

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.

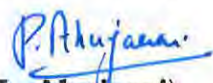
5. The environmental clearance accorded **shall be valid for a period of five years** to start operations by the power plant.

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:2023-24:087

22-Nov-2023

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 Environmental Clearance for Expansion of 77.5 MW to 83.5 MW by addition of 6.0 MW Gas Based Captive Power Plant at Gurugram Plant.

**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 23 to September, 23 related to environmental clearance issued for 6.0 MW Gas based Captive Power Plant at 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, Gurugram

CC: 1. Haryana State Pollution Control Board, Panchkula  
2. Central Pollution Control Board, Lucknow

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**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: 0124-2346721-30, 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 2023 to September 2023**

**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

S. No.	Stipulated Condition in Environment Clearance	Compliance status
<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 the temperature of effluent shall be at ambient.	Sewage treatment plant of adequate capacity is already installed. The treated sewage is recycled for manufacturing process and horticulture.





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 Annexure 1.
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 shall be implemented.
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 Annexure 2. PPE like earplug / ear muffs are provided to person working in high noise area. Periodic audiometric records of persons working in area are maintained.
xiii.	NO <sub>x</sub> emission from each Gas Turbine shall not exceed 50 ppm.	Complied. Reports for stack emission monitoring are attached in Annexure 3.
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.
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 Annexure 4.

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 Annexure 5.
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 belt developed shall not be less than 33% of the total area.	Green belt of GT area is placed at Annexure 6.

#### **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 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 is utilized. 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 Annexure 7.
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 report is 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 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.	Provided.
xi.	Separate funds shall be allocated for implementation or 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.	Funds allocated for environment protection measures are not diverted.
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 located 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. Bineet Arora Assistant Vice President – EMU Maruti Suzuki India Limited Palam Gurugram Road Gurugram, Haryana Email: <a href="mailto:Bineet.arora@maruti.co.in">Bineet.arora@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 is enclosed in Annexure A.
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 units and agricultural land and landless laborers/artisans. a) SC/ST/Adivasis b) Others (Please indicate whether these figures are based on any scientific and systematic	Not Applicable

	survey carried out or 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 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, 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.**  
**ENCLOSURE: GURUGRAM-122015 (HR.)**

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- 48781000, 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 Kumar Garg**

Asst. Gen. Manager (EMM-M2)

Asstt./..../(Cash)ay:2..../  
Track on [www.indiapost.gov.in](http://www.indiapost.gov.in)



EN613493300IN INR:6972613493380  
SF PALAM ROAD SO (122015)  
Counter No:3,25/03/2021,13:37  
To:REGIONAL DIRECTOR,C  
PIN:160019, Sector 19 Chandigarh SO  
From:MSI LTD,G  
M1:50gms

Asstt./..../(Cash)Tay:2..../

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 Mandaia 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



# Tubewell List

Measure - 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

## TEST REPORT

### Issued to :

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230727-015-055  
ULR Code : TC5503 23 3 00009978 F  
Report Date : 01-08-2023  
Sample Receipt Date : 27-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample

Rated Capacity

### Laboratory Provided Information:

Date of Monitoring

Time of Monitoring

Name of the Emission Source Monitoring

Purpose of Monitoring

Instrument used

Test Protocol Followed

**NG Noise**

6 MW

: 27-07-2023

: 10:45 AM

: NG DG Set

: To Check Noise Level

: Sound Level Meter

: CPCB Guidelines



TC - 5503

## Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable Limit#	Test Method
<b>Physical Analysis</b>					
1	Background Noise	dB(A)	66.1	NA	FL/SOP/ENV-08
2	Noise at 1 meter distance from acoustic enclosure (Door Closed)	dB(A)	73.6	75 Max.	FL/SOP/ENV-08
3	Noise at 1 meter distance from acoustic enclosure (Door Open)	dB(A)	98.9	NA	FL/SOP/ENV-08
4	Insertion Loss	dB(A)	25.3	NA	FL/SOP/ENV-08

NA= Not Applicable

#As per MoEF&amp;CC L.No.-J13012/06/2009-IA.II (T), Dated: June 3, 2011 Issued to MSIL Gurgaon Plant Palam Gurgaon Road.

Reviewed By

Authorised Signatory  
D. Mathur, Director

Page 1 of 1

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

# Stack Emission Monitoring Reports

## TEST REPORT

### Issued to :

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230529-008-030  
ULR Code : TC5503 23 3 00006507 F  
Report Date : 03-06-2023  
Sample Receipt Date : 29-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample : **Stack Emissions**  
Rated Capacity : 6 MW  
Type of Stack /Duct : Metal  
Stack Height from Ground Level (m) : 70  
Diameter of the Stack (m) : 1.114  
Type of Fuel used & Its Consumption : Natural Gas  
Operation Load During Monitoring : 4.9 MW

### Laboratory Provided Information:

Date of Sampling : 29-05-2023  
Time of sampling : 02:30 PM  
Test Started On : 29-05-2023  
Test Completed On : 03-06-2023  
Purpose of Monitoring : To Check Pollution Load  
Name of the Emission Source Monitoring : NG DG Set  
Sampling Method : IS-11255 (P-7, P-3)& FL/SOP/ENV/D-02  
Stack Identification : Stack attached to Natural Gas DG (Wartsilla Finland)  
Normal Operating Schedule : As per requirement  
Sampling Duration (min) : 34  
Number of Traverse Points : 12  
Flue Gas Temperature °C : 152.4  
Ambient Air Temperature °C : 35.1  
Flue Gas Velocity (m/s) : 21.8  
Volumetric Flow Rate (Nm³/h) : 53557.19

### Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable Limit#	Test Method
<b>Chemical Analysis</b>					
1	Carbon Monoxide at 15% O <sub>2</sub>	ppmv	65.43	NA	FL/SOP/ENV-26
2	Non Methane Hydrocarbons (as C) at 15% O <sub>2</sub>	ppmv	35.18	NA	FL/SOP/GC-24
3	Oxides of Nitrogen (as NO <sub>2</sub> ) at 15% O <sub>2</sub>	ppmv	37.52	50	IS:11255 (P-7)
4	Particulate matter at 15% O <sub>2</sub>	mg/Nm³	41.65	NA	IS:11255(P-1)

NA= Not Applicable

#As per MoEF&CC L.No.-J13012/06/2009-IA.II (T), Dated: June 3, 2011 Issued to MSIL Gurgaon Plant Palam Gurgaon Road.

*Sandeep Kumar*  
**Reviewed By**

*[Signature]*  
**Authorised Signatory**  
D. Mahapatra, Director

Page 1 of 1

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

## TEST REPORT

**Issued to :**
**MSIL Gurgaon Plant**

Old Palam Gurgaon Road

Gurgaon-122015

Haryana, India

J.O. No. : ENV20230727-014-053

ULR Code : TC5503 23 3 00009976 F

Report Date : 01-08-2023

Sample Receipt Date : 27-07-2023

Account Manager : BD Team 7

Credit Manager : Gulab/Septesh


**Customer Provided Information:#**

Nature of the Sample

Rated Capacity

Type of Stack /Duct

Stack Height from Ground Level (m)

Diameter of the Stack (m)

Type of Fuel used &amp; Its Consumption

Operation Load During Monitoring

**: Stack Emissions**

: 6 MW

: Metal

: 70

: 1.114

: Natural Gas

: 4.95 MW


**Laboratory Provided Information:**

Date of Sampling

Time of sampling

Test Started On

Test Completed On

Purpose of Monitoring

Name of the Emission Source Monitoring

Sampling Method

Stack Identification

Normal Operating Schedule

Sampling Duration (min)

Number of Traverse Points

Flue Gas Temperature °C

Ambient Air Temperature °C

Flue Gas Velocity (m/s)

Volumetric Flow Rate (Nm³/h)

: 27-07-2023

: 10:45 AM

: 27-07-2023

: 01-08-2023

: To Check Pollution Load

: NG DG Set

: IS-11255 (P-7, P-3) &amp; FL/SOP/ENV/D-02

: Stack attached to Natural Gas DG (Wartsila Finland)

: As per requirement

: 33

: 12

: 145.6

: 30.1

: 22.3

: 55675.54

## Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable Limit#	Test Method
<b>Chemical Analysis</b>					
1	Carbon Monoxide at 15% O <sub>2</sub>	mg/Nm <sup>3</sup>	68.95	NA	FL/SOP/ENV-26
2	Non Methane Hydrocarbons (as C) at 15% O <sub>2</sub>	mg/Nm <sup>3</sup>	39.16	NA	FL/SOP/GC-24
3	Oxides of Nitrogen (as NO <sub>2</sub> ) at 15% O <sub>2</sub>	ppmv	42.89	50	IS:11255 (P-7)
4	Particulate matter at 15% O <sub>2</sub>	mg/Nm <sup>3</sup>	46.32	NA	IS:11255 (P-1)

NA= Not Applicable

#As per MoEF&amp;CC L.No.-J13012/06/2009-IA.II (T), Dated: June 3, 2011 Issued to MSIL Gurgaon Plant Palam Gurgaon Road.

*Sandeep Kumar*  
Reviewed By

Page 1 of 1

*D. Mathur*  
Authorised Signatory  
D. Mathur, Director

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**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:

## TEST REPORT

**Issued to :**

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230522-010-037  
ULR Code : TC5503 23 3 00006101 F  
Report Date : 27-05-2023  
Sample Receipt Date : 22-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information: #**

Nature of the Sample

Sampling Location

: Ambient Air

: DM Plant

**Laboratory Provided Information:**

Date of Sampling

Time of Sampling

Test Started On

Test Completed On

Purpose of Monitoring

Method of Sampling

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

Avg. Flow Rate of Air (lpm) (for Benzene)

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

Ambient Temperature (°C)

Duration of Sampling

: 21-05-2023

: 10:32 AM

: 22-05-2023

: 27-05-2023

: To Assess the Pollution Load

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

: 1.14

: 0.2

: 16.7

: 36

: 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	126.48	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	205.36	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	4.13	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	21.74	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.52	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	63.25	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	32.17	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
10	Non methane hydrocarbon	ppmv	ND, [DL-0.1]	NA	FL/SOP/GC-24

*Sandeep Kumar*  
Reviewed By

*D Mathur*  
Authorised Signatory  
D Mathur, Director

Page 1 of 2

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**TEST REPORT**

**Issued to :**

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230522-010-037  
ULR Code : TC5503 23 3 00006101 F  
Report Date : 27-05-2023  
Sample Receipt Date : 22-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information: #**

Nature of the Sample

Sampling Location

**Laboratory Provided Information:**

Date of Sampling

Time of Sampling

Test Started On

Test Completed On

Purpose of Monitoring

Method of Sampling

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

Avg. Flow Rate of Air (lpm) (for Benzene)

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

Ambient Temperature (°C)

Duration of Sampling

: **Ambient Air**

: DM Plant

: 21-05-2023

: 10:32 AM

: 22-05-2023

: 27-05-2023

: To Assess the Pollution Load

: IS-5182 (P-14) & FL/SOP/ENV/D-01

: 1.14

: 0.2

: 16.7

: 36

: 24hrs



**Analysis Report**

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Method
<b>Heavy Metals</b>					
11	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
12	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
13	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009 Except for **PM<sub>10</sub>** & **PM<sub>2.5</sub>** values.

*Sandeep Kumar*

**Reviewed By**

*D Mathur*  
**Authorised Signatory**  
D Mathur, Director

Page 2 of 2

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

**TEST REPORT**

**Issued to :**

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230726-015-058  
ULR Code : TC5503 23 3 00009904 F  
Report Date : 31-07-2023  
Sample Receipt Date : 26-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information: #**

Nature of the Sample  
Sampling Location

Ambient Air  
DM Plant

**Laboratory Provided Information:**

Date of Sampling : 25-07-2023  
Time of Sampling : 10:12 AM  
Test Started On : 26-07-2023  
Test Completed On : 31-07-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>) : 1.16  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 34  
Duration of Sampling : 24hrs



**Analysis Report**

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	58.74	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	95.63	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	5.23	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	7.15	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.47	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	27.35	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	30.84	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	NA	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
10	Non methane hydrocarbon	ppmv	ND, [DL-0.1]		FL/SOP/GC-24
<b>Heavy Metals</b>					
11	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
12	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
13	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(I)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandeep Kumar*  
Reviewed By

*Mathur*  
Authorised Signatory  
D. Mathur, Director

Page 1 of 1

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\*: The details are received from Customer on its own responsibility. FARE Labs Pvt. Ltd. does not Confirm about it and hence does not take any responsibility whatsoever.

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

**TEST REPORT**

**Issued to :**

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230523-019-078  
ULR Code : TC5503 23 3 00006200 F  
Report Date : 29-05-2023  
Sample Receipt Date : 23-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information: #**

Nature of the Sample  
Sampling Location

: **Ambient Air**  
: Machine Shop No. 1&2

**Laboratory Provided Information:**

Date of Sampling  
Time of Sampling  
Test Started On  
Test Completed On  
Purpose of Monitoring  
Method of Sampling  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)  
Avg. Flow Rate of Air (lpm) (for Benzene)  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)  
Ambient Temperature (°C)  
Duration of Sampling

: 22-05-2023  
: 10:37 AM  
: 23-05-2023  
: 29-05-2023  
: To Assess the Pollution Load  
: IS-5182 (P-14) & FL/SOP/ENV/D-01  
: 1.16  
: 0.2  
: 16.7  
: 32  
: 24hrs



**Analysis Report**

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	125.34	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	175.26	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	3.12	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	18.54	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.4	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	71.22	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	42.58	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
10	Non methane hydrocarbon	ppmv	ND, [DL-0.1]	NA	FL/SOP/GC-24

*Sandeep Kumar*  
**Reviewed By**

*D Mathur*  
**Authorised Signatory**  
D Mathur, Director

Page 1 of 2

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**TEST REPORT**

**Issued to :**

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230523-019-078  
ULR Code : TC5503 23 3 00006200 F  
Report Date : 29-05-2023  
Sample Receipt Date : 23-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information: #**

Nature of the Sample

Sampling Location

: **Ambient Air**

: Machine Shop No. 1&2

**Laboratory Provided Information:**

Date of Sampling

Time of Sampling

Test Started On

Test Completed On

Purpose of Monitoring

Method of Sampling

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

Avg. Flow Rate of Air (lpm) (for Benzene)

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

Ambient Temperature (°C)

Duration of Sampling

: 22-05-2023

: 10:37 AM

: 23-05-2023

: 29-05-2023

: To Assess the Pollution Load

: IS-5182 (P-14) & FL/SOP/ENV/D-01

: 1.16

: 0.2

: 16.7

: 32

: 24hrs



**Analysis Report**

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Method
<b>Heavy Metals</b>					
11	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
12	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
13	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(I)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009 Except for **PM<sub>10</sub>** & **PM<sub>2.5</sub>** values.

