

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-sate 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 22nd 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 ElA 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_x 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 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_x 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 SO₂, NOx, RSPM (PM₁₀ & PM_{2.5}) 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_x (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.

- The project authorities shall inform the Regional Office as well as the xii) 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.
- Full cooperation shall be extended to the Scientists/Officers from the xiii) Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.
- 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.
- The environmental clearance accorded shall be valid for a period of five years to start operations by the power plant.
- Concealing factual data or submission of false/fabricated data and 6. 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.
- In case of any deviation or alteration in the project proposed including 7. 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.
- 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:

- The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, 1. New Delhi 110001.
- The Secretary (Environment), Forests and Environment Department 2. Government of Maharashtra.
- The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. 3. 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'

Way of Life!

MSIL:CUIP:ESEC:ENV:19-20:053

30-Oct-2019

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

Sub: Half yearly report for Compliance of Expansion of 77.5 MW to 83.5 MW by addition of 6.0 MW Gas Based Captive Power Plant at Gurgaon Plant, Haryana by M/s Maruti Suzuki India Ltd.

Ref: Environment Clearance Letter from MoEF – J-13012/06/2009-IA-II(T) dated :03-June-2011

Dear Sir,

Enclosed please find herewith the half yearly compliance report for the environment clearance.

Thanking You,

Yours Faithfully

Dansdens

CC:

MADAN BANSODE

DGM (ENVIRONMENT)

MARUTI SUZUKI INDIA LTD.

Madan Ankush Bansode Deputy General Manager (Environment) Maruti Suzuki India Limited, Gurgaon.

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 Limitod,
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

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			
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.			
ii	Mass Spectrometer based Helium detector to detect the gas leakage shall be installed.	Installed			
111	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 to			
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 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. Ground water quality is monitored annually and report is attached at Annex - 1			
х	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.	Rain water harvesting structures are already constructed in premises.			
хi	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 Annex - 2			
xiii	NOx emission from each Gas Turbine shall not exceed 50 ppm,	Complied, Reports are attached in Annex - 3.			
xiv	Stacks of 70 m shall be provided with continuous online monitoring equipments. Exit velocity of flue gases shall not be less that 22 m/sec.	70 m Chimney installed with continuous online monitoring equipment			



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	
xv	Regular monitoring of ground level concentration of SO2, Nox, RSPM (PM10 & PM2.5) 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 are monitored quarterly and reports are placed at Annex - 4.	
XVÎ	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.		
xvíí	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.	Complied. Detailed report placed at Annex - 5.	
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 that 80% shall be developed. The green belt developed shall not be less than 33% of the total area.	Green belt of MSIL is placed at Annex - 6.	



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		
	General Condition in Environment Clearance			
		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.	Are provided during construction phase		
īfi	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 http://envfor.nic.in .	Advertised in two local newspapers. Copy of the notice attached herewith at Annex - 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	d 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			
îx	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.	Six monthly compliance report is submitted in by June and Decembe of every year		



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		
х	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 NOx(from stack & ambient air) shall be displayed at the main gate of the power plant and in public domain.	e Provided		
хi	Separate funds shall be allocated for implementation or environmental protection measures measured along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measured 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,		



DATA SHEET

1	Project Type	River Valley/Mining/Industry /Refinery/Transportation Tourism / Thermal / Nuclear/Construction Projects			
2.	Name of the Project:	Expansion of captive thermal power plant from 77.5 MW to 83.5 MW at Maruti Suzuki India Limited, Gurgaon			
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: Gurgaon State: Haryana Latitude: 28 ⁰ 29'42.9"N Longitude: 77 ⁰ 04'28.9"E			
5.	Address for correspondence: a) Address for Correspondence	Mr Madan Ankush Bansode Deputy General Manager – Environment Maruti Suzuki India Limited			
		Palam Gurgaon Road Gurgaon, Haryana Email: Madan.Bansode@maruti.co.in Phone 0124 – 2346721 ~ 30 Extn: 3583			
	b) Address of executive Project Incharge	Mr. Alok Bansal Vice President – EMU Maruti Suzuki India Limited Palam Gurgaon Road Gurgaon, Haryana Email: Alok.Bansal@maruti.co.in 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	Not Applicable			
	b) Others	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	Not Applicable			
	b) Others				



	(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)	
9.	Financial details:	
	a) Project cost as originally planned and subsequent revised estimates and the year or price reference.	Original: 30 Cr.
	b) Allocations made for environmental management plans with item wise and year wise break up.	Included above
	c) Benefit cost ratio/Internal Rate of Return and the year of assessment.	
	d) Whether (c) includes the cost of environment management as shown in b) above.	-
	e) Actual expenditure incurred on the project so far.	-
	f) Actual expenditure incurred on the environmental management plans so far:	Rs. 6.67 Cr.
10.	Forest land requirement: a) The status of approval for diversion of forest land for non-forestry use. b) The status of clear felling. c) The status of compensatory afforestation of clear felling. If any. d) Comments on the viability & sustainability of compensatory	Not Applicable
	afforestation programmes in the light of actual field experience so far.	
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.	Status of construction. a) date of commencement (actual and/ or planned) b) Date of completion (actual and / or	Jun'11
13.	planned) Reasons for the delay if the project is yet to	Jan'13 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_X 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.





Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

A-3/7, Mayapuri Industrial Area, Ph-II, New Delhi - 110064

Phone : +(91)-(11) 43854300 reports@simalab.com Email

U74899DL1988PTC031785 CIN No Website www.simalab.net | www.simalab.com

ISO 9001:2015 • ISO 14001:2015 • OHSAS 18001:2007 • NABL ACCREDITED • FSSAI, AGMARK, BIS, AYUSH & MoEF RECOGNISED

7.8 F-01

TEST REPORT

PARTY CODE : M/HR/12232

MARUTI SUZUKI INDIA LIMITED

OLD PALAM, GURGAON ROAD, GURUGRAM-122015,

REPORT NO.: SN0525013419

REF. NO. : NS

REF. DATE

: NS

DT.RECD : 25/05/2019

SAMPLE NAME: TUBEWELL WATER NO.4

HARYANA

RESULTS OF ANALYSIS

Reference: IS 10500 -2012

: One tubewell water no.4 sample was collected by us on 23/05/2019

SAMPLING DATE

DESCRIPTION

: 23/05/2019

SAMPLE QTY. : 4 LTR.

S.No.	Parameter	Units	Result	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Test Method	Detection Limits
1,	Colour (Max.)	Hazen	Colourless	5	15	IS:3025 (P-4)	NA
2.	Odour	NA	Agreeable	Agreeable	Agreeable	IS:3025 (P-5)	NA
3.	Taste	NA	Not Done	Agreeable	Agreeable	IS:3025 (P-7 & 8)	NA
4.	Turbidity (Max.)	NTU	<0.1	1.	5	IS:3025 (P-10)	NA
5.	pH Value	NA	7.51	6.5 to 8.5	No Relaxation	IS:3025 (P-11)	NA
6.	Total Dissolved Solids (Max.)	mg/L	432	500	2000	IS:3025 (P-16)	NA
7.	Total Hardness (as CaCO3) (Max.)	mg/L	196	200	600	IS:3025 (P-21)	NA
8.	Calcium (as Ca) (Max.)	mg/L	54	75	200	IS:3025 (P-40)	NA
9.	Magnesium (as Mg) (Max.)	mg/L	15	30	100	IS:3025 (P-46)	NA
10.	Chloride (as CI) (Max.)	mg/L	117	250	1000	IS:3025 (P-32)	NA
11.	Sulphate (as SO4) (Max.)	mg/L	24	200	400	IS:3025 (P-24)	NA
12.	Iron (as Fe) (Max.)	mg/L	BDL	0.3	1.0	IS:3025 (P-2)	0.01
13,	Free residual chlorine (as Cl2) (Min.)	mg/L	BDL	0.2	1.0	IS:3025 (P-26)	0.1
14.	Copper (as Cu) (Max.)	mg/L	BDL	0.05	1.5	IS:3025 (P-2)	0.01
15.	Mangnese (as Mn) (Max.)	mg/L	BDL	0.1	0.3	IS:3025 (P-2)	0.005

SAMPLE COLLECTED BY US

DATE: 30/05/2019

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Rohit

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BUILDING MATERIAL LAB: Plot No. 107/11/2 &107/20, Udhyog Nagar Indi Area, Mundka,

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Sophisticated Industrial Materials

(GOVT APPROVED TESTING LABORATORIES)

Analytic Labs Pvt. Ltd.

Email CIN No

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TEST REPORT

PARTY CODE . M/HR/12232

REPORT NO. - SN0525013419

S.No.	Parameter	Units	Result	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Test Method	Detection Limits
16.	Nitrate (as NO3) (Max.)	mg/L	BDL	45	No Relaxation	IS:3025 (P-34)	0.05
17_	Fluoride (as F) (Max.)	mg/L	BDL	1.0	1.5	APHA - 4500 F-D	0.05
18.	Phenolic Compound (as C6H5OH) (Max.)	mg/L	BDL	0.001	0.002	IS:3025 (P-43)	0.0001
19.	Mercury (as Hg) (Max.)	mg/L	BDL	0.001	No Relaxation	IS:3025 (P-2)	0.0007
20.	Cadmium (as Cd) (Max.)	mg/L	BDL	0.003	No Relaxation	IS:3025 (P-2)	0.002
21.	Selenium (as Se) (Max.)	mg/L	BDL	0.01	No Relaxation	IS:3025 (P-2)	0.002
22.	Arsenic (as As) (Max.)	mg/L	BDL	0.05	No Relaxation	IS:3025 (P-2)	0.005
23.	Cyanide (as CN) (Max.)	mg/L	BDL	0.05	No Relaxation	IS:3025 (P-27)	0.02
24.	Lead (as Pb) (Max.)	mg/L	BDL	0.01	No Relaxation	IS:3025 (P-2)	0.002
25.	Zinc (as Zn) (Max.)	mg/L	BDL	5.0	15	IS:3025 (P-2)	0.1
26.	Anionic Detergents (as MBAS) (Max.)	mg/L	BDL	0.2	1.0	Annex. 'K' of IS:13428	0.1
27,	Total Alkalinity (as CaCO3) (Max.)	mg/L	242	200	600	IS:3025 (P-23)	NA
28.	Aluminium (as Al) (Max.)	mg/L	BDL	0.03	0.2	IS:3025 (P-2)	0.005
29.	Boron (as B) (Max.)	mg/L	BDL	1.0	2.4	1S:3025 (P-2)	0.1
30.	Mineral Oil (Max.)	mg/L	BDL	0.5	No Relaxation	CI-5 of (P-39)	0.1
31,	Barium (as Ba) (Max.)	mg/L	BDL	0.7	No Relaxation	IS:3025 (P-2)	0.01
32.	Chloramines (as Cl2) (Max.)	mg/L	BDL	4.0	No Relaxation	IS:3025 (P-26)	1.0
33.	Silver (as Ag) (Max.)	mg/L	BDL	0.1	No Relaxation	IS:3025 (P-2)	0.002
34.	Sulphide (as H2S) (Max.)	mg/L	BDL	0.05	No Relaxation	IS:3025 (P-29)	0.02
35.	Molybdenum (as MO) (Max.)	mg/L	BDL	0.07	No Relaxation	IS:3025 (P-2)	0.01
36.	Nickel (as Ni) (Max.)	mg/L	BDL	0.02	No Relaxation	IS:3025 (P-2)	0.005
37.	Total Chromium (as Cr) (Max.)	mg/L	BDL	0.05	No Relaxation	IS:3025 (P-2)	0.005
38.	Ammonia (as Total Ammonia-N) (Max.)	mg/L	BDL	0.5	No Relaxation	IS:3025 (P-34)	0.1
39.	E.Coli	Per 100 ml	Absent	Shall not be detectable in any	NA	IS:15185 -2016	NA

SAMPLE COLLECTED BY US

DATE: 30/05/2019

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TEST REPORT





REPORT NO. · SN0525013419 DARTY CODE . M/HR/12232

S.No.	Parameter	Units	Result	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Test Method	Detection Limits
39.				100 ml sample			
4 0.	Total Coliform	Per 100 ml	Absent	Shall not be detectable in any 100 ml sample	NA	IS:15185 -2016	NA
41.	Polynucler Aromatic Hydrocarbons (as PAH) (Max.)	mg/L	BDL	0.0001	No Relaxation	APHA 6440	0.00008
42.	Polychlorinated Biphenyls (Max.)	mg/L	BDL	0.0005	No Relaxation	ASTM 5175	0.00008
43.	Alachlor	ug/L	BDL	20	NA	USEPA 525.2	0.01
44.	Atrazine	ug/L	BDL	2.0	NA	USEPA 525.2	0.01
45.	Aldrin	ug/L	BDL	0.03	NA	USEPA 508	0.01
46.	Dieldrin	ug/L	BDL	0.03	NA	USEPA 508	0.01
47.	Alpha HCH	ug/L	BDL	0.01	NA	USEPA 508	0.01
48.	Beta HCH	ug/L	BDL	0.04	NA	USEPA 508	0.01
49.	Gamma-HCH (Lindane)	ug/L	BDL	2.0	NA	USEPA 508	0.01
50.	Delta HCH	ug/L	BDL	0.Q4	NA	USEPA 508	0.01
51.	Butachlor	ug/L	BDL	125	NA	USEPA 525.2	0.01
52,	Chlorpyrifos	ug/L	BDL	30	NA	USEPA 525.2	0.01
53.	2,4-Dichlorophenoxy Acetic Acid	ug/L	BDL	30	NA	USEPA 525.2	0.01
54,	2,4, DDT	ug/L	BDL	1.0	NA	USEPA 508	0.01
55.	4,4 DDT	ug/L	BDL	1.0	NA	USEPA 508	0.01
56.	2,4 DDD	ug/L	BDL	1.0	NA	USEPA 508	0.01
57.	4,4 DDD	ug/L	BDL	1.0	NA	USEPA 508	0.01
58.	2,4 DDE	ug/L	BDL	1.0	NA	USEPA 508	0.01
59.	4,4 DDE	ug/L	BDL	1.0	NA	USEPA 508	0.01
60.	Endosulfan	ug/L	BDL	0.4	NA	USEPA 508	0.01
61	Endosulfan-I	ug/L	BDL	0.4	NA	USEPA 508	0.01
62.	Endosulfan-II	ug/L	BDL	0.4	NA	USEPA 508	0.01

SAMPLE COLLECTED BY US

DATE: 30/05/2019

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A-3/7, Mayapuri Industrial Area, Ph- II, New Delhi - 110064

TEST REPORT





PARTY CODE M/HR/12232 REPORT NO. : SN0525013419

MIXI	TOODE : WITHVIZZOZ				THE OTHER .		
S.No.	Parameter	Units	Result	Acceptable Limits (as per IS:10500-2012)	Permissible Limits (as per IS:10500-2012)	Test Method	Detection Limits
63.	Ethion	ug/L	BDL	3.0	NA	USEPA 1657A	0.01
64.	Isoproturon	ug/L	BDL	9.0	NA	USEPA 532	0.01
65.	Malathion	ug/L	BDL	190	NA	USEPA 8141A	0.01
66.	Methyl Parathion	ug/L	BDL	0.3	NA	USEPA 8141A	0.01
67.	Monocrophos	ug/L	BDL	1.0	NA	USEPA 8141A	0.01
68.	Phorate	ug/L	BDL	2.0	NA	USEPA 8141A	0.01
69.	Trihalomethanes		-				
70.	Bromoform (Max.)	ug/L	BDL	0.1	NA	APHA 6232	0.05
71.	Dibromochloromethan (Max.)	ug/L	BDL	0.1	NA	APHA 6232	0.05
72.	Bromodichloromethane (Max.)	ug/L	BDL	0.06	NA	APHA 6232	0.05
73.	Chloroform (Max.)	ug/L	BDL	0.2	NA	APHA 6232	0.05

NA-Not Applicable , BDL-Below Detection Limit

Date of performance: 25/05/2019 to 30/05/2019

Note-Taste not Done due to suspended particles present in sample.

