg/l	3.8	30 Max.	IS 3025 (Part 44): 2023
7	Chemical Oxygen Demand(COD)	mg/l	29.0	250 Max.	IS 3025 (Part 58): 2023
8	Oil & Grease	mg/l	BLQ(LOQ 4.0)	10 Max.	IS 3025 (Part 39): 2021
9	Free Ammonia (as NH3)	mg/l	BLQ(LOQ 0.1)	5.0 Max.	APHA (24th Edition)4500-NH3 C: 2023
10	Ammonical Nitrogen (as N)	mg/l	BLQ(LOQ 5.0)	50 Max.	IS 3025 (Part 34/Sec-1): 2023
11	Nitrate Nitrogen (as N)	mg/l	0.75	10 Max.	IS 3025 (Part 34/Sec-1): 2023
12	Total Kjeldahl Nitrogen (as N)	mg/l	18.7	100 Max.	IS 3025 (Part 34/Sec-1): 2023
13	Total Residual Chlorine	mg/l	BLQ(LOQ 0.05)	1.0 Max.	IS 3025 (Part 26): 2021
14	Cyanide (as CN)	mg/l	BLQ(LOQ 0.02)	0.2 Max.	IS 3025 (Part 27/Sec-1): 2021
15	Dissolved Phosphate (as P)	mg/l	BLQ(LOQ 0.05)	5.0 Max.	IS 3025 (Part 31/Sec-1): 2022
16	Fluoride (as F)	mg/l	1.2	2.0 Max.	APHA (24th Edition) 4500F-2023
17	Hexavalent Chromium (as Cr+6)	mg/l	BLQ(LOQ 0.05)	0.1 Max.	IS 3025 (Part 52): 2003
18	Phenolic Compound (C6H5OH)	mg/l	BLQ(LOQ 0.05)	1.0 Max.	IS 3025 (Part 43/Sec-1): 2022
19	Sulphide (H2S)	mg/l	BLQ(LOQ 0.5)	2.0 Max.	IS 3025 (Part 29):2022
20	Arsenic (as As)	mg/l	BLQ(LOQ:0.01)	0.2 Max.	HTH/INS-03/STP-29

Rishabh Dua



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7. The details received from customer on its own responsibility. Lab does not confirm about it and hence does not taken any responsibility whatsoever.





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthousecs@gmail.com, testing@hthlabs.com



TC-7811



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## TEST REPORT

<b>Issued To:</b> <b>Maruti Suzuki India Ltd. (Vehicle Plant)</b> Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)			<b>Report No.</b> : HTH/EP/250527037 <b>ULR No.</b> : TC781125100014599F <b>Party's Ref No.</b> : Nil  <b>Booking Date</b> : 27/05/2025 <b>Period of Testing</b> : 27/05/2025To 02/06/2025 <b>Reporting Date</b> : 02/06/2025		
S.N.	Test Parameters	Unit	Result	Limit as per EP Act. 1986, Schedule-VI (Inland Surface Water)	Test Method
21	Cadmium (as Cd)	mg/l	BLQ(LOQ:0.01)	2.0 Max.	HTH/INS-03/STP-29
22	Chromium (as Cr)	mg/l	BLQ(LOQ:0.1)	2.0 Max.	HTH/INS-03/STP-29
23	Copper (as Cu)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
24	Iron (as Fe)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
25	Lead (as Pb)	mg/l	BLQ(LOQ:0.01)	0.1 Max.	HTH/INS-03/STP-29
26	Manganese (as Mn)	mg/l	BLQ(LOQ:0.1)	2.0 Max.	HTH/INS-03/STP-29
27	Mercury (as Hg)	mg/l	BLQ(LOQ:0.001)	0.01 Max.	HTH/INS-03/STP-29
28	Nickel (as Ni)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
29	Selenium (as Se)	mg/l	BLQ(LOQ:0.01)	0.05 Max.	HTH/INS-03/STP-29
30	Vanadium (as V)	mg/l	BLQ(LOQ:0.1)	0.2 Max.	HTH/INS-03/STP-29
31	Zinc (Zn)	mg/l	BLQ(LOQ:0.1)	5.0 Max.	HTH/INS-03/STP-29