*Sandeep Kumar*  
**Reviewed By**

*D Mathur*  
**Authorised Signatory**  
D Mathur, Director

Page 2 of 2

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

### TEST REPORT

**Issued to :**

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230727-013-051  
ULR Code : TC5503 23 3 00009975 F  
Report Date : 01-08-2023  
Sample Receipt Date : 27-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information:#**

Nature of the Sample

Sampling Location

**Ambient Air**

Machine Shop No.1 &amp; 2

**Laboratory Provided Information:**

Date of Sampling

Time of Sampling

Test Started On

Test Completed On

Purpose of Monitoring

Method of Sampling

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

Avg. Flow Rate of Air (lpm) (for Benzene)

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

Ambient Temperature (°C)

Duration of Sampling

26-07-2023

10:25 AM

27-07-2023

01-08-2023

To Assess the Pollution Load

IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

1.18

0.2

16.7

33

24hrs



### Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	42.16	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	71.65	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	3.52	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	9.64	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.49	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	27.43	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	45.17	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	NA	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
10	Non methane hydrocarbon	ppmv	ND, [DL-0.1]	NA	FL/SOP/GC-24
<b>Heavy Metals</b>					
11	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
12	Nickel (Ni)	µg/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
13	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(I)] 16.11.2009

Inference: The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandeep Kumar*

**Reviewed By**

*[Signature]*  
**Authorised Signatory**  
D. Mathur, Director

Page 1 of 1

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

**TEST REPORT**

**Issued to :**

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230523-019-079  
ULR Code : TC5503 23 3 00006201 F  
Report Date : 29-05-2023  
Sample Receipt Date : 23-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information: #**

Nature of the Sample  
Sampling Location

: **Ambient Air**  
: Sewage Pump House

**Laboratory Provided Information:**

Date of Sampling : 22-05-2023  
Time of Sampling : 10:53 AM  
Test Started On : 23-05-2023  
Test Completed On : 29-05-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>) : 1.14  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 32.3  
Duration of Sampling : 24hrs



**Analysis Report**

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	132.56	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	182.43	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	3.79	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	23.68	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.35	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	75.89	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	38.71	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
10	Non methane hydrocarbon	ppmv	ND, [DL-0.1]	NA	FL/SOP/GC-24

*Sandeep Kumar*  
**Reviewed By**

*D. Mathur*  
**Authorised Signatory**  
D Mathur, Director

Page 1 of 2

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## TEST REPORT

### Issued to :

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230523-019-079  
ULR Code : TC5503 23 3 00006201 F  
Report Date : 29-05-2023  
Sample Receipt Date : 23-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample  
Sampling Location

: Ambient Air  
: Sewage Pump House

### Laboratory Provided Information:

Date of Sampling : 22-05-2023  
Time of Sampling : 10:53 AM  
Test Started On : 23-05-2023  
Test Completed On : 29-05-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>) : 1.14  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 32.3  
Duration of Sampling : 24hrs



### Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Method
<b>Heavy Metals</b>					
11	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
12	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL 0.5]	20	FL/SOP/ENV-18
13	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009 Except for **PM<sub>10</sub>** & **PM<sub>2.5</sub>** values.

*Sandip Kumar*  
**Reviewed By**

*[Signature]*  
**Authorised Signatory**  
D Mathur, Director

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

## TEST REPORT

### Issued to :

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230727-013-052  
ULR Code : TC5503 23 3 00009975 F  
Report Date : 01-08-2023  
Sample Receipt Date : 27-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample  
Sampling Location

### Laboratory Provided Information:

Date of Sampling : 26-07-2023  
Time of Sampling : 10:46 AM  
Test Started On : 27-07-2023  
Test Completed On : 01-08-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>) : 1.18  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 33  
Duration of Sampling : 24hrs

**Ambient Air**  
Sewage Pump House



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	48.97	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	78.24	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	5.18	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	10.98	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.51	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	25.36	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	41.74	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	NA	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
10	Non methane hydrocarbon	ppmv	ND, [DL-0.1]	NA	FL/SOP/GC-24
<b>Heavy Metals</b>					
11	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
12	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
13	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandeep Kumar*  
**Reviewed By**

*[Signature]*  
**Authorised Signatory**  
D. Mathur, Director

Page 1 of 1

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



## TEST REPORT

### Issued to :

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230522-010-038  
ULR Code : TC5503 23 3 00006102 F  
Report Date : 27-05-2023  
Sample Receipt Date : 22-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample

Sampling Location

: Ambient Air

: Sewage Treatment Plant

### Laboratory Provided Information:

Date of Sampling

: 21-05-2023

Time of Sampling

: 10:47 AM

Test Started On

: 22-05-2023

Test Completed On

: 27-05-2023

Purpose of Monitoring

: To Assess the Pollution Load

Method of Sampling

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

: 1.16

Avg. Flow Rate of Air (lpm) (for Benzene)

: 0.2

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

: 16.7

Ambient Temperature (°C)

: 36.5

Duration of Sampling

: 24hrs



### Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	137.59	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	198.27	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	5.29	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	25.86	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.59	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	71.46	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	37.52	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
10	Non methane hydrocarbon	ppmv	ND, [DL-0.1]	NA	FL/SOP/GC-24

*Sandip Kumar*  
Reviewed By

*D Mathur*  
Authorised Signatory  
D Mathur, Director

Page 1 of 2

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#1: The details are received from Customer on its own responsibility. FARE Labs does not confirm about it and hence does not take any responsibility whatsoever.

**TEST REPORT**

**Issued to :**

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230522-010-038  
ULR Code : TC5503 23 3 00006102 F  
Report Date : 27-05-2023  
Sample Receipt Date : 22-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information: #**

Nature of the Sample

Sampling Location

: Ambient Air

: Sewage Treatment Plant

**Laboratory Provided Information:**

Date of Sampling

: 21-05-2023

Time of Sampling

: 10:47 AM

Test Started On

: 22-05-2023

Test Completed On

: 27-05-2023

Purpose of Monitoring

: To Assess the Pollution Load

Method of Sampling

: IS-5182 (P-14) & FL/SOP/ENV/D-01

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

: 1.16

Avg. Flow Rate of Air (lpm) (for Benzene)

: 0.2

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

: 16.7

Ambient Temperature (°C)

: 36.5

Duration of Sampling

: 24hrs



**Analysis Report**

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Method
<b>Heavy Metals</b>					
11	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
12	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
13	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec. 3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009 Except for **PM<sub>10</sub>** & **PM<sub>2.5</sub>** values.

*Sandeep Kumar*  
**Reviewed By**

*D Mathur*  
**Authorised Signatory**  
D Mathur, Director

Page 2 of 2

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

## TEST REPORT

**Issued to :**

**MSIL Gurgaon Plant**  
Old Palam Gurgaon Road  
Gurgaon-122015  
Haryana, India

J.O. No. : ENV20230726-015-059  
ULR Code : TC5503 23 3 00009905 F  
Report Date : 31-07-2023  
Sample Receipt Date : 26-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information:#**

Nature of the Sample

Sampling Location

: Ambient Air

: Sewage Treatment Plant

**Laboratory Provided Information:**

Date of Sampling

Time of Sampling

Test Started On

Test Completed On

Purpose of Monitoring

Method of Sampling

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

Avg. Flow Rate of Air (lpm) (for Benzene)

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

Ambient Temperature (°C)

Duration of Sampling

: 25-07-2023

: 10:34 AM

: 26-07-2023

: 31-07-2023

: To Assess the Pollution Load

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

: 1.16

: 0.2

: 16.7

: 34

: 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	53.26	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	91.82	100	IS:5102 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	6.78	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	8.65	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.51	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	24.96	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	33.67	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	NA	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
10	Non methane hydrocarbon	ppmv	ND, [DL-0.1]		FL/SOP/GC-24
<b>Heavy Metals</b>					
11	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
12	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
13	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(I)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandeep Kumar*  
Reviewed By

*D. Mathur*  
Authorised Signatory  
D. Mathur, Director

Page 1 of 1

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# : The details are received from Customer on its own responsibility. FARE Labs does not confirm about it and hence does not take any responsibility whatsoever.

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

**Report on the CSR initiatives of MSIL in Gurugram, Haryana****Introduction**

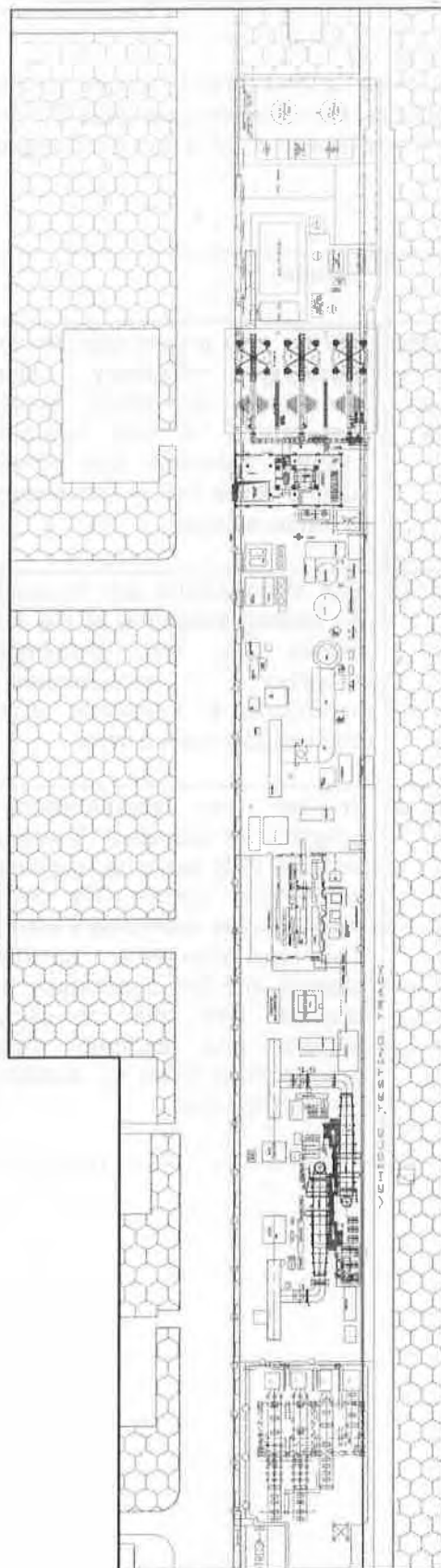
CSR projects of Maruti Suzuki India Limited (MSIL) focused on community development, road safety and skill development. During the Financial year 2022-23, The projects are implemented as per the requirements of the Companies Act 2013 and the Company's CSR Policy.

**CSR Initiatives**

<b>S. No.</b>	<b>Project</b>	<b>Details</b>	<b>Amount spent (in INR)</b>
1	Road Safety Knowledge Centers (RSKC): Training to Traffic violators and learner license aspirants	RSKCs play a very vital role in imparting necessary and prerequisite knowledge about the driving to the Learner License aspirants and Road rules & Road Safety knowledge to traffic violators.	24,45,134
2	Support to Government ITI Gurugram	The interventions are focused on training programs at the ITI related to the industry's shopfloor requirements, behavioral & functional skills and industry work culture.	5,32,409
3	Apprenticeship program at MSIL Gurugram plant	Through the apprenticeship program for Industrial Training Institute (ITI) students, aspiring youth from various ITIs were trained at the Company's plant. They have been given a monthly stipend and the opportunity to engage with the company experts and improve their employability skills by working on the shop floor.	15,87,97,000

Annexure 6

MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA  
Green Area Layout for GT area



**MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA**  
**Advertisement in News papers**

**Advertisement 1:**

TIME 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 1/3<sup>rd</sup> 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:23-24:079

22-Nov-2023

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 Environmental 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 23 to September 23 related to environmental clearance issued for our Captive power plant (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, Gurugram

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](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: 0124-2346721-30, 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 2023 to September 2023**

**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 Annexure-1.
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 are placed at Annexure-2.
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 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 within the plant area, No effluents shall be discharged outside the plant boundary.	The treated effluents conform to the prescribed standards and are reused for the process requirements after recycling. Report is placed at Annexure-3.



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.	Rain water harvesting lagoons have been constructed to take care of surface runoff and recharge the aquifers. The location of the lagoon is attached in Annexure-4.
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 persons working in high noise areas are provided with the personal protection devices.
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 Green Belt are placed at Annexure-4.
12	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	First aid and necessary sanitation arrangement 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 Annexure-5.
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	Notice was published in Amar Ujala (Hindi) and Times of India (English). Copy of the same is attached as Annexure-6.





	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.	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 SEIAA, Panchkula and Regional Office, MoEF, Chandigarh.	Funds for EMP have been included in the project cost itself. It shall be 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.
20	The project proponent shall take adequate preparation for fire and other kind of disaster including chemical disaster. On-site and Off-	Complied.



	site emergency plan should be rehearsed through regular mock drills.	
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 Annexure-7.
22	The project proponent shall ensure that all possible hazards due to the power plant are contained within the plant premises.	Completed.
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.	1.625 KL HSD was used in captive power plant for FY 2023-24(till Sept. 23).
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.	Complied
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.	Completed



GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE  
NORTHERN 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. Bineet Arora Assistant Vice President – EMU Maruti Suzuki India Limited Palam Gurugram Road Gurugram, Haryana Email: <a href="mailto:Bineet.Arora@maruti.co.in">Bineet.Arora@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 is 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 (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. 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>	20 MW & 37 MW are in operation.
13.	Reasons for the delay if the project is yet to start:	Not applicable

*Signature*

**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 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:***

- 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:***

- Rain water 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.



# **NOC from BARC (Bhabha Atomic Research Centre)**

दूरभाष/फैक्स 022 2550 5354  
फैक्स/दूरभाष 022 2550 5151  
022 2550 5353  
ई-मेल/ई-मेल n.d.sharma@barc.gov.in



सत्यमेव जयते

भारत सरकार

GOVERNMENT OF INDIA

भाभा परमाणु अनुसंधान केंद्र

BHABHA ATOMIC RESEARCH CENTRE

सेंट्रल कॉम्प्लेक्स,  
ट्रॉम्बे, मुंबई - 400 085,  
Central Complex,  
Trombay,  
Mumbai - 400 085

न. द. शर्मा  
नियंत्रक  
N. D. Sharma  
Controller

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 परिपत्रक / Fax Transmission

संदेश 27/5/08

दिनांक 27/5/08

Transmitted on ..... at ..... hrs.

# Stack Emission Monitoring Reports



## TEST REPORT

### Issued to :

**MSIL Manesar Vehicle Plant**  
Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230428-011-032  
ULR Code : TC5503 23 3 00004650 F  
Report Date : 03-05-2023  
Sample Receipt Date : 28-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample : **Stack Emissions**  
Rated Capacity : 20 MW  
Type of Stack /Duct : Mild Steel  
Stack Height from Ground Level (m) : 30  
Internal Diameter of the Stack (m) : 3  
Type of Fuel used & its Consumption : Natural Gas  
Operation Load During Monitoring : 16.9 MW

### Laboratory Provided Information:

Date of Sampling : 28-04-2023  
Time of sampling : 02:15 PM  
Test Started On : 28-04-2023  
Test Completed On : 03-05-2023  
Purpose of Monitoring : To Check Pollution Load  
Name of the Emission Source Monitoring : Gas Turbine- 9  
Sampling Method : IS-11255 (P-7, P-3)& FL/SOP/ENV/D-02  
Stack Identification : Stack attached to Gas Turbine- 9  
Normal Operating Schedule : As per requirement  
Sampling Duration (min) : 28  
Number of Traverse Points : 32  
Flue Gas Temperature °C : 210.5  
Ambient Air Temperature °C : 28.6  
Flue Gas Velocity (m/s) : 30.1  
Volumetric Flow Rate (Nm³/h) : 465576.34



## Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable limit#	Test Method
<b>Chemical Analysis</b>					
1	Carbon Dioxide	% by Vol.	10.82	NA	IS:11255 (P-1)
2	Carbon Monoxide at 15% O <sub>2</sub>	ppmv	35.48	NA	FL/SOP/ENV-26
3	Oxides of Nitrogen (as NO <sub>2</sub> ) at 15% O <sub>2</sub>	ppmv	28.32	100	IS:11255 (P-7)
4	Particulate matter at 15% O <sub>2</sub>	mg/Nm³	29.74	NA	IS:11255 (P-1)
5	Sulphur Dioxide	ppmv	4.57	NA	IS:11255 (P-2)
6	Total Hydrocarbons	mg/Nm³	7.95	NA	FL/SOP/GC-24

NA= Not Applicable

#As per MoEF&CC and SEIAA L.No. SEIAA/HR/2012/237-A, Dated: August 30, 2012 Issued to MSIL Manesar, Gurgaon.