SAMPLE COLLECTED BY US

DATE: 30/05/2019

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TEST REPORT

PARTY CODE : M/HR/12232

Description

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0525007919

REF. NO. : NS

OLD PALAM, GURGAON ROAD, GURUGRAM-122015,

HARYANA

REF. DATE

DT.RECD

: NS : 25/05/2019

SAMPLE NAME: NOISE MONITORING

RESULTS OF ANALYSIS

Reference: IS:11446 & 4758 / EP Act Standards

NGDG (6 MW) noise level from different points of M/s MARUTI SUZUKI INDIA LIMITED was monitored

by us on 21/05/2019

S.No.	Location of Sampling Point	Avg. Instant Value dB(A)	Permissible Limit dB(A) (Max.)
1.	When NGDG Set was kept Off :-		
(i).	Background Noise Level Outside The Gate	65.8	
2.	When NGDG Set Was in Operation	WALL BOOK	
(i).	Inside NGDG Acoustic Room at 0.5 meter Distance Away From Engine of G.T Set	104.5	Minimum Loss of Insertion 25.0
	Outside NGDG Acoustic Room at 0.5 meter Distance Away From Gate	72.3	<75.0
3.	Insertion Loss at 0.5 meter	32.2	N.

Date of performance: 25/05/2019 to 25/05/2019

DATE: 25/05/2019

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TEST REPORT

PARTY CODE : M/HR/12232

Description

HARYANA

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0525008319

REF. NO.

: NS

REF. DATE DT.RECD

: 25/05/2019

SAMPLE NAME . STACK EMISSION

RESULTS OF ANALYSIS

Reference: IS 11255 & EPA

One stack emission sample was collected by us on 20/05/2019 between 03:45 PM to

. Mild steel

OLD PALAM, GURGAON ROAD, GURUGRAM-122015,

: MARUTI SUZUKI INDIA LIMITED Name of Industry

Name of plant & Section NGDG section **Emission Source Monitored** : NGDG stack Type of Fuel Used : Natural gas Stack Identification : NGDG stack (6 MW)

Normal Operating Schedule (Hrs/day) ... As & when required Location of sampling Point : As per norms

Type of Chimney (ACC/Metal) Stack Height (Meters)

a. From source of Emission b. From Roof Level c. From Ground Level : 70 : 111.4

Diameter of stack (cm) Sampling Duration (minutes) : 30

Parameters Monitored ; PM, NOX, CO & NMHC Purpose of Monitoring : Assessment of pollution load **Products Manufactured** : Integrated automobile Mfg.

Control measures (if any) . Nil Recovery of Material (if any) : Nil General Sensory observations Normal Fugitive Emissions (if any) Nil Stack Temperature (°C) : 310 Ambient Temperature(°C) : 40 Quantity of Emission (Nm3/Hr) : 37424

S.No.	Parameters	Units	Results	Limits (Max.)	Protocols
1,	Particulate Matter	mg/Nm3	22.4(at 15% O2 Corr.)	75	IS:11255 (P-1)
2.	Nitrogen Oxides (as NOx)	ppm	36.4 (at 15% O2 Corr.)	50	IS:11255 (P-7)
3.	Carbon Monoxide (as CO)	ppm	27.0 (at 15% O2 Corr.)	150	IS:5182 (P-10)

SAMPLE COLLECTED BY US

DATE: 28/05/2019

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TEST REPORT

PARTY CODE : M/HR/12232

REPORT NO. : SN0525008319

S.No.	Parameters	Units	Results	Limits (Max.)	Protocols
4.	Non Methane Hydrocarbons	ppm	16.3 (at 15% O2 Corr.)		Methods of Air sampling & analysis-101





Date of performance: 25/05/2019 to 28/05/2019

SAMPLE COLLECTED BY US

DATE: 28/05/2019

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7.8 F-01

TEST REPORT

PARTY CODE ; M/HR/12232

HARYANA

MARUTI SUZUKI INDIA LIMITED

REF. NO.

REF. DATE

REPORT NO. : SN0816001619

: NS

OLD PALAM, GURGAON ROAD, GURUGRAM-122015,

: NS

DT.RECD

: 16/08/2019

SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 09/08/2019 to 10/08/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

D.M Plant

Date of Sampling

09/08/2019 To 10/08/2019

Sampling started at

11:10 AM (Dt. 09/08/2019)

Sampling completed at

11:10 AM (Dt. 10/08/2019)

Actual time of sampling

1440 Minutes

Flow rate of sampling

1.295 m3 / Minute

Total volume of air sampled

1865 m3 (For PM-10) & 23.994 m3 (For PM-2.5)

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	μg/m³	94.2	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	52.9	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	31.2	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	20.2	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.112	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL.	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	23.9	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 20/08/2019

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Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.

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A-3/7, Mayapuri Industrial Area, Ph-II, New Delhi - 110064

: +(91)-(11) 43854300 Phone

: reports@simalab.com Email CIN No : U74899DL1988PTC031785

Website : www.simalab.net | www.simalab.com

FSSAI, AGMARK, BIS, AYUSH & MOEF RECOGNISED

TEST REPORT



7.8 F-01

PARTY CODE : M/HR/12232

REPORT NO. : SN0816001619

B.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1
13.	Non-Methane Hydrocarbon	ppm	BDL	NA	Methods of Air sampling & Analysis-101	0.05



Date of performance: 16/08/2019 to 20/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 20/08/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred nor implied,

2. Liability of laboratory is limited to the invoiced amount only, Any dispute erising out of this report shall be subject to Delhi jurisdiction only.

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4. Sample shall be disposed off after Issue of Test Report unless specified.

5. A complaint register is available with the laboratory.

Rohit

BUILDING MATERIAL LAB ; Plot No. 107/11/2 &107/20, Udhyog Nagar Indi Area, Mundka,

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Page: 2 of 2

HARIDWAR LABORATORY; Plot No. 37, Sector - 7, LLE SIIDCUL, Haridwar - 249403 New Delhi-110041



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7.8 F-01

TEST REPORT

PARTY CODE : M/HR/12232

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0816001719

REF. NO.

: NS

HARYANA

OLD PALAM, GURGAON ROAD, GURUGRAM-122015,

REF. DATE : NS

DT.RECD

: 16/08/2019

SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 09/08/2019 to 10/08/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

STP Plant

Date of Sampling

09/08/2019 To 10/08/2019

Sampling started at

12:20 PM (Dt. 09/08/2019)

Sampling completed at

12:20 PM (Dt. 10/08/2019)

Actual time of sampling Flow rate of sampling

1440 Minutes

1.25 m3 / Minute

Total volume of air sampled

1800 m3 (For PM-10) & 23.988 m3 (For PM-2.5)

Ambient temperature (°C)

Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
Particulate Matter (as PM -10)	µg/m³	91.7	100	IS:5182 (P-23)	NA
Particulate Matter (as PM - 2.5)	µg/m³	49.6	60	Gravimetric	NA
Nitrogen Dioxides (as NO2)	μg/m³	30.7	80	IS:5182 (P-6)	NA
Sulphur Dioxide (as SO2)	µg/m³	18.4	80	IS:5182 (P-2)	NA
Carbon Monoxide (as CO) (8 hours)	mg/m³	1.094	2.0	NDIR - Spectroscopy	NA
Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
Ozone (as O3) (8 hours)	µg/m³	23.5	100	Methods of Air sampling & Analysis-411	NA
	Particulate Matter (as PM -10) Particulate Matter (as PM - 2.5) Nitrogen Dioxides (as NO2) Sulphur Dioxide (as SO2) Carbon Monoxide (as CO) (8 hours) Benzene (as C6H6)	Particulate Matter (as PM -10) µg/m³ Particulate Matter (as PM - 2.5) µg/m³ Nitrogen Dioxides (as NO2) µg/m³ Sulphur Dioxide (as SO2) µg/m³ Carbon Monoxide (as CO) (8 mg/m³ hours) Benzene (as G6H6) µg/m³ Ammonia (as NH3) µg/m³	Particulate Matter (as PM -10) µg/m³ 91.7 Particulate Matter (as PM - 2.5) µg/m³ 49.6 Nitrogen Dioxides (as NO2) µg/m³ 30.7 Sulphur Dioxide (as SO2) µg/m³ 18.4 Carbon Monoxide (as CO) (8 mg/m³ 1.094 hours) Benzene (as G6H6) µg/m³ BDL Ammonia (as NH3) µg/m³ BDL	Particulate Matter (as PM -10) μg/m³ 91.7 100 Particulate Matter (as PM - 2.5) μg/m³ 49.6 60 Nitrogen Dioxides (as NO2) μg/m³ 30.7 80 Sulphur Dioxide (as SO2) μg/m³ 18.4 80 Carbon Monoxide (as CO) (8 mg/m³ 1.094 2.0 hours) Benzene (as G6H6) μg/m³ BDL 5.0 Ammonia (as NH3) μg/m³ BDL 400	Particulate Matter (as PM -10) μg/m³ 91.7 100 IS:5182 (P-23) Particulate Matter (as PM - 2.5) μg/m³ 49.6 60 Gravimetric Nitrogen Dioxides (as NO2) μg/m³ 30.7 80 IS:5182 (P-6) Sulphur Dioxide (as SO2) μg/m³ 18.4 80 IS:5182 (P-2) Carbon Monoxide (as CO) (8 mg/m³ 1.094 2.0 NDIR - Spectroscopy hours) Benzene (as G6H6) μg/m³ BDL 5.0 IS:5182 (P-11) Ammonia (as NH3) μg/m³ BDL 400 Methods of Air sampling & Analysis-401 Ozone (as O3) (8 hours) μg/m³ 23.5 100 Methods of Air sampling

SAMPLE COLLECTED BY US

DATE: 20/08/2019

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BUILDING MATERIAL LAB :

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TEST REPORT





PARTY CODE : M/HR/12232

REPORT NO. : SN0816001719

9.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0,05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as NI)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1
13.	Non - Methane Hydrocarbon	ppm	BDL	NA	Methods of Air sampling & Analysis-101	0.05



Date of performance: 16/08/2019 to 20/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 20/08/2019

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7.8 F-01



TEST REPORT

PARTY CODE : M/HR/12232

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0816001819

REF. NO.

: NS

OLD PALAM, GURGAON ROAD, GURUGRAM-122015,

HARYANA

REF. DATE

DT.RECD : 16/08/2019

SAMPLE NAME : AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description One ambient air sample was collected by us from 12/08/2019 to 13/08/2019

Name of Industry MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point Machine shop - 1/2

Date of Sampling 12/08/2019 To 13/08/2019 Sampling started at 02:15 PM (Dt. 12/08/2019) Sampling completed at 02:15 PM (Dt. 13/08/2019)

Actual time of sampling 1440 Minutes Flow rate of sampling 1.25 m³ / Minute

Total volume of air sampled 1800 m3 (For PM-10) & 23.991 m3 (For PM-2.5)

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m³	91.0	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	52.9	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	30.2	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	19.4	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.088	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	23.2	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 20/08/2019

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TEST REPORT





PARTY CODE · M/HR/12232

REPORT NO. : SN0816001819

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	μg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1
13.	Non Methane Hydrocarbon	ppm	BDL	NA	Methods of Air sampling & Analysis-101	0.05



Date of performance: 16/08/2019 to 20/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 20/08/2019

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New Delhi-110041

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TEST REPORT



PARTY CODE

: M/HR/12232

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0816001919

REF. NO.

DT.RECD

: NS

OLD PALAM, GURGAON ROAD, GURUGRAM-122015,

REF. DATE

: 16/08/2019

SAMPLE NAME : AMBIENT AIR

HARYANA

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 12/08/2019 to 13/08/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

Near sewage pump house

Date of Sampling

12/08/2019 To 13/08/2019

Sampling started at Sampling completed at 03:00 PM (Dt. 12/08/2019) 03:00 PM (Dt. 13/08/2019)

Actual time of sampling

1440 Minutes

Flow rate of sampling

1,225 m3 / Minute

Total volume of air sampled

1764 m3 (For PM-10) & 23.993 m3 (For PM-2.5)

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1:	Particulate Matter (as PM -10)	µg/m³	90.0	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	51.3	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	29.5	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	18.9	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.075	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	iS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	22.8	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 20/08/2019

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PART	Y CODE ; M/HR/12232			REPORT NO. ; SN0816001919			
8.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit	
9.	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05	
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05	
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05	
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1	
13.	Non - Methane Hydrocarbon	ppm	BDL	NA	Methods of Air sampling & Analysis-101	0.05	



Date of performance: 16/08/2019 to 20/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

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A brief report on the CSR (2018-19) by Maruti Suzuki in Gurgaon

Skill Development

A. Learning level improvement activities in 11 government schools of 05 villages.

B. Vocational Training in 02 Industrial Training Institutes, Govt. ITI Gurugram and Govt. Women ITI, Gurugram.

C. Development of Automobile Skill Enhancement Center (ASEC) in Govt. ITI Gurugram.

A. Learning Level Improvement:

Total 11 Government schools have been upgraded in FY18-19. 26 teachers have been deployed by Maruti Suzuki to support the studies at these 11 schools. The details of the schools upgraded in 2018 -19 in the villages as follows:

- Chauma
- Carterpuri
- Sarhaul
- Dundaheda
- Molaheda

The Company works in these schools through direct intervention. As part of ongoing activities under school up gradation project, the Company is working on below areas. Maintenance work is always undertaken on below activities in the schools supported by the Company.

S. No.	Activities
1	Construction of Toilet blocks
2	Development of playgrounds
3	Repair and maintenance of amenities.
4	Building repair and white washing

An NGO named Haryali maintains the green areas in the supported schools. Regular sweepers are also provided for cleaning of these schools and to make sure that the toilets constructed by the company are clean.

The implementations of all projects are undertaken in partnership with school authorities & Government education department officials along with guidance of Senior Management of Maruti Suzuki India Limited.

The Company has also provided over 40 teachers for Haryana schools to cater the shortage of Government teachers. These Teachers are helping students with subjects like Mathematics, Science and English.



B. Vocational Training & ASEC:

Maruti Suzuki is supporting 114 ITIs in 26 states of India. In Gurgaon 2 Government ITI are adopted. The focuses in these ITI are on four broad developmental areas which are:

- Faculty development
- Student development
- Infrastructure development
- Industry connect

The students were trained on 5S, Safety, advanced automobile, personality development & Interview skills, etc. Faculties were imparted Tier -1 and Tier -2 trainings which aim at behavioral skills, motivational skills, PDCA & Problem Solving, Team work etc.

C. <u>Development of Automobile Skill Enhancement Center (ASEC)</u>

The Company's experience of upgrading ITI has opened various avenues of improvement in quality of vocational training, introduced industrial culture, have reenforced positivity, openness and exposed the institutes to new technology. The company has also started specialized training programme and country's first Auto Body Repair and Auto Body Paint courses under its state-of-the-art facilities provided in its Automobile Skill Enhancement Centers (ASEC). ASEC has also been setup in Gurgaon ITI.

Apart from these courses, the Company offers on job training for the students in its dealer workshops which are spread across the nation. The Company aims to equip these centers for offering relevant skills to the students and make them job ready.

Community Development

Maruti Suzuki has adopted 26 villages in Haryana & Gujarat. In Gurgaon 05 villages are adopted.