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

**Remarks :** BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari  
Sr. Manager (Env.)

Page No.: 2 of 2

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250825005

ULR No. : TC781125100017461F

Party's Ref No. : Nil

Booking Date : 25/08/2025

Period of Testing : 25/08/2025 To 01/09/2025

Reporting Date : 01/09/2025

Sample Description : Effluent Water Sample (ETP-Outlet)

Type of Industry : Automobile Industry  
Sample type : Effluent Water Sample (ETP-Outlet)  
Date of sampling : 25/08/2025  
Date of receipt of sample : 25/08/2025  
Sample Location : ETP-Outlet  
Sample quantity : 5 Ltr.  
Purpose of analysis : Monitoring  
Sampling Method : HTH/EP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### TEST RESULTS

S.N.	Test Parameters	Unit	Result	Limit as per EP Act. 1986, Schedule-VI (Inland Surface Water)	Test Method
Discipline: Chemical, Group: Pollution & Environment					
1	Temperature	°C	25.0	--	IS 3025 (Part 9): 2023
2	Colour	Hazen	BLQ(LOQ 1.0)	--	IS 3025 (Part 4) : 2021
3	Odour	--	Odourless	--	IS 3025 (Part 5): 2018
4	pH	--	8.12	5.5 - 9.0	IS 3025 (Part 11): 2022
5	Total Suspended Solids	mg/l	4.0	100 Max.	IS 3025 (Part 17): 2022
6	Biochemical Oxygen Demand (BOD) 3 Days at 27°C	mg/l	2.5	30 Max.	IS 3025 (Part 44): 2023
7	Chemical Oxygen Demand(COD)	mg/l	30.0	250 Max.	IS 3025 (Part 58): 2023
8	Oil & Grease	mg/l	BLQ(LOQ 4.0)	10 Max.	IS 3025 (Part 39): 2021
9	Free Ammonia (as NH3)	mg/l	BLQ(LOQ 0.1)	5.0 Max.	APHA (24th Edition)4500-NH3 C: 2023
10	Ammonical Nitrogen (as N)	mg/l	BLQ(LOQ 5.0)	50 Max.	IS 3025 (Part 34/Sec-1): 2023
11	Nitrate Nitrogen (as N)	mg/l	BLQ(LOQ 0.5)	10 Max.	IS 3025 (Part 34/Sec-1): 2023
12	Total Kjeldahl Nitrogen (as N)	mg/l	3.7	100 Max.	IS 3025 (Part 34/Sec-1): 2023
13	Total Residual Chlorine	mg/l	BLQ(LOQ 0.05)	1.0 Max.	IS 3025 (Part 26): 2021
14	Cyanide (as CN)	mg/l	BLQ(LOQ 0.02)	0.2 Max.	IS 3025 (Part 27/Sec-1): 2021
15	Dissolved Phosphate (as P)	mg/l	0.08	5.0 Max.	IS 3025 (Part 31/Sec-1): 2022
16	Fluoride (as F)	mg/l	0.69	2.0 Max.	APHA (24th Edition) 4500F-2023
17	Hexavalent Chromium (as Cr+6)	mg/l	BLQ(LOQ 0.05)	0.1 Max.	IS 3025 (Part 52): 2003
18	Phenolic Compound (C6H5OH)	mg/l	BLQ(LOQ 0.05)	1.0 Max.	IS 3025 (Part 43/Sec-1): 2022
19	Sulphide (H2S)	mg/l	BLQ(LOQ 0.5)	2.0 Max.	IS 3025 (Part 29):2022
20	Arsenic (as As)	mg/l	BLQ(LOQ:0.01)	0.2 Max.	HTH/INS-03/STP-29