*Sandeep Kumar*  
Reviewed By

Page 1 of 1

*D. Mathur*  
Authorised Signatory  
D. Mathur, Director

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

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-009-035  
ULR Code : TC5503 23 3 00009363 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh

**Customer Provided Information:#**

Nature of the Sample

Rated Capacity

Type of Stack /Duct

Stack Height from Ground Level (m)

Internal Diameter of the Stack (m)

Type of Fuel used &amp; its Consumption

Operation Load During Monitoring

: **Stack Emissions**

: 20 MW

: Mild Steel

: 30

: 3

: Natural Gas

: 16 MW


**Laboratory Provided Information:**

Date of Sampling

Time of sampling

Test Started On

Test Completed On

Purpose of Monitoring

Name of the Emission Source Monitoring

Stack Identification

Normal Operating Schedule

Sampling Duration (min)

Number of Traverse Points

Flue Gas Temperature °C

Ambient Air Temperature °C

Flue Gas Velocity (m/s)

Volumetric Flow Rate (Nm³/h)

: 19-07-2023

: 02:00 PM

: 19-07-2023

: 24-07-2023

: To Check Pollution Load

: Gas Turbine- 9

: Stack attached to Gas Turbine- 9

: As per requirement

: 28

: 32

: 207.9

: 30.8

: 30.2

: 475973.85

## Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable Limit#	Test Method
<b>Chemical Analysis</b>					
1	Carbon Dioxide	% by Vol.	11.98	NA	IS:13270
2	Carbon Monoxide at 15% O <sub>2</sub>	mg/Nm <sup>3</sup>	39.26	NA	FL/SOP/ENV-26
3	Oxides of Nitrogen (as NO <sub>2</sub> ) at 15% O <sub>2</sub>	ppmv	41.15	100	IS:11255 (P-7)
4	Particulate matter at 15% O <sub>2</sub>	mg/Nm <sup>3</sup>	32.19	NA	IS:11255(P-1)
5	Sulphur Dioxide	mg/Nm <sup>3</sup>	6.14	NA	IS:11255 (P-2)
6	Total Hydrocarbons	mg/Nm <sup>3</sup>	9.48	NA	FL/SOP/GC-24

NA= Not Applicable

#As per MoEF&amp;CC and SEIAA L.No. SEIAA/HR/2012/237-A, Dated: August 30, 2012 Issued to MSIL Manesar, Gurgaon.

*Sandeep Kumar*  
**Reviewed By**

*[Signature]*  
**Authorized Signatory**  
D. Mathur, Director

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, TMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-010-038  
ULR Code : TC5503 23 3 00009366 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information:#**

Nature of the Sample

Rated Capacity

: GT Noise

: 20 MW

**Laboratory Provided Information:**

Date of Monitoring

Time of Monitoring

Name of the Emission Source Monitoring

Purpose of Monitoring

Instrument used

Test Protocol Followed

: 19-07-2023

: 02:00 PM

: Gas Turbine- 09

: To Check Noise Level

: Sound Level Meter

: CPCB Guidelines



## Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable limit#	Test Method
<b>Physical Analysis</b>					
1	Background Noise	dB(A)	67.2	NA	FL/SOP/ENV-08
2	Noise Level at 0.5 metre from the enclosure surface (Acoustic enclosure door closed)	dB(A)	74.8	NA	FL/SOP/ENV-08
3	Noise level at 0.5 metre from the enclosure surface (Acoustic enclosure door open)	dB(A)	99.9	NA	FL/SOP/ENV-08
4	Insertion Loss	dB(A)	25.1	NA	FL/SOP/ENV-08

NA= Not Applicable

#As per MoEF&amp;CC and SEIAA L.No. SEIAA/HR/2012/237-A, Dated: August 30, 2012 Issued to MSIL Manesar, Gurgaon.

*Sandeep Kumar*  
**Reviewed By**

Page 1 of 1

*D. Mathur*  
**Authorised Signatory**  
D. Mathur, Director

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ISO 9001:2015

ISO 14001:2015

ISO 45001:2018

ISO / IEC 27001:2013

# Effluent Treatment Plant Monitoring Reports

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230429-018-029  
ULR Code : TC5503 23 2 00011949 F  
Report Date : 04-05-2023  
Sample Receipt Date : 29-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh

**Customer Provided Information:#**

Nature/Name of the Sample

Location

**ETP Outlet Water**

Plant

**Laboratory Provided Information:**

Sample Quantity &amp; Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

1 Litre x 3 Pet Bottle, 500ml Sterilized Bottle

29-04-2023

04-05-2023

FL/SOP/B/D-1

29-04-2023

Mr. Ankur (FARE LABS Representative)



## Analysis Report

**Physical Description :** Water contains suspended solids

S. No.	Parameters	Unit	Test Results	Standard Limits*	Test Method
<b>Chemical Analysis</b>					
1	Ammonical Nitrogen (as N)	mg/L	0.12	50	APHA 23 <sup>rd</sup> Ed.
2	Biochemical Oxygen Demand, @ 27°C For 3days	mg/L	4	30	IS: 3025 (P-44)
3	Chemical Oxygen Demand	mg/L	30	250	IS-3025 (P-58)
4	Colour	Hazen	10	#	IS:3025 (P-4)
5	Cyanide (as CN)	mg/L	ND, (LOQ-0.03)	0.2	APHA 23 <sup>rd</sup> Ed.
6	Dissolved Phosphate	mg/L	3.2	5	APHA 23 <sup>rd</sup> Ed.
7	Fluoride (as F)	mg/L	0.12	2	APHA 23 <sup>rd</sup> Ed.
8	Free Ammonia(as NH <sub>3</sub> )	mg/L	ND, (LOQ-0.01)	5	APHA 23 <sup>rd</sup> Ed.
9	Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND, (LOQ-0.01)	0.1	IS:3025 (P-52)
10	Nitrate Nitrogen (as NO <sub>3</sub> -N)	mg/L	2.82	10	IS-3025 (P-34)
11	Odour	--	Characteristics	#	IS:3025 (P-5)
12	Oil & Grease	mg/L	ND, (LOQ-2)	10	IS-3025 (P-39)
13	Particle Size of Suspended solids	--	All particles are passes from 850 micron is Sieve	Shall Pass 850 Micron IS Sieve	FL/SOP/W-07
14	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	ND, (LOQ-0.1)	1.0	APHA 23 <sup>rd</sup> Ed.
15	Sulphide (as S)	mg/L	ND, (LOQ-0.005)	2	APHA 23 <sup>rd</sup> Ed.
16	Total kjeldahl Nitrogen	mg/L	0.28	100	APHA 23 <sup>rd</sup> Ed.
17	Temperature	°C	34.2	Shall not exceed 5 °C above the receiving water temperature.	APHA 23 <sup>rd</sup> Ed.
18	Total Residual Chlorine	mg/L	ND, (LOQ-0.1)	1	APHA 23 <sup>rd</sup> Ed.
19	Total Suspended Solids	mg/L	4	100	IS-3025 (P-17)

Reviewed By

Page 1 of 3

Authorised Signatory  
D. Mathur, Director

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**TEST REPORT**

**Issued to :**

**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230429-018-029  
ULR Code : TC5503 23 2 00011949 F  
Report Date : 04-05-2023  
Sample Receipt Date : 29-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information:#**

Nature/Name of the Sample  
Location

**Laboratory Provided Information:**

Sample Quantity & Packaging  
Test started on  
Test Completed  
Method of Sampling  
Date of Sampling  
Sample Collected by

**ETP Outlet Water**  
Plant

1 Litre x 3 Pet Bottle, 500ml Sterilized Bottle  
29-04-2023  
04-05-2023  
FL/SOP/B/D-1  
29-04-2023  
Mr. Ankur (FARE LABS Representative)



**Analysis Report**

S. No.	Parameters	Unit	Test Results	Standard Limits*	Test Method
<b>Chemical Analysis</b>					
20	pH Value	--	7.96	5.5-9.0	IS-3025 (P-11)
<b>Metal Analysis</b>					
21	Arsenic (as As)	mg/L	ND, (LOQ-0.01)	0.2	FL/SOP/ICPMS-23
22	Cobalt	mg/L	ND, (LOQ-0.25)	0.05	FL/SOP/AAS-23
23	Cadmium (as Cd)	mg/L	ND, (LOQ-0.002)	2	FL/SOP/ICPMS-23
24	Copper (as Cu)	mg/L	ND, (LOQ-0.25)	3	FL/SOP/ICPMS-23
25	Iron (as Fe)	mg/L	ND, (LOQ-0.05)	3	FL/SOP/ICPMS-23
26	Lithium	mg/L	ND, (LOQ-0.05)	2.5	FL/SOP/AAS-23
27	Lead (as Pb)	mg/L	ND, (LOQ-0.01)	0.1	FL/SOP/ICPMS-23
28	Manganese (as Mn)	mg/L	ND, (LOQ-0.25)	2	FL/SOP/ICPMS-23
29	Mercury (as Hg)	mg/L	ND, (LOQ-0.001)	0.01	FL/SOP/ICPMS-23
30	Nickel (as Ni)	mg/L	ND, (LOQ-1)	3	FL/SOP/ICPMS-23
31	Selenium (as Se)	mg/L	ND, (LOQ-1)	0.05	FL/SOP/ICPMS-23
32	Total Chromium (as Cr)	mg/L	ND, (LOQ-0.5)	2	FL/SOP/ICPMS-23
33	Vanadium (as V)	mg/L	ND, (LOQ-0.01)	0.2	FL/SOP/ICPMS-23
34	Zinc (as Zn)	mg/L	0.059	5	FL/SOP/ICPMS-23

Reviewed By

Page 2 of 3

Authorised Signatory  
D. Mathur, Director

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230429-018-029  
ULR Code : TC5503 23 2 00011949 F  
Report Date : 04-05-2023  
Sample Receipt Date : 29-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh

**Customer Provided Information:#**

Nature/Name of the Sample

Location

: ETP Outlet Water

: Plant

**Laboratory Provided Information:**

Sample Quantity &amp; Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

: 1Litre x 3 Pet Bottle, 500ml Sterilized Bottle

: 29-04-2023

: 04-05-2023

: FL/SOP/B/D-1

: 29-04-2023

: Mr. Ankur (FARE LABS Representative)



## Analysis Report

S. No.	Parameters	Unit	Test Results	HSPCB Limits***	Test Method
<b>Biological</b>					
1	Faecal coliform	MPN per 100ml	70	<100	APHA 23 <sup>rd</sup> Ed.

\*(Schedule VI Of EPA, 1993) For Discharge Into Surface Water

\*\*\*HSPCB= Haryana state pollution Control board.

#All efforts should be made to remove colour and unpleasant odour as far as practicable

ND= Not Detected; LOQ= Limit of Quantification

Note: FL/SOP/ICPMS-23, Based on APHA 23<sup>rd</sup> Ed. 2017

Note: Specification of temperature applicable only in case of discharge of treated plant water in any inland surface water. Customer using this water for their irrigation purpose.

**Inference:** The tested sample of water **conforms** to Standard/HSPCB Limits.

Reviewed By

Page 3 of 3

Authorised Signatory

Ms. Meenakshi Bakshi, Scientist-B

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230719-020-105  
ULR Code : TC5503 23 2 00019938 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information:#**

Nature/Name of the Sample

Location

**: ETP Outlet Water**

: ETP Plant

**Laboratory Provided Information:**

Sample Quantity &amp; Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

: 1 Litre x 3 Pet Bottle, 500ml Sterilized Bottle

: 19-07-2023

: 24-07-2023

: FL/SOP/B/D-1

: 19-07-2023

: Mr. Ankur (FARE LABS Representative)



## Analysis Report

**Physical Description :** Clear water

S. No.	Parameters	Unit	Test Results	Standard Limits*	Test Method
<b>Chemical Analysis</b>					
1	Ammonical Nitrogen (as N)	mg/L	0.08	50	APHA 23 <sup>rd</sup> Ed.
2	Biochemical Oxygen Demand, @ 27°C For 3days	mg/L	6	30	IS: 3025 (P-44)
3	Chemical Oxygen Demand	mg/L	30	250	IS-3025 (P-58)
4	Colour	Hazen	10	#	IS:3025 (P-4)
5	Cyanide (as CN)	mg/L	ND, (LOQ-0.03)	0.2	APHA 23 <sup>rd</sup> Ed.
6	Dissolved Phosphate (as P)	mg/L	0.7	5	APHA 23 <sup>rd</sup> Ed.
7	Fluoride (as F)	mg/L	0.12	2	APHA 23 <sup>rd</sup> Ed.
8	Free Ammonia(as NH <sub>3</sub> )	mg/L	ND, (LOQ-0.01)	5	APHA 23 <sup>rd</sup> Ed.
9	Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND, (LOQ-0.01)	0.1	IS:3025 (P-52)
10	Nitrate Nitrogen (as NO <sub>3</sub> -N)	mg/L	0.84	10	IS-3025 (P-34)
11	Odour	--	Characteristics	#	IS:3025 (P-5)
12	Oil & Grease	mg/L	ND, (LOQ-2)	10	IS-3025 (P-39)
13	Particle Size of Suspended solids	--	All particles are passes from 850 micron IS Sieve	Shall Pass 850 Micron IS Sieve	FL/SOP/W-07
14	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	ND, (LOQ-0.1)	1.0	APHA 23 <sup>rd</sup> Ed.
15	Sulphide (as S)	mg/L	ND, (LOQ-0.005)	2	APHA 23 <sup>rd</sup> Ed.
16	Total kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	ND, (LOQ-0.2)	100	APHA 23 <sup>rd</sup> Ed.
17	Temperature	°C	27.4	Shall not exceed 5 °C above the receiving water temperature.	APHA 23 <sup>rd</sup> Ed.
18	Total Residual Chlorine	mg/L	ND, (LOQ-0.1)	1	APHA 23 <sup>rd</sup> Ed.
19	Total Suspended Solids	mg/L	2	100	IS-3025 (P-17)

Reviewed By

Authorized Signatory

D. Mathur, Director

Page 1 of 3

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230719-020-105  
ULR Code : TC5503 23 2 00019938 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh

**Customer Provided Information:#**

Nature/Name of the Sample

Location

**: ETP Outlet Water**
**: ETP Plant**
**Laboratory Provided Information:**

Sample Quantity &amp; Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

: 1Litre x 3 Pet Bottle, 500ml Sterilized Bottle

: 19-07-2023

: 24-07-2023

: FL/SOP/B/D-1

: 19-07-2023

: Mr. Ankur (FARE LABS Representative)



## Analysis Report

S. No.	Parameters	Unit	Test Results	Standard Limits*	Test Method
<b>Chemical Analysis</b>					
20	pH Value	--	7.93	5.5-9.0	IS-3025 (P-11)
<b>Metal Analysis</b>					
21	Arsenic (as As)	mg/L	ND, (LOQ-0.01)	0.2	FL/SOP/ICPMS-23
22	Cobalt	mg/L	ND, (LOQ-0.01)	0.05	FL/SOP/AAS-23
23	Cadmium (as Cd)	mg/L	ND, (LOQ-0.002)	2	FL/SOP/ICPMS-23
24	Copper (as Cu)	mg/L	ND, (LOQ-0.01)	3	FL/SOP/ICPMS-23
25	Iron (as Fe)	mg/L	ND, (LOQ-0.02)	3	FL/SOP/ICPMS-23
26	Lithium	mg/L	ND, (LOQ-0.005)	2.5	FL/SOP/AAS-23
27	Lead (as Pb)	mg/L	ND, (LOQ-0.01)	0.1	FL/SOP/ICPMS-23
28	Manganese (as Mn)	mg/L	ND, (LOQ-0.01)	2	FL/SOP/ICPMS-23
29	Mercury (as Hg)	mg/L	ND, (LOQ-0.0005)	0.01	FL/SOP/ICPMS-23
30	Nickel (as Ni)	mg/L	ND, (LOQ-0.01)	3	FL/SOP/ICPMS-23
31	Selenium (as Se)	mg/L	ND, (LOQ-0.01)	0.05	FL/SOP/ICPMS-23
32	Total Chromium (as Cr)	mg/L	ND, (LOQ-0.01)	2	FL/SOP/ICPMS-23
33	Vanadium (as V)	mg/L	ND, (LOQ-0.01)	0.2	FL/SOP/ICPMS-23
34	Zinc (as Zn)	mg/L	ND, (LOQ-0.01)	5	FL/SOP/ICPMS-23

Reviewed By

Page 2 of 3

Authorized Signatory

D. Mathur, Director

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230719-020-105  
ULR Code : TC5503 23 2 00019938 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh

**Customer Provided Information:#**

Nature/Name of the Sample  
Location

**ETP Outlet Water**  
ETP Plant

**Laboratory Provided Information:**

Sample Quantity &amp; Packaging

: 1 Litre x 3 Pet Bottle, 500ml Sterilized Bottle

Test started on

: 19-07-2023

Test Completed

: 24-07-2023

Method of Sampling

: FL/SOP/B/D-1

Date of Sampling

: 19-07-2023

Sample Collected by

: Mr. Ankur (FARE LABS Representative)\



## Analysis Report

S. No.	Parameters	Unit	Test Results	HSPCB Limits***	Test Method
<b>Biological</b>					
1	Faecal coliform	MPN per 100ml	40	Not Specified	APHA 23 <sup>rd</sup> Ed.