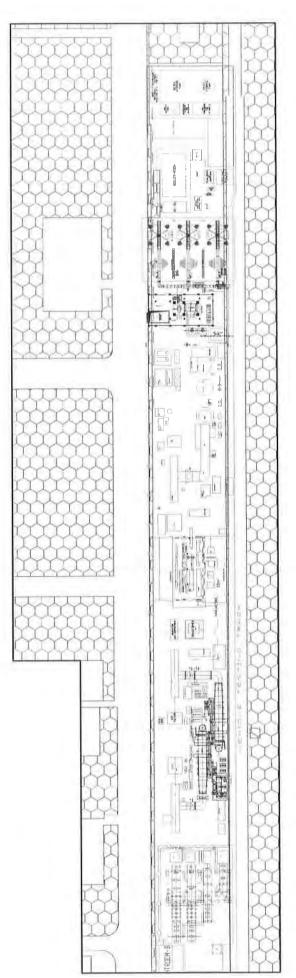
The major focus is on the following areas:

- 1. Water
- 2. Sanitation
- 3. Health
- 4. Common community assets

In 2018-19, the Company has spent Rs. 86,500,000 (approx) to undertake CSR activities in Gurgaon.



Green Area Plan





PUBLIC NOTICE



Maruti Suzuki India Limited, Regd.Office:1, Nelson Mandela Road, Vasant Kuni, 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: 10th June, 2011.

Maruti Suzuki India Limitéd

AMAR UJALA

स्वना



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 गुड़गांव प्लांट में पावर प्लांट के विश्तार हेलु 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://envior.nic.in पर भी देखा जा सकता है.

दिनांकः 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.

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 though 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.

- 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 NOx burners shall be provided and it shall be ensured that NOx 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 recirculated and reused within the plant area. No effluents shall be discharged outside the plant boundary.
- 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.
- 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 1/3rd 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.

- 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 arred 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:

- 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:19-20:055

30-Oct-2019

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

Sub: Half yearly report for Compliance of Environmental Condition for Gas turbine,

Manesar (57 MW)

Ref: Environment Clearance Letter from MoEF – No. SEIAA/HR/2012/237A, dated

30.08.2012.

Dear Sir,

Enclosed please find herewith the half yearly report for the environment clearance issued for our Gas turbine.

Thanking You.

Yours Faithfully

MADAN BANSODE
DGM (ENVIRONMENT)
MARUTI SUZUKI INDIA LTD.

Danrah with Madan Ankush Bansode

Deputy General Manager (Environment) Maruti Suzuki India Limited, Gurgaon.

CC: 1. Haryana State Pollution Control Board, Panchkula

2. State Environment Impact Assessment Authority, Haryana

MARUTI SUZUKI INDIA LIMITED

E-mail id; contact@maruti.co.in, www.marutisuzuki.com

MARUTI SUZUKI INDIA LIMITED, GURGAON, HARYANA

Ref: Environment Clearance letter from MoEF no - SEIAA/HR/2012/237A dated 30,8.2012

S. No.	Clearance Conditions	Compliance Status	
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.m 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 in not available.	Natural gas supply has commenced at Manesar plant	
4	Dry Low NO_X burners shall be provided and it shall be ensured that NO_X emission from the stack is less than 100 ppm.	NOx 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, which ever 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 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.	and are met from the existing tube wells. Current wa	
8	Treated effluents conforming to the prescribed standards shall be recirculated and reused with in the plant area, No effluents shall be discharged outside the plant boundary.	The treated effluents confirm 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.	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 rd of the total area.	Details of Green Belt are placed at Annex: 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 has been made available 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 and on project proponent's website.	Notice was published in Amar Ujala (Hindi) and Times of India (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 the SEIAA/Regional Office, MOEF, Chandigarh and HSPCB.	Half yearly compliance report will be submitted to MoEFCC Regional office.
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.



	Conditions imposed by MoEFCC for expansion project	ct in addition to conditions in original project
20	The project proponent shall take adequate preparation for fire and other kind of disaster including chemical disaster. On-site and Off-site emergency plan should be rehearsed through regular mock drills.	Complied,
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.	223 KL HSD was used in existing captive power plants in 2019-20 (till Sep).
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, GoI.	Completed.



Northern Regional Office Ministry of Environment & Forests Chandigarh

DATA SHEET

1.	Project Type	River Valley/ Mining / Industry /Refinery/Transportation/Tourisms/Thermal /Nuclear/Other(Specify)
2.	Name of the Project:	57 MW Captive Power Plant (expansion) at Maruti Suzuki India Limited, Manesar, Gurgaon, 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	Gurgaon Haryana Latitude: 28º 22' 08" N Longitude: 76º 52' 45" E
5.	Address for correspondence:	Longitude : 70 32 13 E
	a) Address for Correspondence	Mr. Madan Ankush Bansode Deputy General Manager – Environment Maruti Suzuki India Limited Palam Gurgaon Road Gurgaon, Haryana Email: Madan.Bansode@maruti.co.in Phone 0124 – 2346721 ~ 30 Extn : 3583
	b) Address of executive Project In-charge	Mr. Alok Bansal Vice President – EMU Maruti Suzuki India Limited Palam Gurgaon Road Gurgaon, Haryana Email: Alok.Bansal@maruti.co.in 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.	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 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.	Financial details:	
	a) Project cost as originally planned and subsequent revised estimates and the year of price reference.	Project Cost: Rs. 314 Crores
	b) Allocations made for environmental management plans with item wise and year wise breakup.	Rs. 3.7 Crores
	c) Benefit cost ratio /internal Rate of Return and the year of assessment.	-
	d) Whether (c) includes the cost of environmental management as shown in b) above.	-
	e) Actual expenditure incurred on the project so far.	Rs. 324 Crores (approx.)
	f) Actual expenditure incurred on the environment management plans so far.	Rs. 4.2 Crores
10.	 Forest land requirement: a) The status of approval for diversion of forest land for non- forestry use. b) The status of clear felling. c) The status of compensatory afforestation if any. d) Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far. 	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.	Status of Construction: a) Date of Commencement (actual and /or planned) b) Date of completion (actual and /or planned)	20 MW & 37 MW are in operation.
13.	Reasons for the delay if the project is yet to start:	Not applicable



SALIENT FEATURES OF PROJECT:

1. Name of the Project Gas turbine at Maruti Suzuki India Limited,

Manesar, Haryana

2. Capacity 57 MW

3. Location : Maruti Suzuki India Limited, IMT Manesar.

4. Total project cost Rs. 314 Crores

5. Land Area 9440 sq m

ENVIRONMENTAL MANAGEMENT PLAN

Water Pollution control

 The Gas Turbine is air cooled hence the 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.
- NOX emissions will be below 100ppm.
- SPM and SO2 emissions will be very low as natural gas is a clean fuel and ultra low sulphur diesel will be used initially or in case of emergency operation. Later on after the availability of natural gas, SPM and SO₂ emissions will further go down

Noise Pollution Control

 The noise from Gas Turbines 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 will be developed with local area species having capacities to reduce SPM and noise levels.



GRI/Fax: 022 - 2550 5354 022 - 2550 5353 022 - 2550 5353

न, द. शर्मा

N. D. Sharma Controller

नियंत्रक

g-Holomail: ndshalmombara.gov.in



भारत सरकार GOVERNMENT OF INDIA भाभा परमाणु अनुसंधान केंद्र BHABHA ATOMIC RESEARCH CENTRE 228

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संदूष्ण कॉम्प्लेक्स, ट्रॉम्बे, मुंबई - 400 085. Central Complex, Trombay, Mumbai - 480 085.

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

April 16 ,2008

Maruti Suzuki India Limited, Palam Gurgaon Road, Gurgaon, Haryana – 122 015

Kind Attn: Mr Vinay Varshney, Chief General Manager (Production Services)

Sub: NOC for Expansion of Power Plant at MSIL, IMT Manesar

Sir.

With reference to your letter MSIL:PRDS:EM2:1728 dated 18th 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

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Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.

(GOVT, APPROVED TESTING LABORATORIES)

A-3/7, Mayapuri Industrial Area, Ph-II, New Delhi - 110064

: +(91)-(11) 43854300 Phone : reports@simalab.com Email

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

REPORT NO. . SN0805003219

REF. NO.

: NS

REF. DATE DT RECD

: 05/08/2019

SAMPLE NAME - STACK EMISSION

RESULTS OF ANALYSIS

Reference: IS 11255 & EPA

Description

: One stack emission sample was collected by us on 01/08/2019 between 12:10 PM to

12:40 PM

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

Name of Industry

: MARUTI SUZUKI INDIA LIMITED

Name of plant & Section **Emission Source Monitored** : Gas turbine section : Gas turbine stack

Type of Fuel Used

: Natural das

Stack Identification

: Gas turbine stack no. 9 (20 M.W.)

Normal Operating Schedule (Hrs/day) Location of sampling Point

: Double shift : As per norms

Type of Chimney (ACC/Metal)

: Mild steel

Stack Height (Meters)

a. From source of Emission b. From Roof Level 30 c. From Ground Level 300 Diameter of stack (cm) : 30

Sampling Duration (minutes) Parameters Monitored Purpose of Monitoring

: PM, NOx, SO2, CO, CO2 & HC : Assessment of pollution load

Products Manufactured

Integrated Automobile Mfg.

Control measures (if any) Recovery of Material (if any) General Sensory observations Fugitive Emissions (if any) Stack Temperature (°C) Ambient Temperature(°C) Quantity of Emission (Nm3/Hr)

: Normal : Nil : 429 : 33 : 335578

Nil

; Nil

s No	Parameters	Units	Results	Limits (Max.)	Protocols	Detection Limit
	Particulate Matter	mg/Nm3	34.2	NA	IS:11255 (P-1)	NA
(7)	Nitrogen Oxides (as NOx)	ppm	47.5	100	IS:11255 (P-7)	NA
-	Sulphur Dioxide (as SO2)	ppm	BDL	NA	IS:11255 (P-2)	1.0
	Carbon Monoxide (as CO)	ppm	22.7	NA	IS:5182 (P-10)	NA
_	Total Hydrocarbon	ppm	18.7	NA	Methods of Air	NA

SAMPLE COLLECTED BY US

DATE: 09/08/2019

1. Results listed refer only to the tested sample & applicable parameters, Endorsement of products is neither inferred nor implied.

2. Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.

3. This Report is not to be reproduced wholly or in parl and cannot be used as an evidence in the Court of law and should not be used in any advertising media without special permission in writing

Sample shall be disposed off after issue of Test Report unless specified.

A complaint register is available with the laboratory

Phone: +(91)-(01334)-235552 Phone: +(91)-93198-28884

Email: simaharidwar@simalab.co.in Email: bmlab@simalab.com

Rohit

New Delhi-110041

THIS CERTIFICATE IS NOT VALID WITHOUT A HOLOGRAM

SIMA

HARIDWAR LABORATORY: Plot No. 37, Sector - 7, I.I.E SIIDCUL, Haridwar - 249403 BUILDING MATERIAL LAB: Plot No. 107/11/2 &107/20, Udhyog Nagar Indl Area, Mundka,



Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.

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TEST REPORT

PARTY CODE : M/HR/12131

REPORT NO.: SN0805003219

S.No.	Parameters	Units	Results	Limits (Max.)	Protocols	Detection Limit
5.					sampling & analysis- 101	
6.	Carbon Dioxide (as CO2)	% v/v	5.4	NA	IS:13270	NA





Date of performance: 05/08/2019 to 09/08/2019

NA-Not Applicable, BDL-Below Detection Limit

SAMPLE COLLECTED BY US

DATE: 09/08/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred not implied. 2. Liability of laboratory is limited to the involced amount only, Any dispute arising out of this report shall be subject to Delhi jurisdiction only.

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4. Sample shall be disposed off after issue of Test Report unless specified.

5. A complaint register is available with the laboratory.

Rohit

HARIDWAR LABORATORY: Plot No. 37, Sector - 7, I.I.E SIIDCUL, Haridwar - 249403
BUILDING MATERIAL LAB: Plot No. 107/11/2 &107/20, Udhyog Nagar Indl Area, Mundka,
New Delhi-110041
THIS CERTIFICATE IS NOT VALID WITH

Phone: +(91)-(01334)-235552 Phone: +(91)-93198-28884

Email: simaharidwar@simalab.co.in Email: bmlab@slmalab.com

ceo

DRISED SIGNATORY

THIS CERTIFICATE IS NOT VALID WITHOUT A HOLOGRAM

SIN

Page: 2 of 2



Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

REPORT NO : SN0805003719

REF. NO.

: NS

REF. DATE

: 05/08/2019 DT.RECD

SAMPLE NAME: EFFLUENT WATER (ETP-OUTLET)

RESULTS OF ANALYSIS

Reference: EP Act Standard

DESCRIPTION

One effluent water sample from outlet of ETP was collected by us on 03/08/2019

SAMPLING DATE : 03/08/2019

SAMPLE QTY. : 1 LTR

S.No.	Parameters	Units	Results	Limit (Max.)	Protocols	Detection Limit
1.	pH	NA	7.41	5.5 to 9.0	IS:3025 (P-11)	NA
2.	Total Suspended Solids	mg/L	<5	100	IS:3025 (P-17)	NA
3.	Chemical Oxygen Demand	mg/L	24	250	IS:3025 (P-58)	NA
4.	Biochemical Oxygen Demand (for 3 days at 27 Deg C)	mg/L	<5	30	IS:3025 (P-44)	NA
5.	Oil & Grease	mg/L	<3	10	IS:3025 (P-39)	NA
6.	Sulphide (as S)	mg/L	BDL	2.0	IS:3025 (P-29)	1.0
7.	Hexavalent Chromium (as Cr+6)	mg/L	BDL	0.10	IS:3025 (P-52)	0.01
8.	Phenolic Compound (as C6H5OH)	mg/L	BDL	1.0	IS:3025 (P-43)	0.02
9.	Cyanide (as CN)	mg/L	BDL	0.20	APHA-4500 CN-E	0.02
10.	Mercury (as Hg)	mg/L	BDL	0.01	IS:3025 (P-2)	0.007
11,	Lead (as Pb)	mg/L	BDL	0.10	IS:3025 (P-2)	0.05
12.	Arsenic (as As)	mg/L	BDL	0.20	IS:3025 (P-2)	
13.	Colour	NA	Colourless	NA	IS:3025 (P-4)	NA
14.	Odour	NA	Odourless	NA	IS:3025 (P-5)	NA
15.	Nitrate Nitrogen (as NO3-N)	mg/L	0.44	10	IS:3025 (P-34)	NA

SAMPLE COLLECTED BY US

DATE: 10/08/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.

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Sample shall be disposed off after issue of Test Report unless specified.

A complaint register is available with the laboratory.