Rishabh Dua







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## TEST REPORT

<b>Issued To:</b> <b>Maruti Suzuki India Ltd. (Vehicle Plant)</b> Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)	<b>Report No.</b> : HTH/EP/250825005 <b>ULR No.</b> : TC781125100017461F <b>Party's Ref No.</b> : Nil <b>Booking Date</b> : 25/08/2025 <b>Period of Testing</b> : 25/08/2025 To 01/09/2025 <b>Reporting Date</b> : 01/09/2025
--	--

S.N.	Test Parameters	Unit	Result	Limit as per EP Act. 1986, Schedule-VI (Inland Surface Water)	Test Method
21	Cadmium (as Cd)	mg/l	BLQ(LOQ:0.01)	2.0 Max.	HTH/INS-03/STP-29
22	Chromium (as Cr)	mg/l	BLQ(LOQ:0.1)	2.0 Max.	HTH/INS-03/STP-29
23	Copper (as Cu)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
24	Iron (as Fe)	mg/l	BLQ(LOQ:0.1)	3.0 Max.	HTH/INS-03/STP-29
25	Lead (as Pb)	mg/l	0.087	0.1 Max.	HTH/INS-03/STP-29
26	Manganese (as Mn)	mg/l	BLQ(LOQ:0.1)	2.0 Max.	HTH/INS-03/STP-29
27	Mercury (as Hg)	mg/l	BLQ(LOQ:0.001)	0.01 Max.	HTH/INS-03/STP-29
28	Nickel (as Ni)	mg/l	0.350	3.0 Max.	HTH/INS-03/STP-29
29	Selenium (as Se)	mg/l	BLQ(LOQ:0.01)	0.05 Max.	HTH/INS-03/STP-29
30	Vanadium (as V)	mg/l	BLQ(LOQ:0.1)	0.2 Max.	HTH/INS-03/STP-29
31	Zinc (Zn)	mg/l	BLQ(LOQ:0.1)	5.0 Max.	HTH/INS-03/STP-29