\*(Schedule VI Of EPA, 1993) For Discharge into Surface Water

\*\*\*HSPCB= Haryana state pollution Control board.

#All efforts should be made to remove colour and unpleasant odour as far as practicable

ND= Not Detected; LOQ= Limit of Quantification

Note: FL/SOP/ICPMS-23, Based on APHA 23<sup>rd</sup> Ed. 2017

Note: Specification of temperature applicable only in case of discharge of treated plant water in any inland surface water. Customer using this water for their irrigation purpose.

**Inference:** The tested sample of water **conforms** to Standard/HSPCB Limits.

Reviewed By

Authorised Signatory

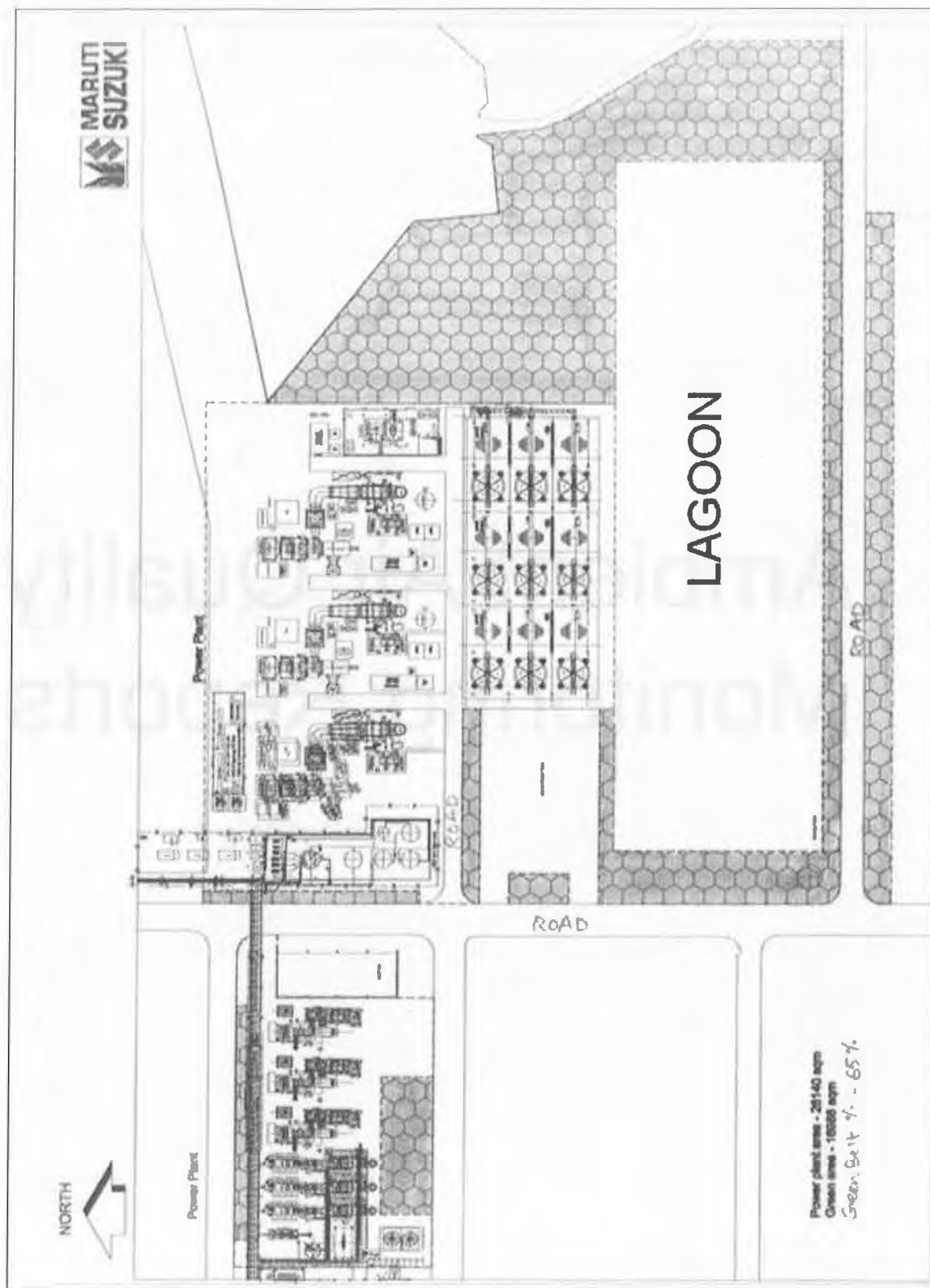
Ms. Meenakshi Bakshi, Scientist-B

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**Maruti Suzuki India Limited, Manesar, Haryana**  
Green Area and RWH details



# Ambient Air Quality Monitoring Reports

## TEST REPORT

### Issued to :

**MSIL Manesar Vehicle Plant**  
Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230428-010-025  
ULR Code : TC5503 23 3 00004643 F  
Report Date : 03-05-2023  
Sample Receipt Date : 28-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample : **Ambient Air**  
Sampling Location : **COP Lab Area**

### Laboratory Provided Information:

Date of Sampling : 27-04-2023  
Time of Sampling : 10:40 AM  
Test Started On : 28-04-2023  
Test Completed On : 03-05-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>) : 1.16  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 30.5  
Duration of Sampling : 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	<b>78.96</b>	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	<b>165.23</b>	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	12.45	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	25.63	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.53	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	128.47	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	39.65	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009 Except for PM<sub>10</sub> & PM<sub>2.5</sub> values.

*Sandeep Kumar*  
**Reviewed By**

*D. Mathur*  
**Authorised Signatory**  
D. Mathur, Director

Page 1 of 1

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

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No.

ENV20230718-019-078

ULR Code

TC5503 23 3 00009297 F

Report Date

24-07-2023

Sample Receipt Date

18-07-2023

Account Manager

BD Team 7

Credit Manager

Gulab/Septesh


**Customer Provided Information:#**

Nature of the Sample

Sampling Location

**Ambient Air**

COP Lab Area

**Laboratory Provided Information:**

Date of Sampling

17-07-2023

Time of Sampling

11:40 AM

Test Started On

18-07-2023

Test Completed On

24-07-2023

Purpose of Monitoring

To Assess the Pollution Load

Method of Sampling

IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

1.18

Avg. Flow Rate of Air (lpm) (for Benzene)

0.2

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

16.7

Ambient Temperature (°C)

32.6

Duration of Sampling

24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	37.48	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	71.35	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	25.32	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	15.46	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.45	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	37.93	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	21.34	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(I)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandup Kumar*  
**Reviewed By**

*D. Mathur*  
**Authorised Signatory**  
D. Mathur, Director

Page 1 of 1

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



## TEST REPORT

### Issued to :

**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230428-010-026  
ULR Code : TC5503 23 3 00004644 F  
Report Date : 03-05-2023  
Sample Receipt Date : 28-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample

Sampling Location

: Ambient Air

: JV Gate Area

### Laboratory Provided Information:

Date of Sampling

Time of Sampling

Test Started On

Test Completed On

Purpose of Monitoring

Method of Sampling

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

Avg. Flow Rate of Air (lpm) (for Benzene)

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

Ambient Temperature (°C)

Duration of Sampling

: 27-04-2023

: 10:50 AM

: 28-04-2023

: 03-05-2023

: To Assess the Pollution Load

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

: 1.16

: 0.2

: 16.7

: 29.8

: 24hrs



TC - 5503

## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	83.12	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	174.56	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	15.36	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	28.54	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.51	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	116.52	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	34.15	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(I)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009 Except for PM<sub>10</sub> & PM<sub>2.5</sub> values.

*Sandeep Kumar*  
Reviewed By

*D. Matkur*  
Authorised Signatory  
D. Matkur, Director

Page 1 of 1

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\*: The details are received from Customer on its own responsibility. FARE Labs does not confirm about it and hence does not take any responsibility whatsoever.

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

**TEST REPORT**

**Issued to :**

**MSIL Manesar Vehicle Plant**  
Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230718-019-079  
ULR Code : TC5503 23 3 00009298 F  
Report Date : 24-07-2023  
Sample Receipt Date : 18-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information:#**

Nature of the Sample : **Ambient Air**  
Sampling Location : **JV Gate Area**

**Laboratory Provided Information:**

Date of Sampling : 17-07-2023  
Time of Sampling : 11:55 AM  
Test Started On : 18-07-2023  
Test Completed On : 24-07-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>) : 1.16  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 31.9  
Duration of Sampling : 24hrs



**Analysis Report**

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	42.16	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	68.91	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	21.49	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	18.74	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.52	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	32.65	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	16.56	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009  
Inference: The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandeep Kumar*  
**Reviewed By**

*D. Mathur*  
**Authorised Signatory**  
D. Mathur, Director

Page 1 of 1

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\* The details are received from Customer on its own responsibility. FARE LABS does not confirm about it and hence does not take any responsibility whatsoever.

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

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No.

: ENV20230502-004-027

ULR Code

: TC5503 23 3 00004896 F

Report Date

: 08-05-2023

Sample Receipt Date : 02-05-2023

Account Manager

: BD Team 7

Credit Manager

: Gulab/Septesh


**Customer Provided Information: #**

Nature of the Sample

: Ambient Air

Sampling Location

: SND Gate

**Laboratory Provided Information:**

Date of Sampling

: 01-05-2023

Time of Sampling

: 12:15 PM

Test Started On

: 02-05-2023

Test Completed On

: 08-05-2023

Purpose of Monitoring

: To Assess the Pollution Load

Method of Sampling

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

: 1.18

Avg. Flow Rate of Air (lpm) (for Benzene)

: 0.2

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

: 16.7

Ambient Temperature (°C)

: 28.7

Duration of Sampling

: 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	46.21	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	64.78	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	4.19	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	26.33	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.48	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	132.96	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	41.53	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandip Kumar*  
**Reviewed By**

*[Signature]*  
**Authorised Signatory**  
D. Mathur, Director

Page 1 of 1

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

**TEST REPORT**

**Issued to :**

**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-011-039  
ULR Code : TC5503 23 3 00009367 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information:#**

Nature of the Sample

Sampling Location

: Ambient Air

: SND Gate

**Laboratory Provided Information:**

Date of Sampling

Time of Sampling

Test Started On

Test Completed On

Purpose of Monitoring

Method of Sampling

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

Avg. Flow Rate of Air (lpm) (for Benzene)

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

Ambient Temperature (°C)

Duration of Sampling

: 18-07-2023

: 11:15 AM

: 19-07-2023

: 24-07-2023

: To Assess the Pollution Load

: IS-5182 (P-14) & FL/SOP/ENV/D-01

: 1.18

: 0.2

: 16.7

: 31.9

: 24hrs



**Analysis Report**

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	34.15	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	57.43	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	9.54	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	13.66	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.43	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	25.73	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	25.82	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandeep Kumar*  
**Reviewed By**

*D. Mathur*  
**Authorised Signatory**  
D. Mathur, Director

Page 1 of 1

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

**TEST REPORT**

**Issued to :**

**MSIL Manesar Vehicle Plant**  
Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230502-004-028  
ULR Code : TC5503 23 3 00004897 F  
Report Date : 08-05-2023  
Sample Receipt Date : 02-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information: #**

Nature of the Sample : **Ambient Air**  
Sampling Location : **STP Area**

**Laboratory Provided Information:**

Date of Sampling : 01-05-2023  
Time of Sampling : 12:25 PM  
Test Started On : 02-05-2023  
Test Completed On : 08-05-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m³/min) (PM<sub>10</sub>) : 1.18  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 29.3  
Duration of Sampling : 24hrs



**Analysis Report**

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m³	49.15	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m³	69.32	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	5.46	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m³	24.19	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m³	0.51	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m³	129.55	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m³	37.49	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m³	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m³	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m³	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m³	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m³	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandip Kumar*  
**Reviewed By**

*[Signature]*  
**Authorised Signatory**  
D. Mathur, Director

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

## TEST REPORT

### Issued to :

**MSIL Manesar Vehicle Plant**  
Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-011-040  
ULR Code : TC5503 23 3 00009368 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information:#

Nature of the Sample  
Sampling Location

: Ambient Air  
: STP Area

### Laboratory Provided Information:

Date of Sampling : 18-07-2023  
Time of Sampling : 11:35 AM  
Test Started On : 19-07-2023  
Test Completed On : 24-07-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>) : 1.18  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 33.2  
Duration of Sampling : 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	40.56	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	66.59	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	12.47	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	17.85	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.49	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	33.42	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	29.51	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandeep Kumar*  
**Reviewed By**

Page 1 of 1

*D. Mathur*  
**Authorised Signatory**  
D. Mathur, Director

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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

**Advertisement 2:**

*Amar Ujala*

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**सूचना**

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SEIAA हरियाणा द्वारा मारुति सुजुकी इंडिया लिमिटेड के मानेसर प्लांट में पॉवर 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 (AAQ)**

**Long term study  
to  
Assess  
The Cumulative Impact  
of  
the Power Plant (57 MW)  
on  
Ambient Air Quality (AAQ)**

**Project Proponent**

**MARUTI  SUZUKI**

**Way of Life!**

**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:

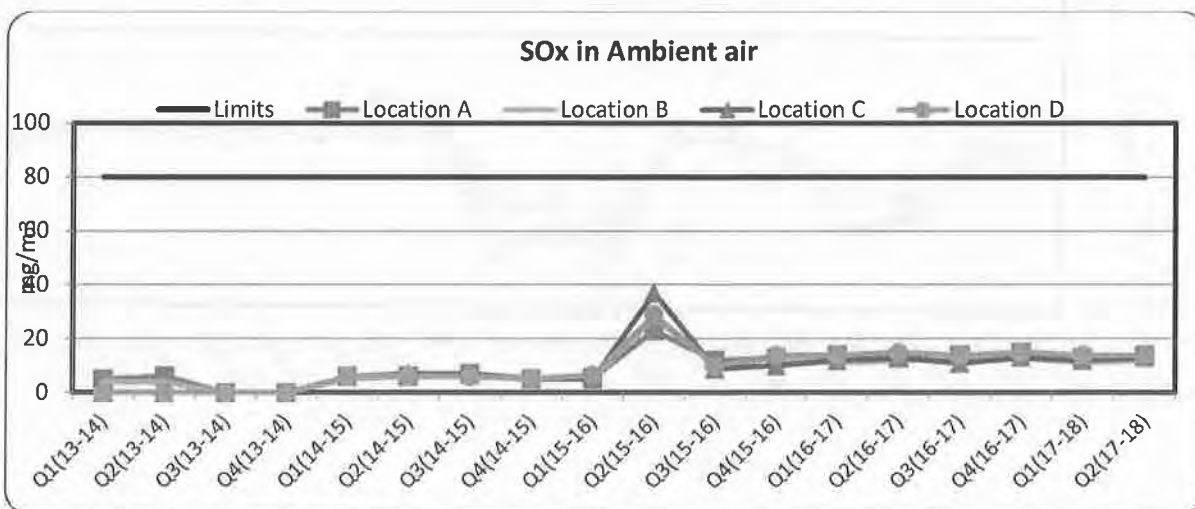
AMBIENT AIR MONITORING DATA 1st Qrt									
	S. No	Location	Starting Date	End Date	SO <sub>2</sub>	NO <sub>x</sub>	Ozone	PM <sub>2.5</sub>	PM <sub>10</sub>
2013-14	1	Site A	26.06.2013	27.06.2013	5	22	105	26	65
	2	Site B	26.06.2013	27.06.2013	4	20	110	26	58
	3	Site C	26.06.2013	27.06.2013	BDL	19	100	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