Phone: +(91) (01334)-235552 Phone: +(91)-93198-28884

Email: simaharidwar@simalab co.in

Email: bmlab@simalab.com

Rohit

HARIDWAR LABORATORY: BUILDING MATERIAL LAB:

Plot No. 37, Sector - 7, I.I.E SIIDCUL, Haridwar - 249403 Plot No. 107/11/2 &107/20, Udhyog Nagar Indl Area, Mundka, New Delhi-110041

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TEST REPORT



PARTY CODE - M/HR/12131 REPORT NO.: SN0805003719

	Parameters	Units	Results	Limit (Max.)	Protocols	Detection Limit
16.	Ammonical Nitrogen (as NH3-N)	rng/L	3.7	50	IS:3025 (P-34)	NA
17.		mg/L	2.9	5.0	IS:3025 (P-31)	NA
18.		mg/L	BDI.	2.0	IS:3025 (P-2)	0,05
19.		mg/L	BDL	2.0	APHA-4500 F-D	0.05
20.	Temp.	°C	24.8	NA	IS:3025 (P-9)	NA
21.	Particle Size	μm	DV(10) 22.916	NA	By Particle Analyzer	NA
22.	Particle Size	μm	DV(50) 77.815	NA	By Particle Analyzer	NA
23.	Particle Size	μm	DV(90) 197.694	NA	By Particle Analyzer	NA
24.	Total Kjeldahl Nitrogen	mg/L	6.0	100	IS:3025 (P-34)	NA
25.	Nickle (as Ni)	mg/L	0.43	3.0	IS:3025 (P-2)	NA
26.	Zinc (as Zn)	mg/L	0.19	5.0	IS:3025 (P-2)	NA
27,	Cadmium (as Cd)	mg/L	BDL	2.0	IS:3025 (P-2)	0.01
28.	Copper (as Cu)	mg/L	BDL	3.0	IS:3025 (P-2)	0.05
29.	Total Chromium (as Cr)	mg/L	BDL	2.0	IS:3025 (P-2)	0.005
30.	Total Residual Chlorine (as Cl2)	mg/L	BDL	1.0	IS:3025 (P-26)	1.0
31.	Iron (as Fe)	mg/L	BDL	3.0	IS:3025 (P-2)	0.05
32,	Selenium (as Se)	mg/L	BDL	0.05	IS:3025 (P-2)	0.005
33.	Free Ammonia	mg/L	BDL	5.0	IS:3025 (P-2)	0.5
34.	Vanadium (as V)	mg/L	BDL	0.2 mg/L	IS:3025 (P-2)	0.05

Date of performance: 05/08/2019 to 10/08/2019 BDL - Below Detection Limit NA - Not Applicable

SAMPLE COLLECTED BY US

DATE: 10/08/2019

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Rohit

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Page: 2 of 2

MARUTI SUZUKI LAGOON **GREEN AREA AND RWH** Annexure 4 ROAD Power plant area - 20140 aqm Green area - 16668 aqm Green Sell Y - 65 % Power Plant NORTH





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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

REPORT NO. : SN0805002419

REF. NO.

REF DATE

: NS

: NS

DT.RECD : 05/08/2019



SAMPLE NAME; AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 31/07/2019 to 01/08/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

Near material gate

Date of Sampling

31/07/2019 To 01/08/2019

Sampling started at

10:30 AM (Dt. 31/07/2019)

Sampling completed at

10:30 AM (Dt. 01/08/2019)

Actual time of sampling Flow rate of sampling

1440 Minutes 1.25 m³ / Minute

Total volume of air sampled

1800 m3 (For PM-10) & 23.992 m3 (For PM-2.5)

Ambient temperature (°C)

34

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m³	93.0	100	IS:5182 (P-23)	NA
2,	Particulate Matter (as PM - 2.5)	µg/m³	52.1	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	28.5	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	19.2	80	IS:5182 (P-2)	NA
5,	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.125	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8,	Ozone (as O3) (8 hours)	µg/m³	22.7	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 08/08/2019

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SIGNATORY



Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.

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TEST REPORT





PARTY CODE : M/HR/12131

REPORT NO. ; SN0805002419

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9,	Lead (as Pb)	μg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12,	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 05/08/2019 to 08/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 08/08/2019

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Rohit

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

REPORT NO. : SN0805002519

NS

REF. NO

REF. DATE DT.RECD

: 05/08/2019



SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 31/07/2019 to 01/08/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

Near Incinerator

Date of Sampling

31/07/2019 To 01/08/2019

Sampling started at

10:50 AM (Dt. 31/07/2019)

Sampling completed at Actual time of sampling 10:50 AM (Dt. 01/08/2019) 1440 Minutes

Flow rate of sampling

1.275 m3 / Minute

Total volume of air sampled

1836 m3 (For PM-10) & 23.996 m3 (For PM-2.5)

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m³	90.1	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	51.3	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	27.7	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	18.6	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.112	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	22.4	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 08/08/2019

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A complaint register is available with the laboratory

Rohit

BUILDING MATERIAL LAB ;

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TEST REPORT

PARTY CODE - M/HR/12131

REPORT NO.: SN0805002519

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 05/08/2019 to 08/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 08/08/2019

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New Delhi-110041

Rohit

REMARKS

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Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

REPORT NO. 🛊 SN0805002619

: NS

REF. NO.

REF. DATE DT.RECD

: 05/08/2019

SAMPLE NAME : AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 01/08/2019 to 02/08/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

Near Gate No. 1

Date of Sampling

01/08/2019 To 02/08/2019

Sampling started at

11:00 AM (Dt. 01/08/2019)

Sampling completed at

11:00 AM (Dt. 02/08/2019)

Actual time of sampling

1440 Minutes

Flow rate of sampling

1.24m³/Minute

Total volume of air sampled

1786m³ (for PM 10) & 24.019m³ (for PM 2.5)

Ambient temperature (°C)

s.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1	Particulate Matter (as PM -10)	μg/m³	93.7	100	IS:5182 (P-23)	NA
100	Particulate Matter (as PM - 2.5)	µg/m³	53.7	60	Gravimetric	NA
	Nitrogen Dioxides (as NO2)	µg/m³	28.6	80	IS:5182 (P-6)	NA
	Sulphur Dioxide (as SO2)	µg/m³	19.2	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.126	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
2	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	24.8	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 09/08/2019

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Sample shall be disposed off after issue of Test Report unless specified.

A complaint register is available with the laboratory

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TEST REPORT



PARTY CODE : M/HR/12131

REPORT NO. : SN0805002619

S.No.	Parameters	Units	Results	Limlt (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11,	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12,	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 05/08/2019 to 09/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 09/08/2019

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New Delhi-110041

Rohit

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

MANESAR, GURUGRAM, HARYANA

REPORT NO : SN0805002719

REF NO.

: NS

REF. DATE : NS

: 05/08/2019 DT RECD



SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 01/08/2019 to 02/08/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

SND Gate

Date of Sampling

01/08/2019 To 02/08/2019

Sampling started at

11:20 AM (Dt. 01/08/2019)

Sampling completed at

11:20 AM (Dt. 02/08/2019)

Actual time of sampling

1440 Minutes 1.26m³/Minute

Flow rate of sampling Total volume of air sampled

1814m³ (for PM 10) & 23.916m³ (for PM 2.5)

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m³	91.7	100	IS:5182 (P-23)	NA
	Particulate Matter (as PM - 2.5)	µg/m³	47.2	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	26.3	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	18.1	80	IS:5182 (P-2)	NA
5,	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.106	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	μg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8,	Ozone (as O3) (8 hours)	µg/m³	24.3	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 09/08/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred not implied 2. Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.

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Sample shall be disposed off after issue of Test Report unless specified.

A complaint register is available with the laboratory

New Delhi-110041

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Email; simaharidwar@simalab.co,in

Email: bmlab@simalab.com

HARIDWAR LABORATORY: Plot No. 37, Sector - 7, I.I.E SIIDCUL, Haridwar - 249403 BUILDING MATERIAL LAB: Plot No. 107/11/2 &107/20, Udhyog Nagar Indi Area, Mundka,

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CIN No : U74899DL1988PTC031785 : www.simalab.net | www.simalab.com Website

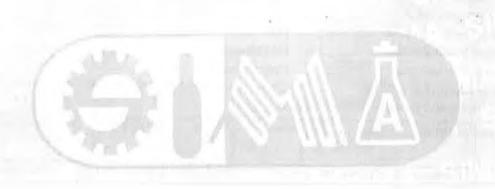
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7.8 F-01

TEST REPORT

REPORT NO : SN0805002719

PART	Y CODE : M/HR/12131			TILL	, 0110000001.10	1
S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	hã/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 05/08/2019 to 09/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 09/08/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.

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Sample shall be disposed off after issue of Test Report unless specified.

5. A complaint register is available with the laboratory.

Rohit

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BUILDING MATERIAL LAB: Plot No. 107/11/2 &107/20, Udhyog Nagar Indi Area, Mundka,
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AUTHORISED SIGNATORY



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TEST REPORT



PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

REPORT NO.: SN0511012619

REF. NO.

CIN No

: NS

REF. DATE : NS

DT.RECD

: 11/05/2019



SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

One ambient air sample was collected by us from 08/05/2019 to 09/05/2019

Name of Industry

Description

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

Near material gate

Date of Sampling

08/05/2019 To 09/05/2019 12:00 PM (Dt. 08/05/2019)

Sampling started at Sampling completed at

12:00 PM (Dt. 09/05/2019)

Actual time of sampling

1440 Minutes

Flow rate of sampling

1.275 m3 / Minute

Total volume of air sampled

1836 m3 (For PM-10) & 23.996 m3 (For PM-2.5)

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m³	95.1	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	54.6	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	32.3	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	20.8	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.293	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	μg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	μg/m³	25.4	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 15/05/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred for implied.

2. Llability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi Jurisdiction only.

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5. A complaint register is available with the laboratory.

Rohit

HARIDWAR LABORATORY: Plot No. 37, Sector - 7, I.I.E SIIDCUL, Haridwar - 249403 Plot No. 107/11/2 & 107/20, Udhvod Ngoar Indi Area, Mundka New Delhi-110041 BUILDING MATERIAL LAR

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TEST REPORT



PARTY CODE : M/HR/12131

REPORT NO. : SN0511012619

S.No.	Parameters	Units	Results	Limít (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 11/05/2019 to 15/05/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 15/05/2019

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5. A complaint register is available with the laboratory.

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BUILDING MATERIAL LAB - Plot No. 107/31/2 x 107/20, Lidhwan Nanar Indi Aras, Mundk

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TEST REPORT

PARTY CODE

: M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

REPORT NO. : SN0511012719

REF. NO.

: NS

REF. DATE : NS

DT.RECD : 11/05/2019

SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 08/05/2019 to 09/05/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

SND Gate

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

Date of Sampling

08/05/2019 To 09/05/2019

Sampling started at

12:35 PM (Dt. 08/05/2019)

Sampling completed at

12:35 PM (Dt. 09/05/2019)

Actual time of sampling

1440 Minutes

Flow rate of sampling

1.325 m3 / Minute

Total volume of air sampled

1908 m3 (For PM-10) & 23.991 m3 (For PM-2.5)

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1,	Particulate Matter (as PM -10)	µg/m³	87.6	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	μg/m³	46.3	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	28.4	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	17.9	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.123	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	μg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	23.9	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 15/05/2019

1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.

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4. Sample shall be disposed off after issue of Test Report unless specified.

5. A complaint register is available with the laboratory,

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Email: sımaharidwar@simalab.co.in Email: bmlab@simalab.com

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Rohit



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TEST REPORT

PARTY CODE · M/HR/12131 REPORT NO. : SN0511012719

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9,	Lead (as Pb)	hā/w _a	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 11/05/2019 to 15/05/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 15/05/2019

1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred/nor implied, REMARKS

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Sample shall be disposed off after issue of Test Report unless specified.

5. A complaint register is available with the laboratory.

Rohlt

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0511012819

REE NO.

NS

· NS

REF. DATE



(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

MANESAR, GURUGRAM, HARYANA

DT.RECD

: 11/05/2019

SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 07/05/2019 to 08/05/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

Near Incinerator

Date of Sampling

07/05/2019 To 08/05/2019

10:20 AM (Dt. 07/05/2019)

Sampling started at

10:20 AM (Dt. 08/05/2019)

Sampling completed at Actual time of sampling

1440 Minutes

Flow rate of sampling

1.3 m³ / Minute

Total volume of air sampled

: 1872 m³ (For PM-10) & 23.98 m³ (For PM-2.5)

Ambient temperature (°C)

39

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1,	Particulate Matter (as PM -10)	μg/m³	90.8	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	49.6	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	30.2	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	19.5	80	IS:5182 (P-2)	NA
5,	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.199	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	μg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	24.7	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 15/05/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters, Endorsement of products is neither inferred not implied.

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4. Sample shall be disposed off after Issue of Test Report unless specified

5. A complaint register is available with the laboratory.

Rohit

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TEST REPORT





· M/HR/12131

REPORT NO. : SN0511012819

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	μg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 11/05/2019 to 15/05/2019

BDL: Below Detection Limit

NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 15/05/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred not implied.

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A complaint register is available with the laboratory.

Rohit

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0511012919

REF. NO.

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

MANESAR, GURUGRAM, HARYANA

REF. DATE

DT.RECD : 11/05/2019

SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

One ambient air sample was collected by us from 07/05/2019 to 08/05/2019

Name of Industry

Description

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

Near gate no.1

Date of Sampling

07/05/2019 To 08/05/2019

Sampling started at

11:00 AM (Dt. 07/05/2019) 11:00 AM (Dt. 08/05/2019)

Sampling completed at Actual time of sampling

1440 Minutes

Flow rate of sampling

1.25 m³ / Minute

Total volume of air sampled

1800 m³ (For PM-10) & 24.02 m³ (For PM-2.5)

Ambient temperature (°C)

39

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	µg/m³	93.0	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	51.2	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	31.6	80	IS:5182 (P-6)	NA
1.	Sulphur Dioxide (as SO2)	µg/m³	19.7	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.251	2.0	NDIR - Spectroscopy	NA
3,	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	μg/m³	24.9	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 15/05/2019

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Phone: +(91)-(01334)-235552

Sample shall be disposed off after issue of Test Report unless specified.

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Rohit

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TEST REPORT



DARTY CODE . M/HR/12131

REPORT NO. : SN0511012919

ARTI CODE . MITTO 12101				(12. Ott. 10 Ottob.) (0.120.0		
S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11,	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 11/05/2019 to 15/05/2019

BDL: Below Detection Limit

NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 15/05/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred not implied.

2. Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.

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4. Sample shall be disposed off after issue of Test Report unless specified.