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

**Remarks :** BLQ : Below limit of Quantification / LOQ : Limit of Quantification

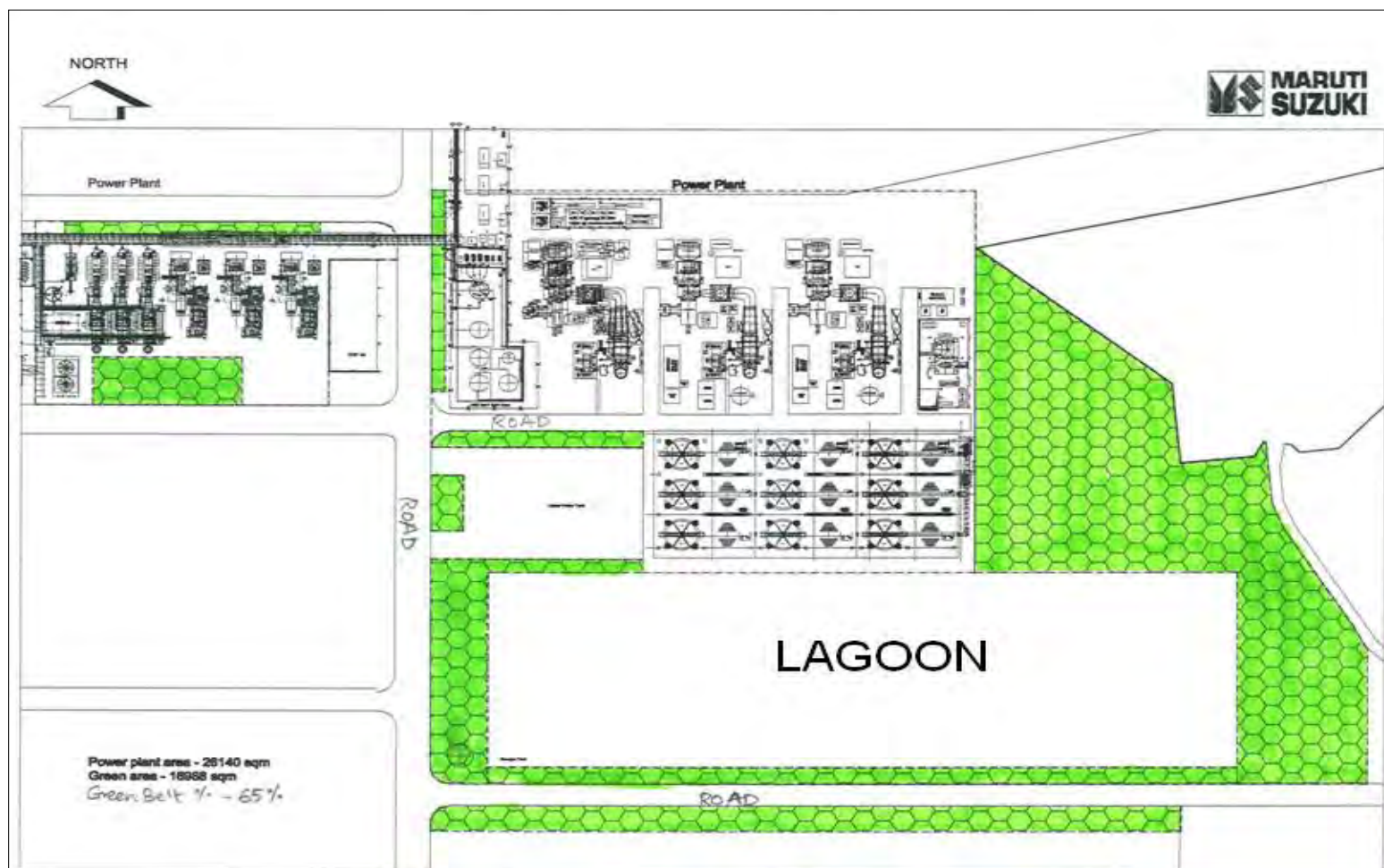
Rishabh Dua  
Rishabh Dua (Digitally Signed)  
Review by

Md. Asfak Ansari  
Sr. Manager (Env.)

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MARUTI SUZUKI INDIA LIMITED, MANESAR, HARYANA  
Green Area and RWH details



# Ambient Air Quality Monitoring Reports





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250524107

ULR No. : TC781125100014766F

Party's Ref No. : Nil

Booking Date : 24/05/2025

Period of Testing : 24/05/2025 To 31/05/2025

Reporting Date : 31/05/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 23/05/2025 (09:50 Hrs) to 24/05/2025 (09:50 Hrs)  
Sample Location : Cop Lab Area  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.16 m<sup>3</sup>/min
2. Total volume of air sampled : 1695.08 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	82.59	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	40.82	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	16.18	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	36.23	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	23.47	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.83	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	1.031	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar

Sr. Analyst (Environment)

Page No.: 1 of 1





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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828016

ULR No. : TC781125100017506F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 26/08/2025 (09:30 Hrs) to 27/08/2025 (09:30 Hrs)  
Sample Location : COP Lab Area  
Instrument used : Air Sampler GTI-311 (Sr. No. 09 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.23 m<sup>3</sup>/min
2. Total volume of air sampled : 1764.00 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	70.86	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	35.35	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	11.22	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	27.26	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	21.45	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	14.25	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.344	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

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Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250529071

ULR No. : TC781125100014767F

Party's Ref No. : Nil

Booking Date : 29/05/2025

Period of Testing : 29/05/2025 To 05/06/2025

Reporting Date : 05/06/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 26/05/2025 (09:30 Hrs) to 27/05/2025 (09:30 Hrs)  
Sample Location : JV Gate Area  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.26 m<sup>3</sup>/min
2. Total volume of air sampled : 1812.89 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	87.71	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	45.27	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	19.72	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	38.25	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	25.73	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	21.27	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.916	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828017