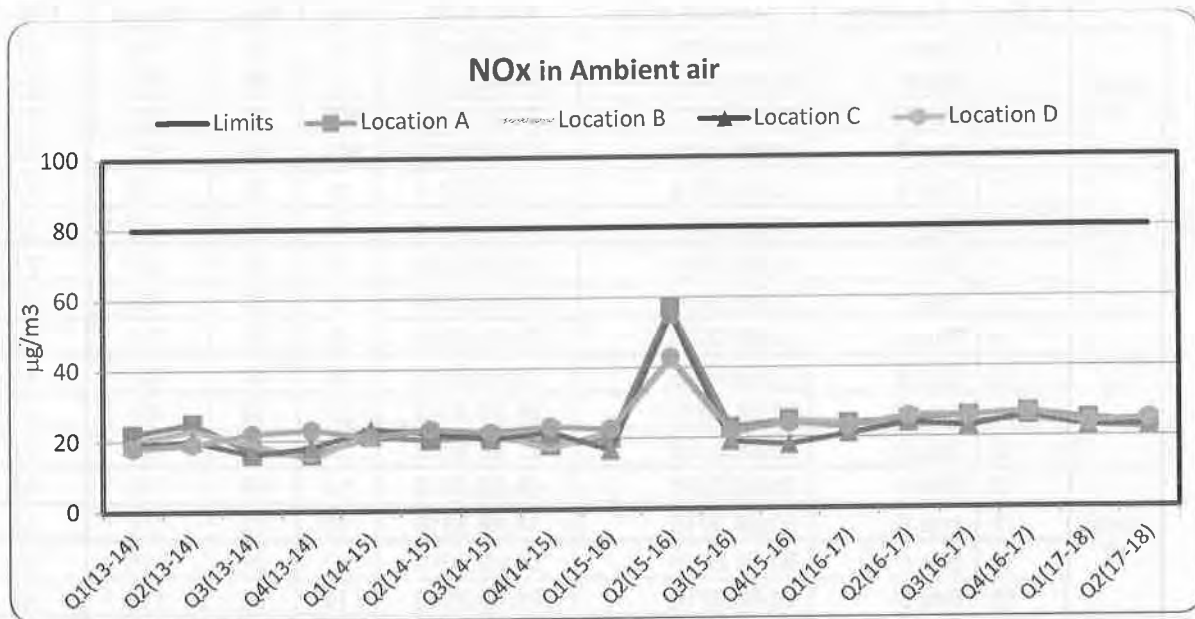
AMBIENT AIR MONITORING DATA Hnd Qrt									
	S.No	Location	Starting Date	End Date	SO <sub>2</sub>	NO <sub>x</sub>	Ozone	PM <sub>2.5</sub>	PM <sub>10</sub>
2013-14	1	Site A	26.08.2013	27.08.2013	6	25	110	27	68
	2	Site B	26.08.2013	27.08.2013	4	23	108	26	65
	3	Site C	26.08.2013	27.08.2013	BDL	20	103	23	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:

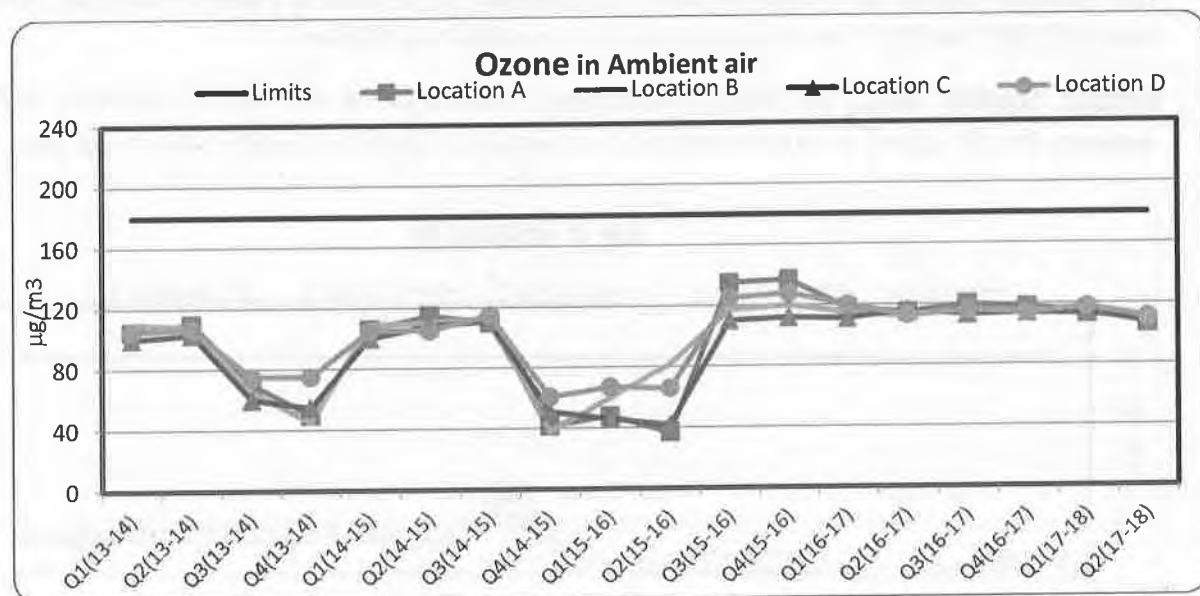
**Sulphur Dioxide (SO<sub>2</sub>):** 24 hourly monitoring concentrations at various locations varied between 0 to 37 µg/m<sup>3</sup>. It reflects that their no increase in pollution load in AAQ of the area.



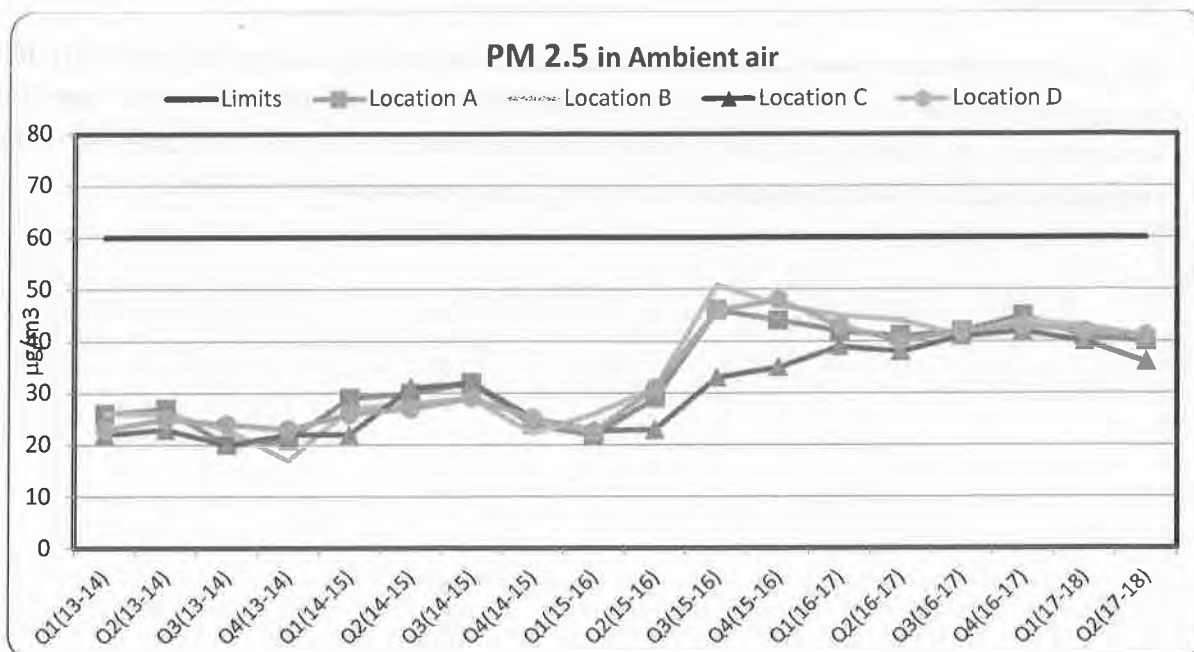
**Nitrogen Oxide (NO<sub>x</sub>):** 24 hourly monitoring concentrations at various locations varied between 15 to 57 µg/m<sup>3</sup>. It reflects that there is no increase in pollution load in AAQ of the area.



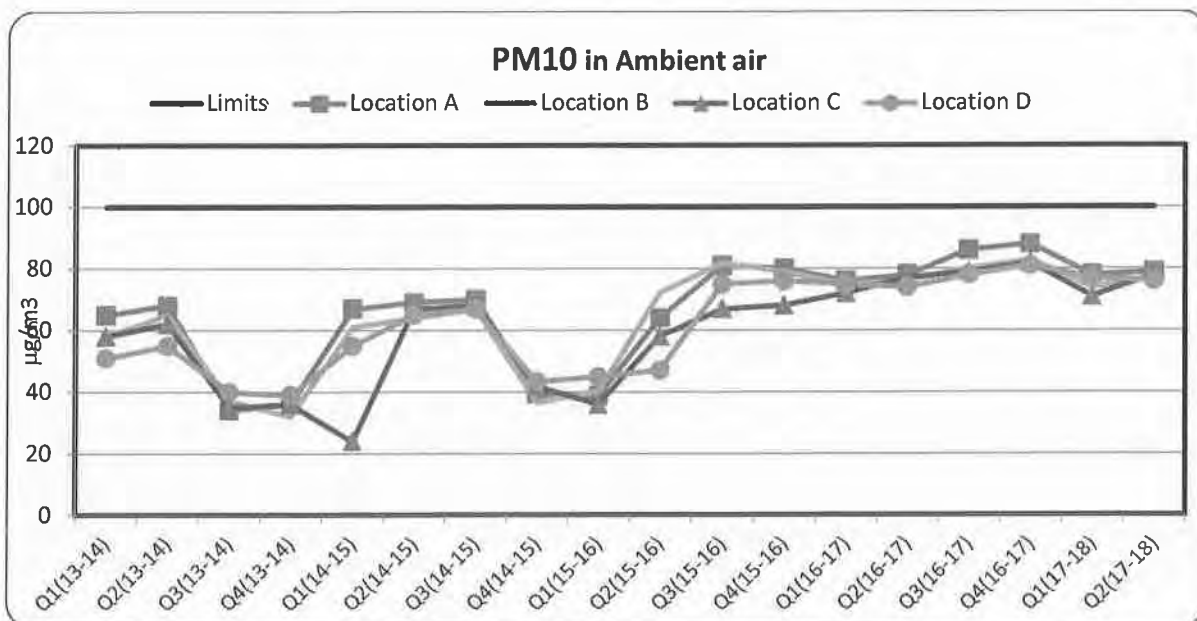
**Ozone(O<sub>3</sub>):** The concentrations at various locations varied between 37 to 137 µg/m<sup>3</sup>. The study reflects that the effect on surrounding area due to the power plant emission is negligible.



**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,  $SO_x$ ,  $NO_x$  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)	
Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual * 24 Hours **	50 80	20 80	-Improved West and Gaeke Method -Ultraviolet Fluorescence
Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual * 24 Hours **	40 80	30 80	-Jacob & Hochheiser modified (NaOH-NaAsO <sub>2</sub> ) Method -Gas Phase Chemiluminescence
Particulate Matter (Size less than 10µm) or PM <sub>10</sub> , µg/m <sup>3</sup>	Annual * 24 Hours **	60 100	60 100	-Gravimetric -TEOM -Beta attenuation
Particulate Matter (Size less than 2.5µm) or PM <sub>2.5</sub> , µg/m <sup>3</sup>	Annual * 24 Hours **	40 60	40 60	-Gravimetric -TEOM -Beta attenuation
Ozone (O <sub>3</sub> ) µg/m <sup>3</sup>	8 Hours * 1 Hour **	100 180	100 180	-UV Photometric -Chemiluminescence -Chemical Method
Lead (Pb) µg/m <sup>3</sup>	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
Carbon Monoxide(CO), mg/m <sup>3</sup>	8 Hours ** 1 Hour **	02 04	02 04	-Non dispersive Infrared (NDIR) Spectroscopy
Ammonia (NH <sub>3</sub> ), µg/m <sup>3</sup>	Annual * 24 Hours **	100 400	100 400	-Chemiluminescence -Indophenol blue method
Benzene (C <sub>6</sub> H <sub>6</sub> ), µg/m <sup>3</sup>	Annual *	05	05	-Gas Chromatography (GC) based continuous analyzer -Adsorption and desorption followed by GC analysis
Benzo(a)Pyrene (BaP) Particulate phase only, ng/m <sup>3</sup>	Annual *	01	01	-Solvent extraction followed by HPLC/GC analysis
Arsenic (As), ng/m <sup>3</sup>	Annual *	06	06	-AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper
Nickel (Ni), ng/m <sup>3</sup>	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.



प्रदूषण नियन्त्रण अनुसंधान संस्थान  
भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार (उत्तराखण्ड) - 249403

**POLLUTION CONTROL RESEARCH INSTITUTE**

(A Govt. of India - UNDP / UNIDO Project)

BHARAT HEAVY ELECTRICALS LIMITED

RANIPUR, HARIDWAR (U.K.) - 249 403

(Approved Lab under Environment (Protection) Act, 1986: EIA Consultancy by NABET, QCI)



**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)  
सचिव/ Dy. Manager  
प्रदूषण नियन्त्रण अनुसंधान संस्थान

Services Offered : Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of 1986, 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



(Approved Lab under Environment (Protection) Act, 1986: EIA Consultancy by NABET, QCI)

## 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 )  
R. S. Yadav  
Dy. Manager  
Pollution Control Research Institute  
BHEL, Ranipur, Haridwar

Services Offered : Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & SPCB for Environmental Impact Assessment, Environmental Audits reports  
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(3) Samples will be disposed off after one month from the date of issue of Test Certificate





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भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार (उत्तराखण्ड) - 249403  
**POLLUTION CONTROL RESEARCH INSTITUTE**  
(A Govt. of India - UNDP / UNIDO Project)  
BHARAT HEAVY ELECTRICALS LIMITED  
RANIPUR, HARIDWAR (U.K.) - 249 403



(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:

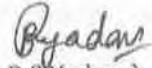
1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0062-O-791
3.	Date of sampling	:	02.06.2016 to 03.06.2016
4.	Location of Sampling	:	C: SND Gate
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999, NDIR, Jacob & Hochheiser Modified (Na-Arsenite) 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)  
जनक शिव यादव / R. S. Yadav  
आ. प्रबन्धक / Dy. Manager

Services Offered : Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & Pollution Control Boards  
Environmental Impact Assessment, Environmental Audits reports

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**POLLUTION CONTROL RESEARCH INSTITUTE**

(A Govt. of India - UNDP / UNIDO Project)

**BHARAT HEAVY ELECTRICALS LIMITED**

**RANIPUR, HARIDWAR (U.K.) - 249 403**

(Approved Lab under Environment (Protection) Act, 1986: EIA Consultancy by NABET, QCI)



## 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

*(Signature)*  
( R S Yadav )  
Dy. Manager ( PCRI )  
चतुर्थ शिप चतुर्थ / R. S. Yadav  
एन एमएल / 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 & SPCB and providing Test Reports, Environmental Impact Assessment, Environmental Audits reports

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### 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-O-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*  
( R. S. Yadav )  
Dy. Manager ( PCRI )  
राजेश्वर सिंह यादव / R. S. Yadav  
उप प्रबंधक / Dy. Manager  
Pollution Control Research Institute  
प्रदूषण नियन्त्रण अनुसंधान संस्थान  
BHEL, Ranipur, Haridwar

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**RANIPUR, HARIDWAR (U.K.) - 249 403**

(Approved Lab under Environment (Protection) Act, 1986: EIA Consultancy by NABET, QCI)



**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-O-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

*(Signature)*  
( R S Yadav )

Dy. Manager ( PCRI )

राजेश सिंह यादव/R. S. Yadav  
उप प्रबन्धक/Dy Manager  
Pollution Control Research Institute  
प्रदूषण नियन्त्रण अनुसंधान संस्थान  
रानीपुर, हरिद्वार-उ.क.