5. A complaint register is available with the laboratory.

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New Delhi-110041

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Page: 2 of 2

Times of India

MARUTI M \$ BUZZEK

PUBLIC NOTICE

MARUTI SUZUKI INDIA LIMITED Gogi offica: 1 Nelson Marutala Road, procedure of Curic New Double 110070

SEIAA Haryana has accorded environment clearance for the proposed expansion of thermal (captive) power plant at Maruti Suzuki India i mitted. 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/ed.html

Date: 27 September 2012

Maruti Suzuki India Limited

Amae Viala

प्य-11

MARUTI SUZUKI INDIA LIMITED Regd. Office: 1 Nelson Mandela Road, Vasant Kunj, New Deltit - 1 10070

vasani run), New Deni - 110000 SEIAA हरियाणा द्वारा मारुति सुजुकी इंडिया हिमिदेंड के अहु सर्व प्लाप्ट में पॉवर प्लांट के विस्तार हेतु पर्याक्रणीय अनुमोक्ट प्रशास कर दिया गया है अनुमोदन पत्र की प्रतियाँ हरियाणा संज्ञा प्रवृद्ध निर्यत्रण बीई के पास उपलब्ध है अनुमोदन पत्र को मारुबि सुजुकी इंडिया लिमिटेंड की देवसाइट www.marutisuzuki.com/ec.html पर भी देखा जा सकता है

दिनांक 1 27 सितम्बर 2012

मारुति सुजुकी प्रहिया लिमिट



Long term study

to

Assess

The Cumulative Impact

of

the Power Plant (57 MW)

on

Ambient Air Quality (AAQ)

Project Proponent



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 cooperation 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, SO₂, NO_x, 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 (SO₂)
- 2. Nitrogen Dioxide (NO₂)
- 3. Particulate Matter (PM 10)
- 4. Particulate Matter (PM_{2.5})



- 5. Ozone (O₃)
- 6. Lead (Pb)
- 7. Carbon Monoxide (CO)
- 8. Ammonia (NH₃)
- 9. Benzene (C₆H₆)
- 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 (O₃)
- 3. Oxides of Nitrogen (NOx)

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_2 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_2) - 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:

	S. No	Location	Starting Date	End Date	SO ₂	NOx	Ozone	PM _{2.5}	PM_{10}
	1	Site A	26.06.2013	27.06.2013	5	22	105	26	65
2013-	2	Site B	26.06.2013	27.06.2013	4	20	110	26	58
14	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
	5	Site A	29.05.2014	30.05.2014	6	21	106	29	67
2014-	6	Site B	29.05.2014	30.05.2014	5	22	109	27	61
15	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
	9	Site A	28.06.2015	29.06.2015	6	20	48	22	39
2015-	10	Site B	28.06.2015	29.06.2015	5	22	60	26	40
16	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
	13	Site A	02.06.2016	03.06.2016	14	24	118	42	76
2016-	14	Site B	02.06.2016	03.06.2016	11	24	115	45	75
17	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-	17	Site A	02.06.2017	03.06.2017	13	23	107	40	100
18	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



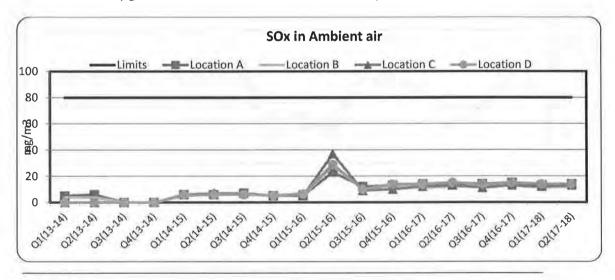




	S.No	Location	Starting Date	End Date	S0 ₂	NOx	Ozone	PM _{2.5}	PM ₁₀
	5.110		-						
	1	Site A	26.08.2013	27.08.2013	6	25	110	27	68
2013-	2	Site B	26.08.2013	27.08.2013	4	23	108	26	65
14	3	Site C	26.08.2013	27.08.2013	BDL	20	103	23	62
	4	Site D	26.08.2013	27.08.2013	BDL	19	107	25	55
	5	Site A	12.09.2014	13.09.2014	6	20	115	30	69
2014-	6	Site B	12.09.2014	13.09.2014	6	23	110	28	64
15	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
	9	Site A	25.08.2015	26.08.2015	23	57	37	29	64
2015-	10	Site B	25.08.2015	26.08.2015	28	42	82	31	72
10	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
	13	Site A	03.09.2016	04.09.2016	14	24	118	42	76
2016-	14	Site B	03.09.2016	04.09.2016	12	23	112	44	76
17	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-	17	Site A	24.08.2017	25.08.2017	14	24	107	40	79
18	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:

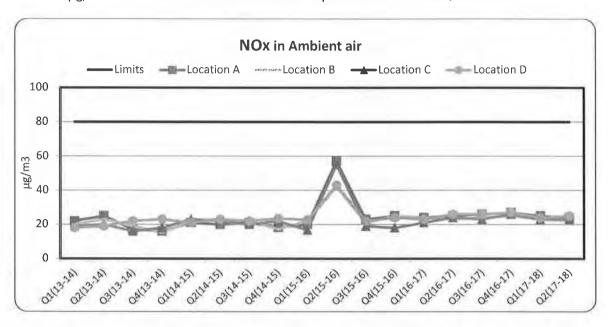
Sulphur Dioxide (SO₂): 24 hourly monitoring concentrations at various locations varied between 0 to 37 μ g/m³. It reflects that their no increase in pollution load in AAQ of the area.



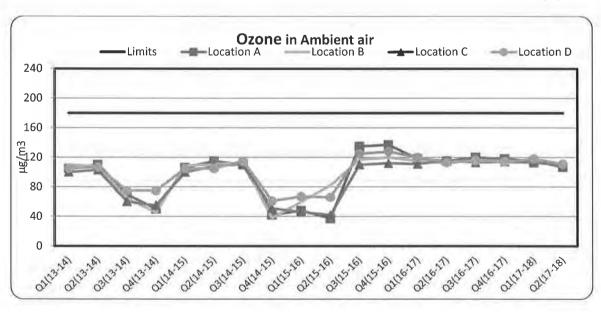




Nitrogen Oxide (NO_x): 24 hourly monitoring concentrations at various locations varied between 15 to 57 μ g/m³. It reflects that their no increase in pollution load in AAQ of the area.



Ozone(O₃): The concentrations are various locations varied between 37 to 137 $\mu g/m^3$. The study reflects that the effect on surrounding area due to the power plant emission is negligible.

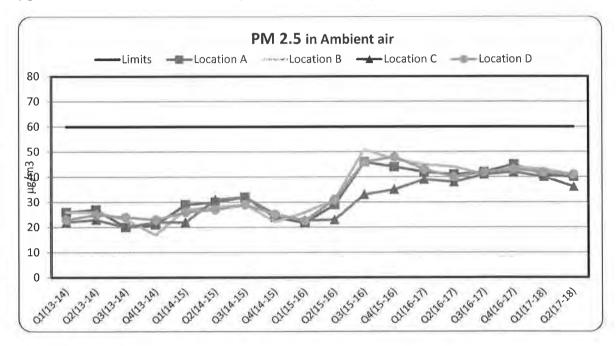




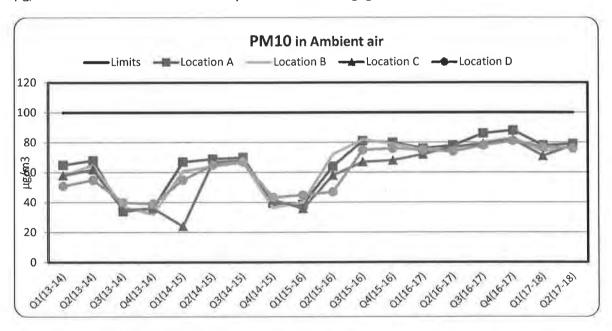




PM(2.5): 24 hourly monitoring concentrations at various locations varied between 17 to 51 μ g/m³. It shows that the increase of pollution load is negligible in AAQ of the area.



PM(_{10}): 24 hourly monitoring concentrations at various locations varied between 24 to 88 μ g/m³. 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	Concentration	in Ambient Air	Methods of Measurement	
	Weighted	Industrial,	Ecologically		
	Average	Residential,	Sensitive Area		
		Rural and	(Notified by		
		other Areas	Central		
			Government)		
Sulphur Dioxide	Annual *	50	20	-Improved West and Gaeke Method	
(SO ₂), μg/m ³	24 Hours **	80	80	-Ultraviolet Fluorescence	
Nitrogen Dioxide	Annual*	40	30	-Jacob & Hochheiser modified	
(NO ₂), μg/m ³	24 Hours **	80	80	(NaOH-NaAsO2) Method	
				-Gas Phase Chemiluminescence	
Particulate Matter	Annual *	60	60	-Gravimetric	
(Size less than 10µm)	24 Hours **	100	100	-TEOM	
or PM ₁₀ , μg/m ³				-Beta attenuation	
Particulate Matter	Annual *	40	40	-Gravimetric	
(Size Iess than 2.5µm)	24 Hours **	60	60	-TEOM	
or PM _{2.5} , μg/m ³		1.		-Beta attenuation	
Ozone (O ₃)	8 Hours *	100	100	-UV Photometric	
μg/m³	1 Hour **	180	180	-Chemiluminescence	
				-Chemical Method	
Lead (Pb)	Annual *	0.50	0.50	-AAS/ICP Method after sampling on	
μg/m³	24 Hours **	1.0	1.0	EPM 2000 or equivalent filter paper	
				-ED-XRF using Teflon filter	
Carbon Monoxide(CO),	8 Hours **	02	02	-Non dispersive Infrared (NDIR)	
mg/m³	1 Hour **	04	04	Spectroscopy	
Ammonia (NH3),	Annual*	100	100	-Chemiluminescence	
μg/m³	24 Hours **	400	400	-Indophenol blue method	
Benzene (C ₆ H ₆),	Annual *	05	05	-Gas Chromatography (GC) based	
μg/m³				continuous analyzer	
				-Adsorption and desorption followed	
				by GC analysis	
Benzo(a)Pyrene (BaP)	Annual*	01	01	-Solvent extraction followed by	
Particulate phase only, ng/m ³				HPLC/GC analysis	
Arsenic (As),	Annual *	06	06	-AAS/ICP Method after sampling on	
ng/m³				EPM 2000 or equivalent filter paper	
Nickel (Ni),	Annual *	20	20	-AAS/ICP Method after sampling on	

^{*} Annual Arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

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.



^{** 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.



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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: 2017-2018:0116

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	1	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	1	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

B. RESULTS OF AMBIENT AIR MONITORING:

Sl. No.	Parameter	Unit	Obtained Value	Allowable
1.	Sulphur Dioxide (SO ₂)	μg/m³	13	80
2.	Nitrogen Dioxide (NO ₂)	μg/m³	25	80
3.	Particulate Matter less than 10 µm or PM ₁₀	μg/m³	78	100
4.	Particulate Matter less than 2.5 µm or PM _{2.5}	μg/m³	41	60
5.	Ozone (O ₃)	μg/m³	115	180
6.	Lead (Pb)	μg/m³	BDL	1
7.	Carbon Monoxide (CO)	mg/m³	2.3	4
8.	Ammonia (NH ₃)	μg/m³	BDL	400
9.	Benzene (C ₆ H ₆)	μg/m ³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	12	20

BDL: Below Detectable Limit,

**: National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

(RS Yadav) Dy. Manager (PCRI) ख्य प्रदन्दक/Dy Manager

Services Offered: Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste as per requirement of EP Act of Credition Formation Technology of Air, Water, Noise & Solid Waste Air, Water, Noise & Solid Waste Air of Credition Formation Technology of Credition Formation Technology of Credition For Environmental Impact Assessment, Environmental Audits reports BHEL Rat by the

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(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: 2017-2018:0117

Date: 17.06.2017

A. GENERAL INFORMATION:

1.	Name and address of Plant	1	M/s Maruti Suzuki India Ltd., Manesar, Haryana			
2.	Work Order No.	1	17-0062-0-791			
3,	Date of sampling	1	·02.06.2017 to 03.06.2017			
4.	Location of Sampling	:	B:Gate No. 1			
5.	Hochheiser Modified (Na-Arsen NDIR & Gas Detection System,	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	1	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 ₂)	μg/m³	11	80
2.	Nitrogen Dioxide (NO ₂)	μg/m³	23	80
3.	Particulate Matter less than 10 µm or PM ₁₀	μg/m³	74	100
4.	Particulate Matter less than 2.5 µm or PM _{2.5}	μg/m³	43	60
5.	Ozone (O ₃)	μg/m³	116	180
6.	Lead (Pb)	μg/m³	BDL	1
7.	Carbon Monoxide (CO)	mg/m³	2.5	4
8.	Ammonia (NH ₃)	μg/m³	BDL	400
9.	Benzene (C ₆ H ₆)	μg/m³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	13	20

BDL: Below Detectable Limit.

**: National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

(RS Yadav

Services Offered: Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB Soll BER Collaboration Environmental Impact Assessment, Environmental Audits reports प्रवृक्त निवक्तम अनुसंधान संस्थान

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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: 2017-2018:0118

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.	1:	17-0062-0-791
3.	Date of sampling	1	02.06.2016 to 03.06.2016
4.	Location of Sampling	:	C:SND Gate
5.	Method of Sampling	4	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	1	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 ₂)	μg/m³	12	80
2.	Nitrogen Dioxide (NO ₂)	μg/m³	23	80
3.	Particulate Matter less than 10 µm or PM ₁₀	μg/m³	71	100
4.	Particulate Matter less than 2.5 µm or PM _{2.5}	μg/m³	40	60
5.	Ozone (O ₃)	μg/m³	113	180
6.	Lead (Pb)	μg/m³	BDL	1
7.	Carbon Monoxide (CO)	mg/m³	1.9	4
8.	Ammonia (NH ₃)	μg/m³	BDL	400
9.	Benzene (C ₆ H ₆)	μg/m³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	11	20

BDL: Below Detectable Limit.

**: National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

Dv. Manager (PCRI)

Services Offered: Monitoring of Air, Water, Noise & Solid Waste as per requirement of EP Act of CPCB & Communication descriptions of the CPCB of the Communication of the CPCB अवुष्ण नियन्त्रण अनुसंधान संस्थान BHEL, Ranipur, Handwar Environmental Impact Assessment, Environmental Audits reports Remarks:- (1) This report refers only to the particular sample/job submitted for testing.

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TEST REPORT

AMBIENT AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2017-2018:0119

South Asia

ISO 9001-2008 OHSAS 18001-2007

Date: 17.06.2017

A. GENERAL INFORMATION:

1.	Name and address of Plant	1	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0062-0-791
3.	Date of sampling		02.06.2016 to 03.06.2016
4.	Location of Sampling	1	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	1	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 ₂)	μg/m³	14	80
2.	Nitrogen Dioxide (NO ₂)	μg/m³	24	80
3.	Particulate Matter less than 10 µm or PM ₁₀	μg/m³	77	100
4.	Particulate Matter less than 2.5 µm or PM _{2.5}	μg/m³	42	60
5.	Ozone (O ₃)	μg/m³	118	180
6.	Lead (Pb)	μg/m³	BDL	1
7.	Carbon Monoxide (CO)	mg/m³	2.0	4
8.	Ammonia (NH ₃)	μg/m³	BDL	400
9.	Benzene (C ₆ H ₆)	μg/m³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	13	20

BDL: Below Detectable Limit,

**: National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

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

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POLLUTION CONTROL RESEARCH INSTITUTE ISO 9001-2008 OHSAS 18001-2007

(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)

Lab. Ref.: PCRI: Air & Noise: 2017-2018: 0533

Date: 14.09.2017

A. GENERAL INFORMATION:

1,	Name and address of Plant	1	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0135-0-791
3.	Date of sampling	1	24.08.2017 to 25.08.2017
4.	Location of Sampling	1	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	1	PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

B. RESULTS OF AMBIENT AIR MONITORING:

Sl. No.	Parameter	Unit	Obtained Value	Allowable
1,	Sulphur Dioxide (SO ₂)	μg/m³	14	80
2,	Nitrogen Dioxide (NO ₂)	μg/m³	24	80
3.	Particulate Matter less than 10 µm or PM ₁₀	μg/m³	79	100
4.	Particulate Matter less than 2.5 µm or PM _{2.5}	μg/m³	40	60
5.	Ozone (O ₃)	μg/m³	107	180
6.	Lead (Pb)	μg/m ³	BDL	100
7.	Carbon Monoxide (60)	mg/m ³	2.2	4
8.	Ammonia (NH ₃)	μg/m³	BDL	400
9.	Benzene (C ₆ H ₆)	μg/m³	BDL	5
10.	-Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	
12,	Nickel (Ni)	ng/m³	10	20

3DL: Below Detectable Limit,

**: National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009.

Dy. Manager (PCRI)

राजेन्द्र सिंह यावव/ R. S. Yadav उप प्रबन्धक/Dy Manager Pollution Control Research Institute

प्रदूषण नियन्त्रण अनुसंधान संस्थान

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

Lab. Ref.: PCRI: Air & Noise: 2017-2018:0534

Date: 14.09.2017

A. GENERAL INFORMATION:

1,	Name and address of Plant	:	M/s Maruti Suzuki India Ltd., Manesar, Haryana
2.	Work Order No.	:	17-0135-0-791
3.	Date of sampling	:	24.08.2017 to 25.08.2017
4.	Location of Sampling		B:Gate No. 1
5.	Method of Sampling	:	IS:5182, Part-II-2001, IV-1999, NDIR, Jacob & Hochheiser Modified (Na-Arsenite) Method, FID, NDIR & Gas Detection System, IS-5182(Part-9), APHA-819, AAS and PM2.5 Sampler
6.	Duration of Sampling		24 Hours
7.	Sample collection by		PCRI, B.H.E.L., Ranipur, Haridwar-U.K.