ULR No. : TC781125100017507F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 26/08/2025 (09:30 Hrs) to 27/08/2025 (09:30 Hrs)  
Sample Location : JV Gate Area  
Instrument used : Air Sampler GTI-311 (Sr. No. 10 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.21 m<sup>3</sup>/min
2. Total volume of air sampled : 1742.40 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	79.78	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	41.17	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	13.09	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	28.45	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	22.64	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	16.63	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.916	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouse@hthlabs.com



TC-7811



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250529072

ULR No. : TC781125100014768F

Party's Ref No. : Nil

Booking Date : 29/05/2025

Period of Testing : 29/05/2025 To 05/06/2025

Reporting Date : 05/06/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 27/05/2025 (10:30 Hrs) to 28/05/2025 (10:30 Hrs)  
Sample Location : SND Gate  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.27 m<sup>3</sup>/min
2. Total volume of air sampled : 1830.32 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	89.06	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	48.12	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	21.29	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	39.90	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	24.49	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.76	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	1.146	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

Remarks : Standard limits are as per CPCB notification Nov. 2009

BLQ : Below limit of Quantification / LOQ : Limit of Quantification

Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Shobhit Kumar  
Sr. Analyst (Environment)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

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Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouse@hthlabs.com



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828018

ULR No. : TC781125100017508F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 27/08/2025 (10:00 Hrs) to 28/08/2025 (10:00 Hrs)  
Sample Location : **SND Gate**  
Instrument used : Air Sampler GTI-311 (Sr. No. 09 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.15 m<sup>3</sup>/min
2. Total volume of air sampled : 1648.80 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	75.81	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	39.50	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	15.33	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	31.21	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	23.54	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	19.14	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.458	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

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Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)

Page No.: 1 of 1





# HTH Laboratories Pvt. Ltd.

(Formerly Known as Haryana Test House)

Plot No. 50-C, Sector-25 Part-II, HUDA, PANIPAT-132 103 (HR.)

Contact : (Off.) 86077-70160, 0180-4067223, (Env.) 86077-70164, (BM) 86077-70166, (Food) 86077-70169  
Web Site : www.haryanatesthouse.net, e-mail : haryanatesthouse@hthlabs.com



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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250524106

ULR No. : TC781125100014765F

Party's Ref No. : Nil

Booking Date : 24/05/2025

Period of Testing : 24/05/2025 To 31/05/2025

Reporting Date : 31/05/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 22/05/2025 (09:30 Hrs) to 23/05/2025 (09:30 Hrs)  
Sample Location : STP Area  
Instrument used : RDS Model APM- 460 BL (Sr. No. 2304 DTB 2018)  
Instrument Calibration Status : Calibrated (upto 27.03.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.16 m<sup>3</sup>/min
2. Total volume of air sampled : 1595.29 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	84.62	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	44.22	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	18.86	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	35.81	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	26.49	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	21.01	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.687	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

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Review by

Shobhit Kumar  
Sr. Analyst (Environment)

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## TEST REPORT

### Issued To:

Maruti Suzuki India Ltd. (Vehicle Plant)

Plot No-1, Phase 3A, IMT Manesar, Gurgaon (Hr)

Report No. : HTH/EP/250828019

ULR No. : TC781125100017509F

Party's Ref No. : Nil

Booking Date : 28/08/2025

Period of Testing : 28/08/2025 To 03/09/2025

Reporting Date : 03/09/2025

Sample Description : Ambient Air Quality Monitoring

Type of Industry : Automobile Industry  
Date & time of sampling : 27/08/2025 (10:00 Hrs) to 28/08/2025 (10:00 Hrs)  
Sample Location : STP Area  
Instrument used : Air Sampler GTI-311 (Sr. No. 10 DTH 25)  
Instrument Calibration Status : Calibrated (upto 15.08.2026)  
Purpose of analysis : Monitoring  
Sampling Method : HTH/AP/SAP-01  
Sample collected/ supplied by : By our Lab. Representative