**Services Offered :** Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & SPB  
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**TEST REPORT**  
**AMBIENT AIR MONITORING**

Lab. Ref.: PCRI: Air & Noise: 2017-2018 : 0535

Date: 14.09.2017

**A. GENERAL INFORMATION:**

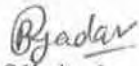
1.	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0135-0-791
3.	Date of sampling	:	24.08.2017 to 25.08.2017
4.	Location of Sampling	:	C:SND Gate
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999, NDIR, Jacob & Hochheiser Modified ( Na-Arsenite) 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

  
( R S Yadav )  
Dy. Manager ( PCRI )  
संयोजक/ Dy Manager  
Pollution Control Research Institute  
प्रदूषण नियन्त्रण अनुसंधान संस्थान  
रानीपुर, हरिद्वार

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BHARAT HEAVY ELECTRICALS LIMITED  
RANIPUR, HARIDWAR (U.K.) - 249 403



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**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.	:	17-0135-0-791
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 )

Dy. Manager ( PCRI )

राजेन्द्र सिंह यादव/ R. S. Yadav

उप प्रबंधक/ Dy Manager

Pollution Control Research Institute

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रानीपुर, हरिद्वार, उत्तराखण्ड

Services Offered : Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & SPCB and Pollution Management, Haridwar, U.K.

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**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:23-24:080

22-Nov-2023

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 Environmental 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 23 to September 23 related to Environment Clearance issued for our captive power plant (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, Gurugram

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: 0124-2346721-30, 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 2023 to September 2023**

**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**

A handwritten signature in black ink, located at the bottom left corner of the page.



**MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA**

Ref: Environment Clearance letter from MoEF no - J-13011/71/2007-IA.II (T) dated 5.2.2008

S. No.	Clearance Conditions	Compliance Status
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 Annexure-1.
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 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 reports are placed at Annexure-2.
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 conform to the prescribed standards and are reused for the process requirements after recycling. Report is placed at Annexure-3.
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.	Rain water harvesting lagoons have been constructed to take care of surface runoff and recharge the aquifers. The location of the lagoon is attached as Annexure-4.
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	Gas Turbines are provided with the acoustic enclosure to limit the noise level within 75 dBA at plant boundary. The persons working

	areas, personal protection devices should be provided.	in high noise areas are provided with the personal protection devices.
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 Green Belt are placed at Annexure-4
12	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	First aid and necessary sanitation arrangement 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 Annexure-5.
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 Annexure-6.
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.

*[Handwritten signature]*

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. Bineet Arora Assistant Vice President – EMU Maruti Suzuki India Limited Palam Gurgaon Road Gurugram, Haryana Email: <a href="mailto:Bineet.arora@maruti.co.in">Bineet.arora@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 is 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

SK

**SALIENT FEATURES OF PROJECT**

- |                        |   |  |
|------------------------|---|--|
| 1. Name of the Project | : | Gas turbine at Maruti Suzuki India Limited, 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 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:***

- 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:***

- Rain water 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.



# NOC from BARC (Bhabha Atomic Research Centre)

दूरभाष/Tel: 022 - 2550 5354  
फैक्स/Fax: 022 - 2550 5151  
022 - 2550 5359  
ई-मेल/e-mail: ndsharma@barc.gov.in



सत्यमेव जयते

भारत सरकार  
GOVERNMENT OF INDIA  
भाभा परमाणु अनुसंधान केंद्र

BHABHA ATOMIC RESEARCH CENTRE

सेंट्रल कॉम्प्लेक्स,  
ट्रॉम्बे, मुंबई - 400 085.  
Central Complex,  
Trombay,  
Mumbai - 400 085

न. द. शर्मा  
नियंत्रक  
N. D. Sharma  
Controller

Ref: 14/8/91/Admn-I / 3281

April 16, 2008

Mantri 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 29/5/08  
Transmitted on ..... at ..... hrs.  
यदि भेज दिया गया।

# Stack Emission Monitoring Reports



## TEST REPORT

### Issued to :

**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230428-011-030  
ULR Code : TC5503 23 3 00004648 F  
Report Date : 03-05-2023  
Sample Receipt Date : 28-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample : **Stack Emissions**  
Rated Capacity : 20 MW  
Type of Stack /Duct : Mild Steel  
Stack Height from Ground Level (m) : 30  
Internal Diameter of the Stack (m) : 3  
Type of Fuel used & Its Consumption : Natural Gas  
Operation Load During Monitoring : 16.5 MW

### Laboratory Provided Information:

Date of Sampling : 28-04-2023  
Time of sampling : 12:40 PM  
Test Started On : 28-04-2023  
Test Completed On : 03-05-2023  
Purpose of Monitoring : To Check Pollution Load  
Name of the Emission Source Monitoring : Gas Turbine- 7  
Sampling Method : IS-11255 (P-7, P-3)& FL/SOP/ENV/D-02  
Stack Identification : Stack attached to Gas Turbine- 7  
Normal Operating Schedule : As per requirement  
Sampling Duration (min) : 28  
Number of Traverse Points : 32  
Flue Gas Temperature °C : 208.4  
Ambient Air Temperature °C : 27.9  
Flue Gas Velocity (m/s) : 30.3  
Volumetric Flow Rate (Nm³/h) : 477053.93



## Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable limit#	Test Method
<b>Chemical Analysis</b>					
1	Carbon Dioxide	% by Vol.	12.54	NA	IS:11255 (P-1)
2	Carbon Monoxide at 15% O <sub>2</sub>	ppmv	27.43	NA	FL/SOP/ENV-26
3	Oxides of Nitrogen (as NO <sub>2</sub> ) at 15% O <sub>2</sub>	ppmv	29.58	100	IS:11255 (P-7)
4	Particulate matter at 15% O <sub>2</sub>	mg/Nm <sup>3</sup>	23.47	NA	IS:11255 (P-1)
5	Sulphur Dioxide	ppmv	4.16	NA	IS:11255 (P-2)
6	Total Hydrocarbons	mg/Nm <sup>3</sup>	7.15	NA	FL/SOP/GC-24

NA= Not Applicable

#As per MoEF&amp;CC L.No. J-13012/71/2007-IA.II(T) Dated: February 05, 2008 issued to MSIL Manesar, Gurgaon.

*Sandip Kumar*  
Reviewed By

*D. Mathur*  
Authorised Signatory  
D. Mathur, Director

Page 1 of 1

NOTE: The laboratory accepts the responsibility for content of report. The results contained in this test report pertain only to the sample tested not for the whole lot. Test report shall not be reproduced except in full, without written approval of the laboratory. This report is intended only for your guidance, and not for legal purposes, commercial decision, and for advertisement. Samples will be destroyed after 15 days from the date of issue of test certificate unless otherwise specified. Any complaints about this report should be communicated in writing within 7 days of issue of this report. Total liability at FARELABS Pvt. Ltd. is limited to invoiced amount only. The recipient of this report is requested to kindly confirm with FARE Labs, the authenticity and genuineness of this report at [report.confirmation@farelabs.com](mailto:report.confirmation@farelabs.com). FARE Labs is not responsible for any unconfirmed Test Report if you have any complaint/feedback regarding the sample collection/testing/test report, please send an email at [feedback@farelabs.com](mailto:feedback@farelabs.com) and call at +91 9599221227.  
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\*\*\*\*\*End of Report\*\*\*\*\*

## TEST REPORT

### Issued to :

#### MSIL Manesar Vehicle Plant

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-009-033  
ULR Code : TC5503 23 3 00009361 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information:#

Nature of the Sample : **Stack Emissions**  
Rated Capacity : 20 MW  
Type of Stack /Duct : Mild Steel  
Stack Height from Ground Level (m) : 30  
Internal Diameter of the Stack (m) : 3  
Type of Fuel used & Its Consumption : Natural Gas  
Operation Load During Monitoring : 16.2 MW



### Laboratory Provided Information:

Date of Sampling : 19-07-2023  
Time of sampling : 11:30 AM  
Test Started On : 19-07-2023  
Test Completed On : 24-07-2023  
Purpose of Monitoring : To Check Pollution Load  
Name of the Emission Source Monitoring : Gas Turbine- 7  
Stack Identification : Stack attached to Gas Turbine- 7  
Normal Operating Schedule : As per requirement  
Sampling Duration (min) : 28  
Number of Traverse Points : 32  
Flue Gas Temperature °C : 204.2  
Ambient Air Temperature °C : 30.5  
Flue Gas Velocity (m/s) : 29.8  
Volumetric Flow Rate (Nm³/h) : 473311.18

### Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable Limit#	Test Method
<b>Chemical Analysis</b>					
1	Carbon Dioxide	% by Vol.	13.54	NA	IS:13270
2	Carbon Monoxide at 15% O <sub>2</sub>	mg/Nm³	31.25	NA	FL/SOP/ENV-26
3	Oxides of Nitrogen (as NO <sub>2</sub> ) at 15% O <sub>2</sub>	ppmv	35.12	100	IS:11255 (P-7)
4	Particulate matter at 15% O <sub>2</sub>	mg/Nm³	28.45	NA	IS:11255(P-1)
5	Sulphur Dioxide	mg/Nm³	5.26	NA	IS:11255 (P-2)
6	Total Hydrocarbons	mg/Nm³	8.23	NA	FL/SOP/GC-24

NA= Not Applicable

#As per MoEF&CC L.No. J-13012/71/2007-IA.II(T) Dated: February 05, 2008 Issued to MSIL Manesar, Gurgaon.

*Sandup Kumar*

Reviewed By

*D. Mathur*

Authorised Signatory

D. Mathur, Director

Page 1 of 1

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

**TEST REPORT**

**Issued to :**

**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-010-036  
ULR Code : TC5503 23 3 00009364 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information: #**

Nature of the Sample

Rated Capacity

: GT Noise

: 20 MW

**Laboratory Provided Information:**

Date of Monitoring

Time of Monitoring

Name of the Emission Source Monitoring

Purpose of Monitoring

Instrument used

Test Protocol Followed

: 19-07-2023

: 11:30 AM

: Gas Turbine- 07

: To Check Noise Level

: Sound Level Meter

: CPCB Guidelines



**Analysis Report**

S. No.	Parameters	Unit	Test Results	Allowable limit#	Test Method
<b>Physical Analysis</b>					
1	Background Noise	dB(A)	64.6	NA	FL/SOP/ENV-08
2	Noise Level at 0.5 metre from the enclosure surface (Acoustic enclosure door closed)	dB(A)	73.6	NA	FL/SOP/ENV-08
3	Noise level at 0.5 metre from the enclosure surface (Acoustic enclosure door open)	dB(A)	98.9	NA	FL/SOP/ENV-08
4	Insertion Loss	dB(A)	25.3	NA	FL/SOP/ENV-08

NA= Not Applicable

#As per MoEF&CC L.No. J-13012/71/2007-IA.II(T), Dated: February 05, 2008 Issued to MSIL Manesar, Gurgaon.

*Sandeep Kumar*

**Reviewed By**

*[Signature]*  
**Authorised Signatory**  
D. Mathur, Director

Page 1 of 1

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

ISO 9001:2015

ISO 14001:2015

ISO 45001:2018

ISO / IEC 27001:2013

## TEST REPORT

### Issued to :

**MSIL Manesar Vehicle Plant**

 Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230428-011-031  
 ULR Code : TC5503 23 3 00004649 F  
 Report Date : 03-05-2023  
 Sample Receipt Date : 28-04-2023  
 Account Manager : BD Team 7  
 Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample : **Stack Emissions**  
 Rated Capacity : 20 MW  
 Type of Stack /Duct : Mild Steel  
 Stack Height from Ground Level (m) : 30  
 Internal Diameter of the Stack (m) : 3  
 Type of Fuel used & Its Consumption : Natural Gas  
 Operation Load During Monitoring : 16.8 MW

### Laboratory Provided Information:

Date of Sampling : 28-04-2023  
 Time of sampling : 01:35 PM  
 Test Started On : 28-04-2023  
 Test Completed On : 03-05-2023  
 Purpose of Monitoring : To Check Pollution Load  
 Name of the Emission Source Monitoring : Gas Turbine- 8  
 Sampling Method : IS-11255 (P-7, P-3)& FL/SOP/ENV/D-02  
 Stack Identification : Stack attached to Gas Turbine- 8  
 Normal Operating Schedule : As per requirement  
 Sampling Duration (min) : 28  
 Number of Traverse Points : 32  
 Flue Gas Temperature °C : 215.6  
 Ambient Air Temperature °C : 28.4  
 Flue Gas Velocity (m/s) : 30.1  
 Volumetric Flow Rate (Nm³/h) : 466921.60



## Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable limit#	Test Method
<b>Chemical Analysis</b>					
1	Carbon Dioxide	% by Vol.	11.95	NA	IS:11255 (P-1)
2	Carbon Monoxide at 15% O <sub>2</sub>	ppmv	28.36	NA	FL/SOP/ENV-26
3	Oxides of Nitrogen (as NO <sub>2</sub> ) at 15% O <sub>2</sub>	ppmv	34.69	100	IS:11255 (P-7)
4	Particulate matter at 15% O <sub>2</sub>	mg/Nm³	19.56	NA	IS:11255 (P-1)
5	Sulphur Dioxide	ppmv	4.89	NA	IS:11255 (P-2)
6	Total Hydrocarbons	mg/Nm³	7.83	NA	FL/SOP/GC-24

NA= Not Applicable

#As per MoEF&amp;CC L.No. J-13012/71/2007-IA.II(T) Dated: February 05, 2008 Issued to MSIL Manesar, Gurgaon.