B. RESULTS OF AMBIENT AIR MONITORING:

Sl. No.	Parameter	Unit	Obtained Value	Allowable Limit**
1.	Sulphur Dioxide (SO ₂)	μg/m³	12	80
2.	Nitrogen Dioxide (NO ₂)	μg/m³	22	80
3,	Particulate Matter less than 10 µm or PM ₁₀	μg/m³	77	100
4.	Particulate Matter less than 2.5 µm or PM _{2.5}	μg/m³	41	60
5.	Ozone (O ₃)	μg/m³	110	180
6.	Lead (Pb)	μg/m³	BDL	1
7.	Carbon Monoxide (CO)	mg/m³	2.4	4
8.	Ammonia (NH ₃)	μg/m³	BDL	400
9.	Benzene (C ₆ H ₆)	μg/m³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	12	20

BDL: Below Detectable Limit,

**: National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

Dy. Manager (PCRI)

राजेन्त्र सिंह वादव/R. S. Yadav उप प्रवन्धक/ Dy Manager

Pollution Control Research Institute प्रवृषण नियन्त्रण अन्तर

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

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.	- 1	17-0135-0-791
3.	Date of sampling	3	24.08.2017 to 25.08.2017
4.	Location of Sampling	1	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 ₂)	μg/m³	13	80
2,	Nitrogen Dioxide (NO ₂)	μg/m³	23	80
3.	Particulate Matter less than 10 µm or PM ₁₀	μg/m³	78	100
4.	Particulate Matter less than 2.5 µm or PM _{2.5}	μg/m³	36	60
5.	Ozone (O ₃)	μg/m³	109	180
6.	Lead (Pb)	μg/m³	BDL	1
7.	Carbon Monoxide (CO)	mg/m ³	1.85	4
8.	Ammonia (NH ₃)	μg/m³	BDL	400
9.	Benzene (C ₆ H ₆)	μg/m³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	11	20

BDL: Below Detectable Limit,

**: National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009

(RS Yadav) Dy. Manager (PCRI)

राजेन्द्र सिंह सादव/R. S. Yaday

उप प्रवत्सक/Dy Manager Pollution Control Research Institute

प्रदूषण नियन्त्रण अनुसद्धान सरधान

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

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.	1.	17-0135-0-791
3.	Date of sampling	1	24.08.2017 to 25.08.2017
4.	Location of Sampling	3	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	136	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 ₂)	μg/m³	14	80
2.	Nitrogen Dioxide (NO ₂)	μg/m³	25	80
3.	Particulate Matter less than 10 µm or PM ₁₀	μg/m³	76	100
4,	Particulate Matter less than 2.5 µm or PM _{2.5}	μg/m ³	41	60
5.	Ozone (O ₃)	μg/m³	111	180
6.	Lead (Pb)	μg/m³	BDL	1
7.	Carbon Monoxide (CD)	mg/m³	2.1	4
8.	Ammonia (NH ₃)	μg/m³	BDL	400
9.	Benzene (C ₆ H ₆)	μg/m³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	12	20

BDL: Below Detectable Limit,

**: National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009.

(RS Yadav) Dy. Manager (PCRI)

राजेन्द्र सिंह यायव/R. S. Yadav

ख्य प्रयासक/Dy Manager Pollution Control Research Institute प्रदृषण नियन्त्रण अनुसाधान सरधान

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STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY HARYANA Bay No. 55-58, Prayatan Bhawan, Sector-2, PANCHKULA.

No. SEIAA/HR/2014/453

Dated: 14-03-2014.

To

M/S Maruti Suzuki India Ltd. C/o EGM Department, Palam Gurgaon Road Gurgaon, Haryana 122015

Subject:

Environment Clearance for expansion of captive Power Plant by 13.5 MW at Maruti Suzuki India Ltd. at Plot no. 1, Sector-33B-33C, IMT, Rohtak.

Dear Sir,

This has reference to your application no. MSIL:PRDS:EGM:11-12:011 dated 25.04.2011 addressed to IA Division Thermal Power Plant and transferred to MS, SEIAA on 16.05.2012 and subsequent letters dated 23-07-2012, 24.08.2012, 12.11.2013, 06.01.2014 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 report, EIA/EMP on the basis of approved 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 28.06.2012. 29.09.2012, 25.06.2013, 06.08.2013, 16.12.2013 and 08.01.2014.

- It is inter-alia noted that the project is for the project is for expansion of captive power plant from 4.8 MW capacity to total capacity of 13.5 MW based on ultra low sulphur HSD at Plot no. 1, Sector-33B-33C, IMT, Rohtak on plot area of 6000 sqmt which is available within the proposed R&D centre of Maruti Suzuki India Ltd. at IMT Rohtak. The fuel requirement is 400 Lt /hr and project proponent shall provide 200 KL HSD tank for storage of fuel. The requisite clearance from Petroleum and Explosives Safety Organization (PESO) for HSD shall be taken. The project proponent has proposed to develop 30% of plant area as green belt. Acoustic noise curtain shall be provided to reduce noise pollution. The stack height shall be 30 mtrs. The system is based on air cooled technology and closed circuit air cool condenser will be used. The water requirement shall be 2 KLD which will be met from HSIIDC.
- 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 28.06.2012. The public hearing in this case was exempted as the proposed project is located in Notified Industrial Estate. The project proponent on the basis on approved TOR's submitted EIA/EMP on 12.11.2013.

The State Expert Appraisal Committee, Haryana after due consideration of [4] 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 67th meeting held on 28.02.2014 decided 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:-

SPECIFIC CONDITIONS:-

- The proposed project shall be set up on plot area of 6000 sqmt within the proposed [1] R&D centre of Maruti Suzuki India Ltd. at IMT Rohtak
- Ultra low sulphur HSD shall only be used as fuel. [2]
- The project proponent shall appoint well qualified fire supervisor. [3]
- Dry Low NOx burners shall be provided and it shall be ensured that NOx [4] emissions from the stack are less than 100 ppm.
- The height of the stack shall be as per the standards prescribed under the [5] 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.
- Air cooled condensers shall be installed. [6]
- The drinking water requirement during construction and operation phase shall be [7] met by HSIIDC Supply.
- Rainwater harvesting shall be practiced. A detailed scheme for rain water [8] 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 the SEIAA.
- Leg of Noise level shall be limited to 75 dBA and regular maintenance of [9] equipments should be undertaken. For people working in high noise areas, personal protection devices should be provided.
- [10] The project proponent shall develop 3 meter wide green belt as buffer zone around the plant boundary as sound barrier. The area under greenbelt shall be at least 30% of the total area.
- First aid and sanitation arrangements shall be made for the drivers and other [11]contract workers during construction phase.
- The project proponent shall take adequate preparation for fire and other kinds of [12] disaster including chemical disaster. On-site, off-site emergency plan should be prepared and rehearsed in regular mock drills.
- The project Proponent shall initiate a long term study through a reputed institution [13] 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 HSD based power

- plant on the chemistry of upper atmosphere and on concentration of PM_{10} , $PM_{2.5}$. It shall be ensured that the worst seasonal atmospheric conditions are taken into account in the above said study.
- [14] The Project Proponent shall ensure that all possible hazards due to the power plant are contained within the plant premises.
- [15] The project proponent shall use only treated water for cooling system.

General Conditions:

- The Project Proponent shall ensure the commitments made in Form-1, EIA/EMP and other documents submitted to the SEIAA for the protection of environment and proposed environmental safeguards are complied with in letter and spirit. In case of contradiction between two or more documents on any point, the most environmentally friendly commitment on the point shall be taken as commitment by project proponent.
- [ii] The project proponent shall set up continuous online AAQ monitoring system (supervisory control & data acquisition) in the project area to monitor the parameters viz $PM_{2.5}$, PM_{10} , NOx, SOx and CO. The project proponent shall ensure that the values of these parameters are within the prescribed limits of CPCB/HSPCB.
- [iii] The Project proponent should inform the public that the project has been accorded Environment Clearance by the SEIAA and copies of the clearance letter are available with the Haryana State Pollution Control Board & SEIAA. This should be advertised within 7 days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region and the copy of the same should be forwarded to SEIAA Haryana. A copy of Environment Clearance conditions shall also be put on project proponent's web site for public awareness.
- [iv] 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 as by e-mail) to the northern Regional Office of MoEF, the respective Zonal Office of CPCB, HSPCB and SEIAA Haryana.
- [v] 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 along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.
- [vi] 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 purposed and year-wise expenditure shall be reported to the SEIAA, Panchuka.
- [vii] 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.
- [viii] 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.
- [ix] The project proponent shall display Material Safety Data Sheet (MSDS) of fuel in big fonts at suitable locations within project site. One copy of MSDS shall be supplied to DC Rohtak also.
- [x] Standards for discharge of environmental pollutants as enshrined in various schedules of rule 3 of environment protection rule 1986 shall be complied with.
- [xi] The SEIAA, Haryana reserves the right to add additional safeguard measures subsequently, if found necessary. Environmental Clearance granted will be revoked if it is found that false information has been given for getting approval of this project. SEIAA reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of SEIAA/MoEF.
- [xii] The environmental clearance accorded shall be valid for a period of 5 years to start of production operation by the power plant.
- [xiii] 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.
- [xiv] 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, 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.
- [xv] 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 within 3 months period. Latest Corporate Environment Policy should be submitted to SEIAA within 3 months of issuance of this letter.
- [xvi] The Project proponent shall not violate any judicial orders/pronouncements issued by any Court/Tribunal.

- [xvii] Any appeal against the this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
- [xviii] The fund ear-marked for environment protection measures should be kept in separate account and should not be diverted for other purposes and year wise expenditure shall be reported to the SEIAA/RO MoEF, GoI under rules prescribed for Environment Audit.
- [xix] The project proponent shall seek fresh Environmental clearance if at any stage there is change in the planning of the proposed project.
- The proponent shall upload the status of compliance of the stipulated EC 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. The criteria pollutant levels namely; PM_{2.5}, PM₁₀, SO_X NO_X, Ozone, Lead, CO, Benzene, Ammonia, Benzopyrine, arsenic and Nickel. (Ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the HSPCB Panchkula as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of the EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
- [xxii] The project proponent shall conduct environment audit at every three months interval and thereafter corrected measures shall be taken without any delay. Details of environmental audit and corrective measures shall be submitted in the monitoring report.

Member Secretary, State Level Environment Impact Assessment Authority, Haryana, Panchkula.

Endst. No. SEIAA/HR/2014

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:19-20:058

30-Oct-2019

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

Sub: Half yearly report for Compliance of Expansion by 13.5 MW Captive Power Plant at Maruti Suzuki India Ltd. At Plot No. 1, Sector 33B-33C, IMT, Rohtak

Ref: 1. Environment Clearance Letter from MoEF - No .SEIAA/HR/2014/453 dated 14.03.2014

- 2. MoEFCC letter No. J-13012/36/2012/-IA-II (T) dated 17th March 2015
- MSIL Letter No. MSIL:CUIM:16-17:015 dated 20-May-2016
 SEIAA Memo No. SEIAA/HR/2016/585 dated 29-07-2016

Dear Sir,

MoEFCC has issued a clarification vide letter no. J-13012/36/2012/-IA-II (T) dated 17th March 2015, that Environment Clearance is not required for Diesel Generating Sets (captive not supplying power to grid). So the Environment Clearance is not required for the proposed 13.5 MW captive power plant expansion.

Now SEIAA, Haryana has clarified that "submission of Six Monthly Compliance Report is now not required as the activity is not covered under Thermal Power Plant category of EIA notification as per clarification rendered by MoEF&CC, GOI vide office memorandum 17.03.2015".

Thanking You.

Yours Faithfully

ensod in

MADAN BANSODE DGM (ENVIRONMENT) MARUTI SUZUKI INDIA LTD.

Madan Ankush Bansode Deputy General Manager (Environment) Maruti Suzuki India Limited, Gurgaon

CC:

- 1. Haryana State Pollution Control Board, Panchkula
- 2. Central Pollution Control Board, Lucknow
- 3. State Environment Impact Assessment Authority, Haryana

MARUTI SUZUKI INDIA LIMITED

Head Office:
Maruti Suzuki India Limited,

1. Nelson Mandela Road, Vasant Kunj,
New Delhi - 110070, India.
Tel: 011- 46781000, Fax: 011-46150275/46150276

E-mail id: contact@maruti.co.in, www.marutisuzuki.com

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

Gurgaon Plant:

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

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

Telephone No. 0172-2565232

Memo No:

SEIAA/HR/2016/585

Date: 29-07-2016

To,

Maruti Suzuki India Limited, Plot No. 1, Sector 33B-33C,

IMT, Rohtak

Subject:

Half yearly Report for Compliance of Expansion by 13.5 MW Captive Power Plant by M/S Maruti Suzuki India Ltd at Plot No. 1, sector 33B-

33C, IMT, Rohtak.

Sir.

Reference is invited to your letter no. MSIL:CUIM:ENV:16-17:016 dated 20.05.2016. The Environment Clearance to Project Proponent was granted by SEIAA vide letter no. SEIAA/HR/2014/453 dated 14.03.2014.

It is informed that submission of Six Monthly Compliance Report is now not required as the activity is not covered under Thermal Power Plant category of EIA notification as per clarification rendered by MOEF & CC, GOI vide office memorandum 17.03.2015.

> Member Secre SEIAA, Haryan

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: 5th 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 3rd 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 m². 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 m3/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 m² 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 NOx burners shall be provided and it shall be ensured that NOx 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 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 recirculated and reused with in 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 1/3rd 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.
- 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:-

- The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi -110001.
- The Secretary (Environment), Deptt. of Environment, Haryana Civil Secretariat, Government of Haryana, Chandigarh.
- The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
- 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.
- The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- 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.
- Monitoring file.

(Dr. S.K. AGGARWAL) Director MSIL:CUIP:ESEC:ENV:19-20:056

30-Oct-2019

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

Sub: Half yearly report for Compliance of Environmental Condition for Gas turbine,

Manesar (70 MW)

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 report for the environment clearance issued for our Gas turbine.

Thanking You.

Yours Faithfully

MADAN BANSODE DGM (ENVIRONMENT) MARUTI SUZUKI INDIA LTD.

Madan Ankush Bansode Deputy General Manager (Environment) Maruti Suzuki India Limited, Gurgaon.

1. Haryana State Pollution Control Board, Panchkula

2. Central Pollution Control Board, Lucknow

MARUTI SUZUKI INDIA LIMITED

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

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

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

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 ² 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.m 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 in 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_X burners shall be provided and it shall be ensured that NO_X emission from the stack is less than 100 ppm.	NOx 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, which ever 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 and are met from the existing tube wells. Current water withdrawal is maintained within the quantity permitted by the Competent Authority.
8	Treated effluents conforming to the prescribed standards shall be recirculated and reused with in the plant area, No effluents shall be discharged outside the plant boundary.	The treated effluents confirm 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.	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 should 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 rd of the total area.	Details of Green Belt are placed at Annex: 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 has been made available 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 http://envfor.nic.in.	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.	Half yearly compliance report will be submitted to MoEFCC Regional office.
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.