### A. Observations:

1. Sampling flow rate (Avg.) : 1.09 m<sup>3</sup>/min
2. Total volume of air sampled : 1562.40 m<sup>3</sup>
3. Period of sampling : 24 Hrs

S.N.	Test Parameters	Units	Result	Standard Limits (NAAQS)	Test Method
Discipline - Chemical, Group - Atmospheric Pollution					
1	Particulate Matter (PM10)	µg/ m <sup>3</sup>	72.32	100 max	IS 5182 (Part-23) : 2006
2	Particulate Matter (PM 2.5)	µg/ m <sup>3</sup>	37.43	60 max	IS 5182 (Part-24) : 2019
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/ m <sup>3</sup>	14.58	80 max	IS 5182 (Part-2) Sec-1 : 2023
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/ m <sup>3</sup>	33.58	80 max	IS 5182 (Part-6) : 2006
5	Ammonia (NH <sub>3</sub> )	µg/ m <sup>3</sup>	25.62	400 max	IS 5182 (Part-25) : 2018
6	Ozone (O <sub>3</sub> )	µg/ m <sup>3</sup>	15.49	100 max	IS 5182 (Part-9) : 1974
7	Carbon Monoxide (CO)	mg/ m <sup>3</sup>	0.573	4 max	IS 5182 (Part-10) : 1999
8	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/ m <sup>3</sup>	BLQ (LOQ-0.52)	5 max	IS 5182 (Part-11) : 2006
9	Benzo - Pyrene (BaP)	ng/ m <sup>3</sup>	BLQ (LOQ-0.1)	1 max	IS 5182 (Part-12) : 2004
10	Lead (Pb)	µg/ m <sup>3</sup>	BLQ (LOQ-0.02)	1 max	IS 5182 (Part-22) : 2004
11	Nickel (Ni)	ng/ m <sup>3</sup>	BLQ (LOQ:2)	20 max	IS 5182 (Part-26) : 2020
12	Arsenic (As)	ng/ m <sup>3</sup>	BLQ (LOQ:1)	6 max	HTH/INS-03/STP-33

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

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Rishabh Dua

Rishabh Dua (Digitally Signed)

Review by

Md. Asfak Ansari

Sr. Manager (Env.)


Page No.: 1 of 1



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TRIBUNE 22 - Feb - 2008

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**Maruti Suzuki India Limited**  
 11th Floor, Jeevan Prakash Building,  
 25 Kasturba Gandhi Marg, New Delhi - 110001.  
 Ph: 011-23316831. Fax: 011-23318754

Ministry of Environment and Forests has accorded environment clearance for the proposed expansion of thermal (captive) power plant at Maruti Suzuki India Limited, Manesar Plant. The copies of the clearance letters are available with the Haryana State Pollution Control Board and the same can also be seen on the website of Ministry of Environment & Forest at <http://envfor.nic.in>

**Date: 22nd February, 2008. Maruti Suzuki India Limited**

**Advertisement 2:**

AMAR UJALA 22-Feb-2008

**सूचना**

 **MARUTI SUZUKI**

**Maruti Suzuki India Limited**  
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 25 Kasturba Gandhi Marg, New Delhi - 110001.  
 Ph: 011-23316831. Fax: 011-23318754

पर्यावरण एवं वन मंत्रालय द्वारा मारुति सुजुकी इण्डिया लिमिटेड के मानेसर प्लांट में पावर प्लांट के विस्तार हेतु पर्यावरणीय अनुमोदन प्रदान कर दिया गया है. अनुमोदन पत्र की प्रतियां हरियाणा राज्य प्रदूषण नियंत्रण बोर्ड के पास उपलब्ध है. अनुमोदन पत्र को पर्यावरण एवं वन मंत्रालय की वेबसाइट <http://envfor.nic.in> पर भी देखा जा सकता है.

**दिनांक: 22 फरवरी, 2008 मारुति सुजुकी इण्डिया लिमिटेड**