**Reviewed By**
**Authorised Signatory**

D. Mathur, Director

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

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-009-034  
ULR Code : TC5503 23 3 00009362 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information:#**

Nature of the Sample : **Stack Emissions**  
Rated Capacity : 20 MW  
Type of Stack /Duct : Mild Steel  
Stack Height from Ground Level (m) : 30  
Internal Diameter of the Stack (m) : 3  
Type of Fuel used & Its Consumption : Natural Gas  
Operation Load During Monitoring : 16.3 MW

**Laboratory Provided Information:**

Date of Sampling : 19-07-2023  
Time of sampling : 12:50 PM  
Test Started On : 19-07-2023  
Test Completed On : 24-07-2023  
Purpose of Monitoring : To Check Pollution Load  
Name of the Emission Source Monitoring : Gas Turbine- 8  
Stack Identification : Stack attached to Gas Turbine- 8  
Normal Operating Schedule : As per requirement  
Sampling Duration (min) : 28  
Number of Traverse Points : 32  
Flue Gas Temperature °C : 197.4  
Ambient Air Temperature °C : 31.5  
Flue Gas Velocity (m/s) : 29.6  
Volumetric Flow Rate (Nm³/h) : 476930.76



## Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable Limit#	Test Method
<b>Chemical Analysis</b>					
1	Carbon Dioxide	% by Vol.	12.63	NA	IS:13270
2	Carbon Monoxide at 15% O <sub>2</sub>	mg/Nm³	34.62	NA	FL/SOP/ENV-26
3	Oxides of Nitrogen (as NO <sub>2</sub> ) at 15% O <sub>2</sub>	ppmv	37.96	100	IS:11255 (P-7)
4	Particulate matter at 15% O <sub>2</sub>	mg/Nm³	22.35	NA	IS:11255(P-1)
5	Sulphur Dioxide	mg/Nm³	5.73	NA	IS:11255 (P-2)
6	Total Hydrocarbons	mg/Nm³	8.31	NA	FL/SOP/GC-24

NA= Not Applicable

#As per MoEF&amp;CC L.No. J-13012/71/2007-IA.II(T) Dated: February 05, 2008 Issued to MSIL Manesar, Gurgaon.

Reviewed By

Authorised Signatory  
D. Mathur, Director

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

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-010-037  
ULR Code : TC5503 23 3 00009365 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information:#**

Nature of the Sample

: GT Noise

Rated Capacity

: 20 MW

**Laboratory Provided Information:**

Date of Monitoring

: 19-07-2023

Time of Monitoring

: 12:50 PM

Name of the Emission Source Monitoring

: Gas Turbine- 08

Purpose of Monitoring

: To Check Noise Level

Instrument used

: Sound Level Meter

Test Protocol Followed

: CPCB Guidelines



## Analysis Report

S. No.	Parameters	Unit	Test Results	Allowable Limit#	Test Method
<b>Physical Analysis</b>					
1	Background Noise	dB(A)	66.8	NA	FL/SOP/ENV-08
2	Noise Level at 0.5 metre from the enclosure surface (Acoustic enclosure door closed)	dB(A)	73.2	NA	FL/SOP/ENV-08
3	Noise level at 0.5 metre from the enclosure surface (Acoustic enclosure door open)	dB(A)	98.7	NA	FL/SOP/ENV-08
4	Insertion Loss	dB(A)	25.5	NA	FL/SOP/ENV-08

NA= Not Applicable

#As per MoEF&amp;CC L.No. J-13012/71/2007-IA.II(T), Dated: February 05, 2008 Issued to MSIL Manesar, Gurgaon.

Reviewed By

D. Matani, Director

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

# Effluent Treatment Plant Monitoring Reports



**TEST REPORT**

**Issued to :**

**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230429-018-029  
ULR Code : TC5503 23 2 00011949 F  
Report Date : 04-05-2023  
Sample Receipt Date : 29-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



**Customer Provided Information:#**

Nature/Name of the Sample

Location

**ETP Outlet Water**

Plant

**Laboratory Provided Information:**

Sample Quantity & Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

: 1Litre x 3 Pet Bottle, 500ml Sterilized Bottle

: 29-04-2023

: 04-05-2023

: FL/SOP/B/D-1

: 29-04-2023

: Mr. Ankur (FARE LABS Representative)



**Analysis Report**

**Physical Description :** Water contains suspended solids

S. No.	Parameters	Unit	Test Results	Standard Limits*	Test Method
<b>Chemical Analysis</b>					
1	Ammonical Nitrogen (as N)	mg/L	0.12	50	APHA 23 <sup>rd</sup> Ed.
2	Biochemical Oxygen Demand, @ 27°C For 3days	mg/L	4	30	IS: 3025 (P-44)
3	Chemical Oxygen Demand	mg/L	30	250	IS-3025 (P-58)
4	Colour	Hazen	10	#	IS:3025 (P-4)
5	Cyanide (as CN)	mg/L	ND, (LOQ-0.03)	0.2	APHA 23 <sup>rd</sup> Ed.
6	Dissolved Phosphate	mg/L	3.2	5	APHA 23 <sup>rd</sup> Ed.
7	Fluoride (as F)	mg/L	0.12	2	APHA 23 <sup>rd</sup> Ed.
8	Free Ammonia(as NH <sub>3</sub> )	mg/L	ND, (LOQ-0.01)	5	APHA 23 <sup>rd</sup> Ed.
9	Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND, (LOQ-0.01)	0.1	IS:3025 (P-52)
10	Nitrate Nitrogen (as NO <sub>3</sub> -N)	mg/L	2.82	10	IS-3025 (P-34)
11	Odour	--	Characteristics	#	IS:3025 (P-5)
12	Oil & Grease	mg/L	ND, (LOQ-2)	10	IS-3025 (P-39)
13	Particle Size of Suspended solids	--	All particles are passes from 850 micron is Sieve	Shall Pass 850 Micron IS Sieve	FL/SOP/W-07
14	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	ND, (LOQ-0.1)	1.0	APHA 23 <sup>rd</sup> Ed.
15	Sulphide (as S)	mg/L	ND, (LOQ-0.005)	2	APHA 23 <sup>rd</sup> Ed.
16	Total kjeldahl Nitrogen	mg/L	0.28	100	APHA 23 <sup>rd</sup> Ed.
17	Temperature	°C	34.2	Shall not exceed 5 °C above the receiving water temperature.	APHA 23 <sup>rd</sup> Ed.
18	Total Residual Chlorine	mg/L	ND, (LOQ-0.1)	1	APHA 23 <sup>rd</sup> Ed.
19	Total Suspended Solids	mg/L	4	100	IS-3025 (P-17)

Reviewed By

Authorised Signatory  
D. Mathur / Director

Page 1 of 3

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230429-018-029  
ULR Code : TC5503 23 2 00011949 F  
Report Date : 04-05-2023  
Sample Receipt Date : 29-04-2023  
Account Manager : BD Team-7  
Credit Manager : Gulab/Septesh

**Customer Provided Information:#**

Nature/Name of the Sample

Location

**ETP Outlet Water**

Plant

**Laboratory Provided Information:**

Sample Quantity &amp; Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

: 1 Litre x 3 Pet Bottle, 500ml Sterilized Bottle

: 29-04-2023

: 04-05-2023

: FL/SOP/B/D-1

: 29-04-2023

: Mr. Ankur (FARE LABS Representative)



## Analysis Report

S. No.	Parameters	Unit	Test Results	Standard Limits*	Test Method
<b>Chemical Analysis</b>					
20	pH Value	--	7.96	5.5-9.0	IS-3025 (P-11)
<b>Metal Analysis</b>					
21	Arsenic (as As)	mg/L	ND, (LOQ-0.01)	0.2	FL/SOP/ICPMS-23
22	Cobalt	mg/L	ND, (LOQ-0.25)	0.05	FL/SOP/AAS-23
23	Cadmium (as Cd)	mg/L	ND, (LOQ-0.002)	2	FL/SOP/ICPMS-23
24	Copper (as Cu)	mg/L	ND, (LOQ-0.25)	3	FL/SOP/ICPMS-23
25	Iron (as Fe)	mg/L	ND, (LOQ-0.05)	3	FL/SOP/ICPMS-23
26	Lithium	mg/L	ND, (LOQ-0.05)	2.5	FL/SOP/AAS-23
27	Lead (as Pb)	mg/L	ND, (LOQ-0.01)	0.1	FL/SOP/ICPMS-23
28	Manganese (as Mn)	mg/L	ND, (LOQ-0.25)	2	FL/SOP/ICPMS-23
29	Mercury (as Hg)	mg/L	ND, (LOQ-0.001)	0.01	FL/SOP/ICPMS-23
30	Nickel (as Ni)	mg/L	ND, (LOQ-1)	3	FL/SOP/ICPMS-23
31	Selenium (as Se)	mg/L	ND, (LOQ-1)	0.05	FL/SOP/ICPMS-23
32	Total Chromium (as Cr)	mg/L	ND, (LOQ-0.5)	2	FL/SOP/ICPMS-23
33	Vanadium (as V)	mg/L	ND, (LOQ-0.01)	0.2	FL/SOP/ICPMS-23
34	Zinc (as Zn)	mg/L	0.059	5	FL/SOP/ICPMS-23

  
Reviewed By

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Authorised Signatory  
D. Mathur Director

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## TEST REPORT

### Issued to :

#### MSIL Manesar Vehicle Plant

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230429-018-029  
ULR Code : TC5503 23 2 00011949 F  
Report Date : 04-05-2023  
Sample Receipt Date : 29-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information:#

Nature/Name of the Sample

Location

: ETP Outlet Water

: Plant

### Laboratory Provided Information:

Sample Quantity & Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

: 1 Litre x 3 Pet Bottle, 500ml Sterilized Bottle

: 29-04-2023

: 04-05-2023

: FL/SOP/B/D-1

: 29-04-2023

: Mr. Ankur (FARE LABS Representative)



## Analysis Report

S. No.	Parameters	Unit	Test Results	HSPCB Limits***	Test Method
<b>Biological</b>					
1	Faecal coliform	MPN per 100ml	70	<100	APHA 23 <sup>rd</sup> Ed.

\*(Schedule VI Of EPA, 1993) For Discharge into Surface Water

\*\*\*HSPCB= Haryana state pollution Control board.

#All efforts should be made to remove colour and unpleasant odour as far as practicable

ND= Not Detected; LOQ= Limit of Quantification

Note: FL/SOP/ICPMS-23, Based on APHA 23<sup>rd</sup> Ed. 2017

Note: Specification of temperature applicable only in case of discharge of treated plant water in any inland surface water. Customer using this water for their irrigation purpose.

**Inference:** The tested sample of water **conforms** to Standard/HSPCB Limits.

Reviewed By

Page 3 of 3

Authorised Signatory

Ms. Meenakshi Bakshi, Scientist-B

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No.

: W20230719-020-105

ULR Code

: TC5503 23 2 00019938 F

Report Date

: 24-07-2023

Sample Receipt Date

: 19-07-2023

Account Manager

: BD Team 7

Credit Manager

: Gulab/Septesh


**Customer Provided Information:#**

Nature/Name of the Sample

Location

: ETP Outlet Water

: ETP Plant

**Laboratory Provided Information:**

Sample Quantity &amp; Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

: 1 Litre x 3 Pet Bottle, 500ml Sterilized Bottle

: 19-07-2023

: 24-07-2023

: FL/SOP/B/D-1

: 19-07-2023

: Mr. Ankur (FARE LABS Representative)



## Analysis Report

**Physical Description :** Clear water

S. No.	Parameters	Unit	Test Results	Standard Limits*	Test Method
<b>Chemical Analysis</b>					
1	Ammonical Nitrogen (as N)	mg/L	0.08	50	APHA 23 <sup>rd</sup> Ed.
2	Biochemical Oxygen Demand, @ 27°C For 3days	mg/L	6	30	IS: 3025 (P-44)
3	Chemical Oxygen Demand	mg/L	30	250	IS-3025 (P-58)
4	Colour	Hazen	10	#	IS:3025 (P-4)
5	Cyanide (as CN)	mg/L	ND, (LOQ-0.03)	0.2	APHA 23 <sup>rd</sup> Ed.
6	Dissolved Phosphate (as P)	mg/L	0.7	5	APHA 23 <sup>rd</sup> Ed.
7	Fluoride (as F)	mg/L	0.12	2	APHA 23 <sup>rd</sup> Ed.
8	Free Ammonia(as NH <sub>3</sub> )	mg/L	ND, (LOQ-0.01)	5	APHA 23 <sup>rd</sup> Ed.
9	Hexavalent Chromium (as Cr <sup>6+</sup> )	mg/L	ND, (LOQ-0.01)	0.1	IS:3025 (P-52)
10	Nitrate Nitrogen (as NO <sub>3</sub> -N)	mg/L	0.84	10	IS-3025 (P-34)
11	Odour	--	Characteristics	#	IS:3025 (P-5)
12	Oil & Grease	mg/L	ND, (LOQ-2)	10	IS-3025 (P-39)
13	Particle Size of Suspended solids	--	All particles are passes from 850 micron IS Sieve	Shall Pass 850 Micron IS Sieve	FL/SOP/W-07
14	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	ND, (LOQ-0.1)	1.0	APHA 23 <sup>rd</sup> Ed.
15	Sulphide (as S)	mg/L	ND, (LOQ-0.005)	2	APHA 23 <sup>rd</sup> Ed.
16	Total kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	ND, (LOQ-0.2)	100	APHA 23 <sup>rd</sup> Ed.
17	Temperature	°C	27.4	Shall not exceed 5 °C above the receiving water temperature.	APHA 23 <sup>rd</sup> Ed.
18	Total Residual Chlorine	mg/L	ND, (LOQ-0.1)	1	APHA 23 <sup>rd</sup> Ed.
19	Total Suspended Solids	mg/L	2	100	IS-3025 (P-17)

Reviewed By

Page 1 of 3

Authorized Signatory

D. Mathur, Director

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### TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230719-020-105

ULR Code : TC5503 23 2 00019938 F

Report Date : 24-07-2023

Sample Receipt Date : 19-07-2023

Account Manager : BD Team 7

Credit Manager : Gulab/Septesh


**Customer Provided Information:#**

Nature/Name of the Sample

Location

: ETP Outlet Water

: ETP Plant

**Laboratory Provided Information:**

Sample Quantity &amp; Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

: 1 Litre x 3 Pet Bottle, 500ml Sterilized Bottle

: 19-07-2023

: 24-07-2023

: FL/SOP/B/D-1

: 19-07-2023

: Mr. Ankur (FARE LABS Representative)



### Analysis Report

S. No.	Parameters	Unit	Test Results	Standard Limits*	Test Method
<b>Chemical Analysis</b>					
20	pH Value	--	7.93	5.5-9.0	IS-3025 (P-11)
<b>Metal Analysis</b>					
21	Arsenic (as As)	mg/L	ND, (LOQ-0.01)	0.2	FL/SOP/ICPMS-23
22	Cobalt	mg/L	ND, (LOQ-0.01)	0.05	FL/SOP/AAS-23
23	Cadmium (as Cd)	mg/L	ND, (LOQ-0.002)	2	FL/SOP/ICPMS 23
24	Copper (as Cu)	mg/L	ND, (LOQ-0.01)	3	FL/SOP/ICPMS 23
25	Iron (as Fe)	mg/L	ND, (LOQ-0.02)	3	FL/SOP/ICPMS-23
26	Lithium	mg/L	ND, (LOQ-0.005)	2.5	FL/SOP/AAS-23
27	Lead (as Pb)	mg/L	ND, (LOQ-0.01)	0.1	FL/SOP/ICPMS-23
28	Manganese (as Mn)	mg/L	ND, (LOQ-0.01)	2	FL/SOP/ICPMS-23
29	Mercury (as Hg)	mg/L	ND, (LOQ-0.0005)	0.01	FL/SOP/ICPMS-23
30	Nickel (as Ni)	mg/L	ND, (LOQ-0.01)	3	FL/SOP/ICPMS-23
31	Selenium (as Se)	mg/L	ND, (LOQ-0.01)	0.05	FL/SOP/ICPMS-23
32	Total Chromium (as Cr)	mg/L	ND, (LOQ-0.01)	2	FL/SOP/ICPMS-23
33	Vanadium (as V)	mg/L	ND, (LOQ-0.01)	0.2	FL/SOP/ICPMS-23
34	Zinc (as Zn)	mg/L	ND, (LOQ-0.01)	5	FL/SOP/ICPMS-23

Reviewed By

Authorized Signatory  
D. Mathur, Director

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : W20230719-020-105  
ULR Code : TC5503 23 2 00019938 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information:#**

Nature/Name of the Sample

Location

**Laboratory Provided Information:**

Sample Quantity &amp; Packaging

Test started on

Test Completed

Method of Sampling

Date of Sampling

Sample Collected by

**ETP Outlet Water**

ETP Plant

: 1Litre x 3 Pet Bottle, 500ml Sterilized Bottle  
: 19-07-2023  
: 24-07-2023  
: FL/SOP/B/D-1  
: 19-07-2023  
: Mr. Ankur (FARE LABS Representative)\



## Analysis Report

S. No.	Parameters	Unit	Test Results	HSPCB Limits***	Test Method
<b>Biological</b>					
1	Faecal coliform	MPN per 100ml	40	Not Specified	APHA 23 <sup>rd</sup> Ed.