DATA SHEET

1.	Project Type	River Valley/Mining/Industry /Transportation Tourism/Thermal/Nuclear/Other (Specify)
2.	Name of the Project:	70 MW Gas turbine at Maruti Suzuki India Limited, Manesar, Haryana
3.	Clearance letter (s)/ O.M No. & dates:	No. J-13011/71/2007-IA.II(T) Dated: 5 th February, 2008
4.	Location: a) District (s) b) State (s) c) Latitudes/Longitudes	District: Gurgaon (South) State: Haryana Latitude: 27 ^o 39' N to 28 ^o 32'N Longitude: 76 ^o 39'E to 77 ^o 20'E
5.	a) Address of Correspondence (with Pin Code/ Tel No./Telex/Fax No./E mail address)	Mr. Madan Ankush Bansode Deputy General Manager – Environment Maruti Suzuki India Limited Palam Gurgaon Road Gurgaon, Haryana Email: Madan.Bansode@maruti.co.in Phone 0124 – 2346721 ~ 30 Extn: 3583
	b) Address of executive Project Engineer/ Manager (with Pin Code/ Tel No./Telex/Fax No./Email address)	Mr. Alok Bansal Vice President – EMU Maruti Suzuki India Limited Palam Gurgaon Road Gurgaon, Haryana Email: Alok.Bansal@maruti.co.in Phone 0124 – 2346721 ~ 30
6.	Salient Features: a) of the projectb) 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	The project is 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 figure 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)	Not Applicable



9.	Financial details:	
	a) Project cost as originally planned and subsequent revised estimates and the year or price reference.	Rs. 389 Crores
	b) Allocations made for environmental management plans with item wise and year wise break up.	-
	c) Benefit cost ratio/Internal Rate of Return and the year of assessment.	-
	d) Whether (c) includes the cost of environment management as shown in b) above.	*:
	e) Actual expenditure incurred on the project so far.	Rs. 319 Crores
	f) Actual expenditure incurred on the environmental management plans so far:	Rs. 52.4 Crores
10.	Forest land requirement: a) The status of approval for diversion of forest land for non-forestry use. b) The status of clear felling. c) The status of compensatory afforestation of clear felling. If any. d) Comments on the viability & sustainability of compensatory afforestation programmes in the light of actual field experience so far.	Not Applicable
1.	The status of clear feeling in non-forest areas (such as submergence area of reservoir, approach road) if any, with quantitative information.	Not Applicable
2.	Status of construction. 1. date of commencement (actual and/ or planned) 2. Date of completion (actual and / or planned)	2X20MW GT are under operation. 3X10 MW GT has been dismantled.
3.	Reasons for the delay if the project is yet to start:	Not Applicable



SALIENT FEATURES OF PROJECT:

1. Name of the Project Gas turbine at Maruti Suzuki India Limited,

Manesar, Haryana

2. Capacity 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 30m.
- NO_x emissions will be below 100ppm.
- SPM and SO2 emissions will be very low as natural gas is a clean fuel and ultra low sulphur diesel will be used initially or in case of emergency operation. Later on after the availability of natural gas, SPM and SO₂ emissions will further go down

Noise Pollution Control

 The noise from Gas Turbines 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 will be developed with local area species having capacities to reduce SPM and noise levels.



सेट्ल कॉब्लेवन ट्रॉम्बे, नाई - 400 085.

Central Complex, Trombay: Mumbai - 400 085.

CHT/Tel: 022 - 2550 5354 केक्स/Fax :082 - 2550 5151 022 - 2550 5353 g-mail ndshama@bara.gov.in



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

भारत संस्कार **GOVERNMENT OF INDIA** भाभा परमाणु अनुसंधान केंद्र BHABHA ATOMIC RESEARCH CENTRE

Ref. 14/8/91/Admm-I / 3 2 8 1

6 .2008 April

Manuti Suzuki India Limited, Palam Gurgaon Road, Gurgaon, Harvana - 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 18th 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

संवार अनुभाग / Contempication Section केवल परिषक / For Transmission,



SIMA LABS PVT. LTD.

Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

A-3/7, Mayapuri Industrial Area, Ph- II, New Delhi - 110064

: +(91)-(11) 43854300 Phone : reports@simalab.com Email U74899DL1988PTC031785 CIN No

www.simalab.net l.www.simalab.com Website

ISO 9001:2015 • ISO 14001:2015 • OHSAS 18001:2007 • NABL ACCREDITED • FSSAI, AGMARK, BIS, AYUSH & MoEF RECOGNISED

TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

REF NO.

REPORT NO. : SN0805002819

: NS

REF. DATE : NS

DT.RECD

: 05/08/2019

Description

SAMPLE NAME . STACK EMISSION

RESULTS OF ANALYSIS

Reference: IS 11255 & EPA

: One stack emission sample was collected by us on 02/08/2019 between 10:40 AM to

11:10 AM

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Name of plant & Section **Emission Source Monitored** : Gas turbine section Gas turbine stack

Type of Fuel Used

: Natural gas

Stack Identification

: Gas turbine stack no.1 (4.3 MW)

Normal Operating Schedule (Hrs/day) Location of sampling Point

: Double shift . As per norms

Type of Chimney (ACC/Metal)

: Mild steel

Stack Height (Meters)

a. From source of Emission b. From Roof Level : 30 c. From Ground Level

Diameter of stack (cm) Sampling Duration (minutes)

135 : 30

Parameters Monitored Purpose of Monitoring

PM, NOx, SO2, CO, CO2 & HC Assessment of pollution load

Products Manufactured Control measures (if any) : Integrated automobile Mfg. : Nil

Recovery of Material (if any) General Sensory observations Fugitive Emissions (if any)

: Normal : Nil : 392

: Nil

Stack Temperature (°C) Ambient Temperature(°C) Quantity of Emission (Nm³/Hr)

: 34

S.No.	Parameters	Units	Results	Limits (Max.)	Protocols	Detection Limit
1,	Particulate Matter	mg/Nm3	32.9	NA	IS:11255 (P-1)	NA
2.	Nitrogen Oxides (as NOx)	ppm	40.3	100	IS:11255 (P-7)	NA
3.	Sulphur Dioxide (as SO2)	ррт	BDL.	NA	IS:11255 (P-2)	1.0
4.	Carbon Monoxide (as CO)	ррт	20.7	NA	IS:5182 (P-10)	NA
5.	Total Hydrocarbon	ppm	12.5	NA	Methods of Air	NA

SAMPLE COLLECTED BY US

DATE: 09/08/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred the implied.

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Rohit

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TEST REPORT

'REPORT NO. : SN0805002819 PARTY CODE · M/HR/12131

Units	Results	Limits (Max.)	Protocols	Detection Limit
	-:		sampling & analysis- 101	7 .
0/ y/y	16	NA	IS:13270	NA
		- ;	Units Rodate	sampling & analysis- 101





Date of performance: 05/08/2019 to 09/08/2019

NA-Not Applicable, BDL-Below Detection Limit

SAMPLE COLLECTED BY US

DATE: 09/08/2019

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TEST REPORT

PARTY CODE M/HR/12131

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0809002218

REF. NO. : NS

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

MANESAR, GURUGRAM, HARYANA

REF. DATE : NS

DT.RECD : 09/08/2018

SAMPLE NAME: STACK EMISSION

RESULTS OF ANALYSIS

Reference : IS 11255 & EPA : One stack emission sample was collected by us on 07/08/2018 between 01:00 PM to

Description 01:30 PM

: MARUTI SUZUKI INDIA LIMITED Name of Industry

Gas turbine section Name of plant & Section : Gas turbine stack **Emission Source Monitored** : Natural gas

Type of Fuel Used : Gas turbine stack no.2 (4.3 MW)

Stack Identification Normal Operating Schedule (Hrs/day) : Double shift

: As per norms Location of sampling Point Type of Chimney (ACC/Metal) : Mild steel Stack Height (Meters)

a. From source of Emission b. From Roof Level

: 30 c. From Ground Level : 135 Diameter of stack (cm) : 30 Sampling Duration (minutes)

: PM, NOx, SO2, CO, CO2 & HC Parameters Monitored : Assessment of pollution load Purpose of Monitoring : Integrated automobile mfg.

Products Manufactured : Nil Control measures (if any) Recovery of Material (if any) : Nil General Sensory observations : Normal Fugitive Emissions (if any) : Nil : 410 Stack Temperature (°C) : 41 Ambient Temperature(°C) Quantity of Emission (Nm³/Hr) : 39101

		Units	Results	Limits (Max.)	Protocols	Detection Limit
No.	Parameters	Ullits	Nobalis		IS:11255 (P-1)	NA
1	Particulate Matter	mg/Nm3	24.3	NA		
	A D S V Ar L PC - C -	warm.	53.1	100	IS:11255 (P-7)	NA
	Nitrogen Oxides (as NOx)	ppm		NA	IS:11255 (P-2)	1.0
3	Sulphur Dioxide (as SO2)	ppm	BDL			NA
	Carbon Monoxide (as CO)	ppm	27.6	NA	IS:5182 (P-10)	
			10.4	NA	Methods of Air	NA
5,	Total Hydrocarbon	ppm	18.4	1975	sampling &	

SAMPLE COLLECTED BY US

DATE: 13/08/2018

ANALYST

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TEST REPORT

NAULID /40404

REPORT NO. : SN0809002218

	Parameters	Units	Results	Limits (Max.)	Protocols	Detection Limit
5.190.	- Granious				analysis-101	
J,	Carbon Dioxide (as CO2)	% v/v	4.9	NA	IS:13270	NA

Date of performance: 09/08/2018 to 13/08/2018

NA-Not Applicable , BDL-Below Detection Limit

SAMPLE COLLECTED BY US

DATE: 13/08/2018

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

REPORT NO. : SN0805003019

REF. NO.

: NS

REF. DATE

: 05/08/2019 DT.RECD

SAMPLE NAME . STACK EMISSION

RESULTS OF ANALYSIS Reference: IS 11255 & EPA

Description

One stack emission sample was collected by us on 02/08/2019 between 12:30 PM to

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Name of plant & Section **Emission Source Monitored**

Gas Turbine Section Gas Turbine Stack

Type of Fuel Used

Natural Gas

Stack Identification

Gas Turbine Stack No.3 (4.3M.A.)

Normal Operating Schedule (Hrs/day)

: Double Shift * As Per Norms

Location of sampling Point Type of Chimney (ACC/Metal)

: Mild Steel

Stack Height (Meters)

a. From source of Emission

b. From Roof Level

: 30

c. From Ground Level Diameter of stack (cm)

Sampling Duration (minutes)

135 : 30

Parameters Monitored

: PM, NOx, SO2, CO, CO2 & HC

Purpose of Monitoring

: Assessment of Pollution Load

Products Manufactured

: Integrated Automobile Mfg

Control measures (if any)

: Nil : Nil

Recovery of Material (if any) General Sensory observations

: Normal

Fugitive Emissions (if any)

; Nil

Stack Temperature (°C)

: 421

Ambient Temperature(°C)

: 34

Quantity of Emission (Nm³/Hr)

: 68505

S.No.	Parameters	Units	Results	Limits (Max.)	Protocols	Detection Limit
1.	Particulate Matter	mg/Nm3	30.4	NA	IS:11255 (P-1)	NA
2.	Nitrogen Oxides (as NOx)	ppm	39.7	100	IS:11255 (P-7)	NA
	Sulphur Dioxide (as SO2)	ppm	BDL	NA	IS:11255 (P-2)	1.0
	Carbon Monoxide (as CO)	ppm	18.6	NA	IS:5182 (P-10)	NA
	Total Hydrocarbon	ppm	15.4	NA	Methods of Air	NA

SAMPLE COLLECTED BY US

DATE: 09/08/2019

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TEST REPORT

PART'	Y CODE : M/HR/12131			REPORT	NO. ; SN0805003019	
	Parameters	Units	Results	Limits (Max.)	Protocols	Detection Limit
5.					sampling & analysis-	
6.	Carbon Dioxide (as CO2)	% v/v	3.9	NA	IS:13270	NA





Date of performance: 05/08/2019 to 09/08/2019

NA-Not Applicable, BDL-Below Detection Limit

SAMPLE COLLECTED BY US

DATE: 09/08/2019

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TEST REPORT

PARTY CODE M/HR/12131

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0809002118

REF. NO.

· NS

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

MANESAR, GURUGRAM, HARYANA

REF. DATE

: NS

DT.RECD

: 09/08/2018

SAMPLE NAME: STACK EMISSION

RESULTS OF ANALYSIS

Reference : IS 11255 & EPA

Description

One stack emission sample was collected by us on 07/08/2018 between 12:20 PM to

12:50 PM

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Name of plant & Section **Emission Source Monitored**

Gas turbine section : Gas turbine stack

Type of Fuel Used

: Natural Gas

Stack Identification

: Gas turbine stack no.7 (20 MW)

Normal Operating Schedule (Hrs/day) : Double shift

Location of sampling Point

: As per norms

Type of Chimney (ACC/Metal)

: Mild steel

Stack Height (Meters)

a. From source of Emission

b. From Roof Level

: 30

c. From Ground Level

: 300

Diameter of stack (cm) Sampling Duration (minutes)

: 30

Parameters Monitored

: PM, NOx, SO2, CO, HC & CO2

Purpose of Monitoring

: Assessment of pollution load : Integrated automobile mfg.

Products Manufactured Control measures (if any)

Recovery of Material (if any)

: Nil

General Sensory observations

: Normal

Fugitive Emissions (if any) Stack Temperature (°C)

: Nil : 396

Ambient Temperature(°C)

: 39

Quantity of Emission (Nm³/Hr)

: 183535

		Units	Results	Limits (Max.)	Protocols	Detection Limit
S.No.	Parameters			210	IS:11255 (P-1)	NA
1	Particulate Matter	mg/Nm3	29.4	NA		NA .
		ppm	57.9	100	IS:11255 (P-7)	
	Nitrogen Oxides (as NOx)	_	BDL	NA	IS:11255 (P-2)	1.0
3.	Sulphur Dioxide (as SO2)	ppm			IS:5182 (P-10)	NA
1	Carbon Monoxide (as CO)	ppm	31.2	NA.		
		ppm	20.2	NA	Methods of Air	NA
5.	Total Hydrocarbon	ppm			sampling &	

SAMPLE COLLECTED BY US

DATE: 16/08/2018

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TEST REPORT

· M/HR/12131 PARTY CODE

REPORT NO. : SN0809002118

	Parameters	Units	Results	Limits (Max.)	Protocols	Detection Limit
5.140.	I diamotore				analysis-101	
5.		04. 4	110	NA	IS:13270	NA
6.	Carbon Dioxide (as CO2)	% v/v	4.2	INV	10/102/10	1

Date of performance: 09/08/2018 to 16/08/2018 NA-Not Applicable, BDL-Below Detection Limit

SAMPLE COLLECTED BY US

DATE: 16/08/2018

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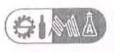
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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

REF. NO.

REPORT NO. : SN0805003119

MANESAR, GURUGRAM, HARYANA

NS

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

REF. DATE

: 05/08/2019 DT.RECD

SAMPLE NAME . STACK EMISSION

RESULTS OF ANALYSIS

Reference: IS 11255 & EPA

Description One stack emission sample was collected by us on 01/08/2019 between 01:00 PM to

01:30 PM

: MARUTI SUZUKI INDIA LIMITED Name of Industry

Name of plant & Section Gas Turbine Section **Emission Source Monitored** Gas Turbine Stack

Type of Fuel Used : Natural Gas

Stack Identification : Gas Turbine Stack No.8 (20 M.W.)

Normal Operating Schedule (Hrs/day) : Double Shift Location of sampling Point : As Per Norms Type of Chimney (ACC/Metal) : Mild Steel Stack Height (Meters)

a. From source of Emission

b. From Roof Level c. From Ground Level : 30

Diameter of stack (cm) : 300 Sampling Duration (minutes) : 30

Parameters Monitored : PM, NOx, SO2, CO, CO2 & HC Purpose of Monitoring : Assessment of Pollution Load. **Products Manufactured** ; Intergrated Automobile Mfg

Control measures (if any) Nil Recovery of Material (if any) : Nil General Sensory observations · Normal Fugitive Emissions (if any) · Nil Stack Temperature (°C) : 429 Ambient Temperature(°C) : 33 Quantity of Emission (Nm³/Hr) : 330632

S.No.	Parameters	Units	Results	Limits (Max.)	Protocols	Detection Limit
1,	Particulate Matter	mg/Nm3	33.5	NA	IS:11255 (P-1)	NA
2.	Nitrogen Oxides (as NOx)	ppm	44.8	100	IS:11255 (P-7)	NA
3.	Sulphur Dioxide (as SO2)	ppm	BDL	NA	IS:11255 (P-2)	1.0
4.	Carbon Monoxide (as CO)	ppm	21.2	NA	IS:5182 (P-10)	NA
5.	Total Hydrocarbon	ppm	17.5	NA	Methods of Air	NA

SAMPLE COLLECTED BY US

DATE: 09/08/2019

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PARTY CODE : M/HR/12131

REPORT NO. : SN0805003119

S.No.	Parameters	Units	Results	Limits (Max.)	Protocols	Detection Limit
5.					sampling & analysis- 101	
6.	Carbon Dioxide (as CO2)	% v/v	5.1	NA .	IS:13270	NA





Date of performance: 05/08/2019 to 09/08/2019

NA-Not Applicable, BDL-Below Detection Limit

SAMPLE COLLECTED BY US

DATE: 09/08/2019

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

REPORT NO. : SN0805003719

REF. NO.

: NS

: NS

REF. DATE DT.RECD

: 05/08/2019

SAMPLE NAME: EFFLUENT WATER (ETP-OUTLET)

RESULTS OF ANALYSIS

Reference: EP Act Standard

DESCRIPTION

One effluent water sample from outlet of ETP was collected by us on 03/08/2019

SAMPLING DATE : 03/08/2019

SAMPLE QTY. : 1 LTR.

S.No.	Parameters	Units	Results	Limit (Max.)	Protocols	Detection Limit
1,	pH	NA	7.41	5.5 to 9.0	IS:3025 (P-11)	NA
2.	Total Suspended Solids	mg/L	<5	100	IS:3025 (P-17)	NA
3.	Chemical Oxygen Demand	mg/L	24	250	IS:3025 (P-58)	NA
4.	Biochemical Oxygen Demand (for 3 days at 27 Deg C)	mg/L	<5	30	IS:3025 (P-44)	NA
5.	Oil & Grease	mg/L	<3	10	IS:3025 (P-39)	NA
6.	Sulphide (as S)	mg/L	BDL	2.0	IS:3025 (P-29)	1.0
7.	Hexavalent Chromium (as Cr+6)	mg/L	BDL	0.10	IS:3025 (P-52)	0.01
8.	Phenolic Compound (as C6H5OH)	mg/L	BDL.	1.0	IS:3025 (P-43)	0.02
9.	Cyanide (as CN)	mg/L	BDL	0.20	APHA-4500 CN-E	0.02
10.	Mercury (as Hg)	mg/L	BDL	0.01	IS:3025 (P-2)	0.007
11.	Lead (as Pb)	mg/L	BDL	0.10	IS:3025 (P-2)	0.05
12.	Arsenic (as As)	mg/L	BDL	0.20	IS:3025 (P-2)	
13.	Colour	NA	Colourless	NA	IS:3025 (P-4)	NA
14.	Odour	NA	Odourless	NA	IS:3025 (P-5)	NA
15.	Nitrate Nitrogen (as NO3-N)	mg/L	0.44	10	IS:3025 (P-34)	NA

SAMPLE COLLECTED BY US

DATE: 10/08/2019

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HARIDWAR LABORATORY: Plot No. 37, Sector - 7, I.I.E SIIDCUL, Haridwar - 249403 BUILDING MATERIAL LAB: Plot No. 107/11/2 &107/20, Udhyog Nagar Indl Area, Mundka,



Sophisticated Industrial Materials Analytic Labs Pvt. Ltd.

(GOVT. APPROVED TESTING LABORATORIES)

• ISO 14001:2015 • OHSAS 18001:2007 • NABL ACCREDITED

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TEST REPORT



SN0805003719

S.No.	Parameters	Units	Results	Limit (Max.)	Protocols	Detection Limit
						Limit
16.	Ammonical Nitrogen (as NH3-N)	mg/L	3.7	50	IS:3025 (P-34)	NA
17.	Dissolved Phosphate (as P)	mg/L	2.9	5.0	IS:3025 (P-31)	NA
18.	Mangnese (as Mn)	mg/L	BDL	2.0	IS:3025 (P-2)	0.05
19.	Fluorides (as F)	mg/L	BDL	2.0	APHA-4500 F-D	0.05
20,	Temp,	°C	24.8	NA	IS:3025 (P-9)	NA
21.	Particle Size	μm	DV(10) 22.916	NA	By Particle Analyzer	NA
22.	Particle Size	μm	DV(50) 77.815	NA	By Particle Analyzer	NA
23.	Particle Size	μm	DV(90) 197.694	NA	By Particle Analyzer	NA
24.	Total Kjeldahl Nitrogen	mg/L	6.0	100	IS:3025 (P-34)	NA
 25.	Nickle (as Ni)	mg/L	0.43	3.0	IS:3025 (P-2)	NA
26,	Zinc (as Zn)	mg/L	0.19	5.0	(S:3025 (P-2)	NA
27.	Cadmium (as Cd)	mg/L	BDL	2.0	IS:3025 (P-2)	0.01
28.	Copper (as Cu)	mg/L	BDL	3.0	IS:3025 (P-2)	0.05
29.	Total Chromium (as Cr)	mg/L	BDL	2.0	IS:3025 (P-2)	0.005
30.	Total Residual Chlorine (as CI2)	mg/L	BDL	1.0	IS:3025 (P-26)	1.0
31.	Iron (as Fe)	mg/L	BDL	3.0	IS:3025 (P-2)	0.05
32.	Selenium (as Se)	mg/L	BDL	0.05	IS:3025 (P-2)	0.005
33.	Free Ammonia	mg/L	BDL	5.0	IS:3025 (P-2)	0.5
34.	Vanadium (as V)	mg/L	BDL	0.2 mg/L	IS:3025 (P-2)	0.05

Date of performance: 05/08/2019 to 10/08/2019 NA - Not Applicable BDL - Below Detection Limit

SAMPLE COLLECTED BY US

DATE: 10/08/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.

2. Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.

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Sample shall be disposed off after issue of Test Report unless specified.

A complaint register is available with the laboratory.

Phone: +(91)-(01334)-235552 Phone: +(91)-93198-28884

Email: simaharidwar@simalab.co.in

HARIDWAR LABORATORY: Plot No. 37, Sector - 7, I.I.E SIDCUL, Haridwar - 249403

BUILDING MATERIAL LAB: Plot No. 107/11/2 &107/20, Udhyog Nagar Indi Area, Mundka,
New Delhi-110041

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Email: bmlab@simalab.com

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

REF. NO.

REPORT NO. : SN0805002419

: NS

REF. DATE

: NS

DT.RECD

: 05/08/2019



SAMPLE NAME; AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

One ambient air sample was collected by us from 31/07/2019 to 01/08/2019

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

Name of Industry

Description

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

Near material gate

Date of Sampling

31/07/2019 To 01/08/2019

Sampling started at

10:30 AM (Dt. 31/07/2019)

Sampling completed at

10:30 AM (Dt. 01/08/2019)

Actual time of sampling

1440 Minutes

1.25 m³ / Minute

Flow rate of sampling Total volume of air sampled

1800 m³ (For PM-10) & 23.992 m³ (For PM-2.5)

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	μg/m³	93.0	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	52.1	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	28.5	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	19.2	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.125	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	22.7	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 08/08/2019

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A complaint register is available with the laboratory

Rohit

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SIGNATORY



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PARTY CODE : M/HR/12131

REPORT NO. : SN0805002419

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9,	Lead (as Pb)	μg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0,05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 05/08/2019 to 08/08/2019

BDL : Below Detection Limit NA : Not Applicable

SAMPLE COLLECTED BY US

DATE: 08/08/2019

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5. A complaint register is available with the laboratory.

Rohit

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

REPORT NO. : SN0805002519

REF. NO.

· NS

REF. DATE

: NS

DT.RECD ; 05/08/2019



(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

MANESAR, GURUGRAM, HARYANA

SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

One ambient air sample was collected by us from 31/07/2019 to 01/08/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

Near Incinerator

Date of Sampling

31/07/2019 To 01/08/2019

Sampling started at

10:50 AM (Dt. 31/07/2019)

Sampling completed at

10:50 AM (Dt. 01/08/2019)

Actual time of sampling

1440 Minutes 1.275 m3 / Minute

Flow rate of sampling Total volume of air sampled

1836 m3 (For PM-10) & 23.996 m3 (For PM-2.5)

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1.	Particulate Matter (as PM -10)	μg/m³	90.1	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	51.3	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	27.7	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	18.6	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.112	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
	Ammonia (as NH3)	μg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	22.4	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 08/08/2019

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Sample shall be disposed off after Issue of Test Report unless specified.

A complaint register is available with the laboratory

New Delhi-110041

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· M/HR/12131

REPORT NO.: SN0805002519

UIVI	Y CODE : WINTR/12131					1
S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9,	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL.	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0,1



Date of performance: 05/08/2019 to 08/08/2019

BDL: Below Detection Limit

NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 08/08/2019

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

MANESAR, GURUGRAM, HARYANA

REPORT NO. - SN0805002619

REF. NO. : NS

REF. DATE : NS

: 05/08/2019 DT.RECD



SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

One ambient air sample was collected by us from 01/08/2019 to 02/08/2019 Description

11:00 AM (Dt. 02/08/2019)

MARUTI SUZUKI INDIA LIMITED Name of Industry

Near Gate No. 1 Location of the Sampling Point

01/08/2019 To 02/08/2019 Date of Sampling 11:00 AM (Dt. 01/08/2019) Sampling started at

Sampling completed at 1440 Minutes Actual time of sampling 1.24m³/Minute Flow rate of sampling

1786m3 (for PM 10) & 24.019m3 (for PM 2.5) Total volume of air sampled

Ambient temperature (°C)

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
1	Particulate Matter (as PM -10)	µg/m³	93.7	100	IS:5182 (P-23)	NA
	Particulate Matter (as PM - 2.5)	µg/m³	53.7	60	Gravimetric	NA
	Nitrogen Dioxides (as NO2)	µg/m³	28.6	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	19.2	80	IS:5182 (P-2)	NA
5,	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.126	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7,	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	24.8	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 09/08/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters, Endorsement of products is neither inferred not implied.

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Phone: +(91)-93198-28884

Rohit

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Plot No. 37, Sector - 7, I.I.E SIIDCUL, Haridwar - 249403 Plot No. 107/11/2 &107/20, Udhyog Nager Indl Area, Mundka,

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TEST REPORT



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· M/HR/12131 PARTY CODE

REPORT NO. : SN0805002619

S.No.	Parameters	Units	Results	Limlt (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 05/08/2019 to 09/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 09/08/2019

REMARKS 1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred in implied.

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TEST REPORT

PARTY CODE : M/HR/12131

MARUTI SUZUKI INDIA LIMITED

MANESAR, GURUGRAM, HARYANA

(MANESAR PLANT) PLOT NO.1, PHASE-3A, IMT

REPORT NO : SN0805002719

REF NO.

: NS

REF, DATE DT.RECD

: 05/08/2019



SAMPLE NAME: AMBIENT AIR

RESULTS OF ANALYSIS

Reference: As Per EP Act-1986

Description

· One ambient air sample was collected by us from 01/08/2019 to 02/08/2019

Name of Industry

MARUTI SUZUKI INDIA LIMITED

Location of the Sampling Point

SND Gate

Date of Sampling

01/08/2019 To 02/08/2019

Sampling started at

11:20 AM (Dt. 01/08/2019)

Sampling completed at

11:20 AM (Dt. 02/08/2019)

Actual time of sampling

1440 Minutes 1.26m³/Minute

Flow rate of sampling Total volume of air sampled

1814m3 (for PM 10) & 23.916m3 (for PM 2.5)

Ambient temperature (°C)

35

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
4	Particulate Matter (as PM -10)	μg/m³	91.7	100	IS:5182 (P-23)	NA
2.	Particulate Matter (as PM - 2.5)	µg/m³	47.2	60	Gravimetric	NA
3.	Nitrogen Dioxides (as NO2)	µg/m³	26.3	80	IS:5182 (P-6)	NA
4.	Sulphur Dioxide (as SO2)	µg/m³	18.1	80	IS:5182 (P-2)	NA
5.	Carbon Monoxide (as CO) (8 hours)	mg/m³	1.106	2.0	NDIR - Spectroscopy	NA
6.	Benzene (as C6H6)	µg/m³	BDL	5.0	IS:5182 (P-11)	0.05
7.	Ammonia (as NH3)	µg/m³	BDL	400	Methods of Air sampling & Analysis-401	0.05
8.	Ozone (as O3) (8 hours)	µg/m³	24.3	100	Methods of Air sampling & Analysis-411	NA

SAMPLE COLLECTED BY US

DATE: 09/08/2019

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TEST REPORT

DARTY CODE . M/HR/12131

REPORT NO : SN0805002719

S.No.	Parameters	Units	Results	Limit (Max)	Protocols	Detection Limit
9.	Lead (as Pb)	µg/m³	BDL	1.0	Methods of Air sampling & Analysis-822	0.05
10.	Arsenic (as As)	ng/m³	BDL	6	Methods of Air sampling & Analysis-822	0.05
11.	Nickel (as Ni)	ng/m³	BDL	20	Methods of Air sampling & Analysis-822	0.05
12.	Benzo (a) Pyrene (Bap)	ng/m³	BDL	1.0	USEPA 8270-C	0.1



Date of performance: 05/08/2019 to 09/08/2019

BDL: Below Detection Limit NA: Not Applicable

SAMPLE COLLECTED BY US

DATE: 09/08/2019

1. Results listed refer only to the tested sample & applicable parameters. Endorsement of products is neither inferred nor implied.

2. Liability of laboratory is limited to the invoiced amount only. Any dispute arising out of this report shall be subject to Delhi jurisdiction only.

3. This Report is not to be reproduced wholly or in part and cannot be used as an evidence in the Court of law and should not be used in any advertising media without special

4. Sample shall be disposed off after issue of Test Report unless specified.

5. A complaint register is available with the laboratory.

New Delhi-110041

Rohit

HARIDWAR LABORATORY: Plot No. 37, Sector - 7, I.I.E SIIDCUL, Haridwar - 249403 BUILDING MATERIAL LAB: Plot No. 107/11/2 &107/20, Udhyog Nagar Indi Area, Mundka,

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PUBLIC NOTICE

Maruti Suzuld Indla Limited 11th Floor, Jeevan Prakash Bulkling, 25 Kasturba Gandhi Marg, New Delhi - 110001. Ph: 011-23316831. Fax: 011-23316754

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 evallable 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

AMAR UTALA 22-Pol- 2008.

सूचना



Marull Suzuki India Limited 11th Floor, Jeevan Prakash Bullding, 25 Kasturba Gandhi Marg, New Delni - 110001. Ph: 011-23316031. Fax: 011-23318754

पर्यावरण एवं सन 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 चन मंत्रालय की वेबसाइट http://envlor.nic.in पर भी देखा जा सकता है.

दिनांकः 22 फरवरी, 2008

मारुति सुजुकी इण्डिया लिमिटेड