\*(Schedule VI Of EPA, 1993) For Discharge into Surface Water

\*\*\*HSPCB= Haryana state pollution Control board.

#All efforts should be made to remove colour and unpleasant odour as far as practicable

ND= Not Detected; LOQ= Limit of Quantification

Note: FL/SOP/ICPMS-23, Based on APHA 23<sup>rd</sup> Ed. 2017

Note: Specification of temperature applicable only in case of discharge of treated plant water in any inland surface water, Customer using this water for their irrigation purpose.

**Inference:** The tested sample of water **conforms** to Standard/HSPCB Limits.

Reviewed By

Page 3 of 3

Authorised Signatory

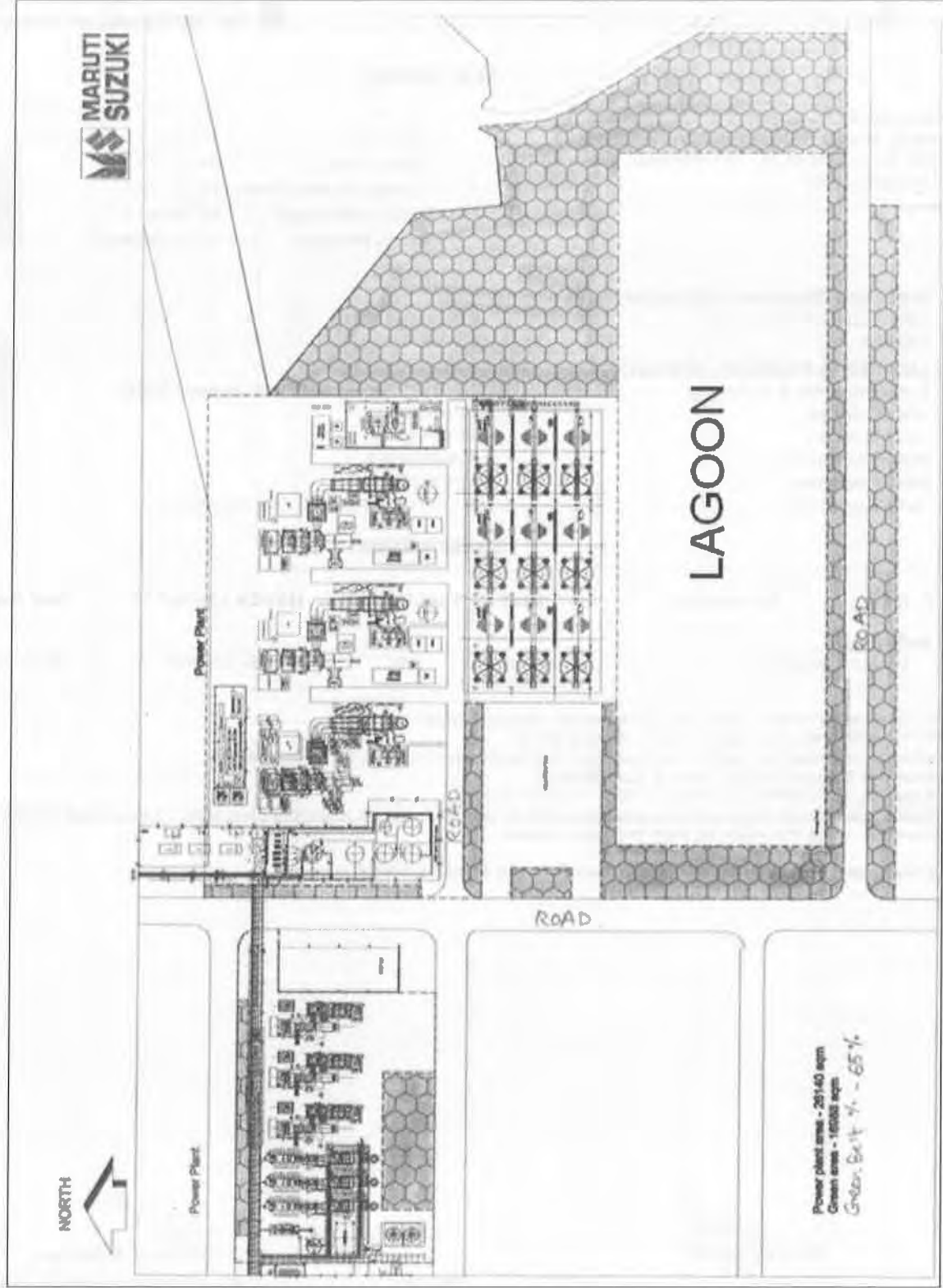
Ms. Meenakshi Bakshi, Scientist-B

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**MARUTI SUZUKI INDIA LIMITED, MANESAR, HARYANA**  
Green Area and RWH details





# Ambient Air Quality Monitoring Reports

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230428-010-025  
ULR Code : TC5503 23 3 00004643 F  
Report Date : 03-05-2023  
Sample Receipt Date : 28-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information: #**

Nature of the Sample

Sampling Location

**Laboratory Provided Information:**

Date of Sampling

Time of Sampling

Test Started On

Test Completed On

Purpose of Monitoring

Method of Sampling

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

Avg. Flow Rate of Air (lpm) (for Benzene)

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

Ambient Temperature (°C)

Duration of Sampling

**Ambient Air**

COP Lab Area

27-04-2023

10:40 AM

28-04-2023

03-05-2023

To Assess the Pollution Load

IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

1.16

0.2

16.7

30.5

24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	<b>78.96</b>	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	<b>165.23</b>	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	12.45	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	25.63	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.53	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	128.47	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	39.65	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (NI)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009 Except for PM<sub>10</sub> & PM<sub>2.5</sub> values.

*Sandip Kumar*

Reviewed By

*D. Malhur*  
Authorised Signatory  
D. Malhur, Director

Page 1 of 1

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

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No.

ENV20230718-019-078

ULR Code

TC5503 23 3 00009297 F

Report Date

24-07-2023

Sample Receipt Date

18-07-2023

Account Manager

BD Team 7

Credit Manager

Gulab/Septesh


**Customer Provided Information:#**

Nature of the Sample

: Ambient Air

Sampling Location

: COP Lab Area

**Laboratory Provided Information:**

Date of Sampling

: 17-07-2023

Time of Sampling

: 11:40 AM

Test Started On

: 18-07-2023

Test Completed On

: 24-07-2023

Purpose of Monitoring

: To Assess the Pollution Load

Method of Sampling

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

: 1.18

Avg. Flow Rate of Air (lpm) (for Benzene)

: 0.2

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

: 16.7

Ambient Temperature (°C)

: 32.6

Duration of Sampling

: 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	37.48	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	71.35	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	25.32	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	15.46	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.45	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	37.93	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	21.34	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandip Kumar*  
Reviewed By

Page 1 of 1

*D. Mathur*  
Authorised Signatory  
D. Mathur, Director

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

## TEST REPORT

### Issued to :

**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230428-010-026  
ULR Code : TC5503 23 3 00004644 F  
Report Date : 03-05-2023  
Sample Receipt Date : 28-04-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


### Customer Provided Information: #

Nature of the Sample

: Ambient Air

Sampling Location

: JV Gate Area

### Laboratory Provided Information:

Date of Sampling

: 27-04-2023

Time of Sampling

: 10:50 AM

Test Started On

: 28-04-2023

Test Completed On

: 03-05-2023

Purpose of Monitoring

: To Assess the Pollution Load

Method of Sampling

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

: 1.16

Avg. Flow Rate of Air (lpm) (for Benzene)

: 0.2

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

: 16.7

Ambient Temperature (°C)

: 29.8

Duration of Sampling

: 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	83.12	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	174.56	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	15.36	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	28.54	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.51	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	116.52	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	34.15	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009 Except for PM<sub>10</sub> & PM<sub>2.5</sub> values.

*Sandeep Kumar*  
Reviewed By

*[Signature]*  
Authorised Signatory  
D. Mathur, Director

Page 1 of 1

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230718-019-079  
ULR Code : TC5503 23 3 00009298 F  
Report Date : 24-07-2023  
Sample Receipt Date : 18-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh


**Customer Provided Information: #**

Nature of the Sample

: Ambient Air

Sampling Location

: JV Gate Area

**Laboratory Provided Information:**

Date of Sampling

: 17-07-2023

Time of Sampling

: 11:55 AM

Test Started On

: 18-07-2023

Test Completed On

: 24-07-2023

Purpose of Monitoring

: To Assess the Pollution Load

Method of Sampling

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

: 1.16

Avg. Flow Rate of Air (lpm) (for Benzene)

: 0.2

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

: 16.7

Ambient Temperature (°C)

: 31.9

Duration of Sampling

: 24hrs



TC - 5503

## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	42.16	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	68.91	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	21.49	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	18.74	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.52	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	32.65	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	16.56	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandip Kumar*  
Reviewed By

Page 1 of 1

*D. Mathur*  
Authorised Signatory  
D. Mathur, Director

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

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230502-004-027

ULR Code : TC5503 23 3 00004896 F

Report Date : 08-05-2023

Sample Receipt Date : 02-05-2023

Account Manager : BD Team 7

Credit Manager : Gulab/Septesh


**Customer Provided Information: #**

Nature of the Sample

Sampling Location

: Ambient Air

: SND Gate

**Laboratory Provided Information:**

Date of Sampling

Time of Sampling

Test Started On

Test Completed On

Purpose of Monitoring

Method of Sampling

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

Avg. Flow Rate of Air (lpm) (for Benzene)

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

Ambient Temperature (°C)

Duration of Sampling

: 01-05-2023

: 12:15 PM

: 02-05-2023

: 08-05-2023

: To Assess the Pollution Load

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

: 1.18

: 0.2

: 16.7

: 28.7

: 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	46.21	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	64.78	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	4.19	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	26.33	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.48	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	132.96	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	41.53	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandip Kumar*  
Reviewed By

Page 1 of 1

*D. Mathur*  
Authorised Signatory  
D. Mathur, Director

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

## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-011-039  
ULR Code : TC5503 23 3 00009367 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh

**Customer Provided Information:#**

Nature of the Sample

: Ambient Air

Sampling Location

: SND Gate

**Laboratory Provided Information:**

Date of Sampling : 18-07-2023  
Time of Sampling : 11:15 AM  
Test Started On : 19-07-2023  
Test Completed On : 24-07-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>) : 1.18  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 31.9  
Duration of Sampling : 24hrs


## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	34.15	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	57.43	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	9.54	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	13.66	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.43	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	25.73	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	25.82	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(I)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandeep Kumar*  
Reviewed By

*[Signature]*  
Authorised Signatory  
D. Mathur, Director

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



## TEST REPORT

**Issued to :**  
**MSIL Manesar Vehicle Plant**  
Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230502-004-028  
ULR Code : TC5503 23 3 00004897 F  
Report Date : 08-05-2023  
Sample Receipt Date : 02-05-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh



### Customer Provided Information: #

Nature of the Sample  
Sampling Location

: Ambient Air  
: STP Area

### Laboratory Provided Information:

Date of Sampling : 01-05-2023  
Time of Sampling : 12:25 PM  
Test Started On : 02-05-2023  
Test Completed On : 08-05-2023  
Purpose of Monitoring : To Assess the Pollution Load  
Method of Sampling : IS-5182 (P-14) & FL/SOP/ENV/D-01  
Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>) : 1.18  
Avg. Flow Rate of Air (lpm) (for Benzene) : 0.2  
Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>) : 16.7  
Ambient Temperature (°C) : 29.3  
Duration of Sampling : 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	49.15	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	69.32	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	5.46	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	24.19	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.51	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	129.55	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	37.49	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(I)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

*Sandip Kumar*  
Reviewed By

*[Signature]*  
Authorised Signatory  
D. Mathan, Director

Page 1 of 1

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## TEST REPORT

**Issued to :**
**MSIL Manesar Vehicle Plant**

Plot No-1, Phase 3A, IMT Manesar, Gurgaon  
Haryana, India

J.O. No. : ENV20230719-011-040  
ULR Code : TC5503 23 3 00009368 F  
Report Date : 24-07-2023  
Sample Receipt Date : 19-07-2023  
Account Manager : BD Team 7  
Credit Manager : Gulab/Septesh

**Customer Provided Information: #**

Nature of the Sample

: Ambient Air

Sampling Location

: STP Area

**Laboratory Provided Information:**

Date of Sampling

: 18-07-2023

Time of Sampling

: 11:35 AM

Test Started On

: 19-07-2023

Test Completed On

: 24-07-2023

Purpose of Monitoring

: To Assess the Pollution Load

Method of Sampling

: IS-5182 (P-14) &amp; FL/SOP/ENV/D-01

Average Flow Rate (m<sup>3</sup>/min) (PM<sub>10</sub>)

: 1.18

Avg. Flow Rate of Air (lpm) (for Benzene)

: 0.2

Avg. Flow Rate of Air (lpm) (PM<sub>2.5</sub>)

: 16.7

Ambient Temperature (°C)

: 33.2

Duration of Sampling

: 24hrs



## Analysis Report

S. No.	Parameters	Unit	Test Results	NAAQS* (Maximum Allowable Limit)	Test Method
<b>Chemical Analysis</b>					
1	Particulate Matter (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	40.56	60	FL/SOP/ENV-01
2	Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	66.59	100	IS:5182 (P-23)
3	Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	12.47	80	IS:5182 (P-2)
4	Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	17.85	80	IS:5182 (P-6)
5	Carbon Monoxide (CO)	mg/m <sup>3</sup>	0.49	2	IS:5182 (P-10)
6	Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	33.42	400	Methods of Air Sampling & Analysis (401)
7	Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	29.51	100	IS:5182 (P-9)
8	Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	ND, [DL-0.5]	1	Methods of Air Sampling & Analysis (102)
9	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	ND, [DL-0.5]	5	FL/SOP/GC-46
<b>Heavy Metals</b>					
10	Lead (as Pb)	µg/m <sup>3</sup>	ND, [DL-0.5]	1	FL/SOP/ENV-18
11	Nickel (Ni)	ng/m <sup>3</sup>	ND, [DL-0.5]	20	FL/SOP/ENV-18
12	Arsenic (As)	ng/m <sup>3</sup>	ND, [DL-0.5]	6	FL/SOP/ENV-18

\*NAAQS - National Ambient Air Quality Standards; Schedule-VII, [Rule 3 (3B)], [Part-II-sec.-3(i)] 16.11.2009

**Inference:** The tested sample of Ambient Air for above mentioned location conforms to NAAQS 2009.

**Reviewed By**

Page 1 of 1

**Authorised Signatory**

D. Mathur, Director

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MARUTI SUZUKI INDIA LIMITED, MANESAR, GURGAON, HARYANA  
Advertisement in News papers

## Advertisement 1:

TRIBUNE 22 - Feb - 2008

**PUBLIC NOTICE**

 **MARUTI SUZUKI**

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 (capitive) 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 Feburary, 2008. Maruti Suzuki India Limited**

## Advertisement 2:

AMAR UJALA 22-Feb-2008

**सूचना**

 **MARUTI SUZUKI**

Maruti Suzuki India Limited  
 11th Floor, Jeevan Prakash Building,  
 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**