

# Kapstone Constructions Pvt. Ltd.

Registered & Corp. Office : 702, NATRAJ, M. V. Road Junction, Western Express Highway,  
Andheri (East), Mumbai - 400 069. Tel.: +91 - 22 - 6676 6888, Fax: +91 - 22 - 6676 6999.  
E-mail: comehome@rustomjee.com, Web : www.rustomjee.com, CIN : U45200MH2003PTC140091

27<sup>th</sup> June, 2017

To,  
**The Director**  
**Regional Office (West Central Zone),**  
**Ministry of Environment, Forest and Climate Change,**  
Ground Floor, East wing,  
New Secretariat Building,  
Civil lane, Nagpur-440001

**Subject: Half-yearly Compliance Report: December 2016 to May 2017**

**Project Environmental Clearance for Amendment in Environmental Clearance for Residential and Commercial Project at Majiwada, Thane, Maharashtra. by Kapstone Constructions Pvt. Ltd.**

**EC No. Environmental Clearance Letter No. SEAC-2013/CR-344/TC-1 Dated 25<sup>th</sup> March, 2014**

Dear Sir,

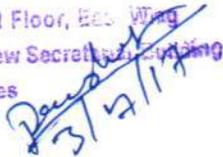
We are submitting half-yearly Compliance Report (hard & soft copy) in respect of the of stipulated terms and conditions of 'Prior Environmental Clearance' as specified in 'Environment Clearance' Notification Clause No. 10(ii).

Thanking you,  
Yours faithfully,  
**For Kapstone Construction Pvt. Ltd.**

  
**Project Proponent**

- Enclosure:**
1. A hard copy of the compliance and monitoring report
  2. A CD containing the same report
- CC copy to:**
1. Regional officer, Maharashtra Pollution Control Board, Thane (SRO-I)
  2. Member Secretary, Maharashtra Pollution Control Board, Sion, Mumbai
  3. Member Secretary, State Environmental Impact Assessment Authority, Govt. of Maharashtra, Mumbai

पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय  
Ministry of Environment, Forest & Climate Change  
क्षेत्रीय कार्यालय (पश्चिम मध्य क्षेत्र)  
Regional Office (Western Central Zone)  
भू-तल, पूर्व खंड / Ground Floor, East Wing  
नया सचिवालय भवन / New Secretariat Building  
सिविल लाईन्स / Civil Lines  
नागपुर / Nagpur-440 001

  
31/7/17

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*[Handwritten Signature]*  
आवक लिपिक  
पर्यावरण विभाग  
30-6-17  
कार्यालय, मुंबई-३२

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2. Member Secretary, Maharashtra Pollution Control Board, Sion, Mumbai
3. Member Secretary, State Environmental Impact Assessment Authority, Govt. of Maharashtra, Mumbai

*[Handwritten Stamp]*  
VMM  
30/6/17  
Regional Office  
M.P.C Board  
Office Complex Bldg., 5th Floor  
Near Mulund Check Naka,  
Mumbai - 400 503

*[Handwritten Stamp]*  
Maharashtra Pollution Control Board  
Kaberar  
Sion (Metro)  
Opp. State  
Phone : 240  
30/6/17

# **ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT**

for the period of  
**(December 2016 to May, 2017)**  
For

## **Kapstone Constructions Pvt. Ltd.** **"Rustomjee 100 Acres"** **Expansion of Residential & Commercial Project** **at Majiwade, Thane, West**

**Environmental Clearance Letter No.SEAC-2013/CR-344/TC-1**  
**Dated 25<sup>th</sup> March, 2014**

**Proposed by**  
**Kapstone Constructions Pvt. Ltd.**



CONSULTANT  
**Mahabal Enviro Engineers Pvt. Ltd.**  
Plot F-7, Road 21, MIDC Wagle Estate, Thane-400604  
Phone: +91-22-25823139/1663/0658 [thane@mahabal.com](mailto:thane@mahabal.com)

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## Environmental Clearance

### Government of Maharashtra

#### RETYPED

SEAC-2013/CR-344/TC-1  
Environment department  
Room No.217, 2<sup>nd</sup> floor,  
Mantralaya Annexe,  
Mumbai-400032.  
Dated: 25<sup>th</sup> March, 2014

To,  
**Kapstone Consultants Pvt. Ltd.**  
702, Natraj, M.V. Road Junction,  
Western Express Highway,  
Andheri (East), Mumbai

**Subject: Environmental Clearance for Amendment in Environmental Clearance for Residential and Commercial Project at Majiwade, Thane by Kapstone Consultants Pvt. Ltd.**

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered a per the EIA Notification-2006, by the State Level Expert Appraisal Committee-II, Maharashtra in its 16<sup>th</sup> & 18<sup>th</sup> meetings decided to recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 61<sup>st</sup> & 66<sup>th</sup> meetings.

2. It is noted that the proposal is for grant of Environmental Clearance for Amendment in Environmental Clearance of Residential and Commercial project at Majiwade, Thane. SEAC considered the project under screening category 8(b) B1 as per EIA Notification 2006.

**Brief Information of the project submitted by project proponent is as:**

<b>Name of the project</b>	Expansion of Residential & Commercial Project			
<b>Project Proponent</b>	Kapstone Construction Pvt. Ltd.			
<b>Consultant</b>	Mahabal Enviro Engineers Pvt. Ltd.			
<b>Type of project</b>	Expansion of Residential & Commercial Project.			
<b>Location of the project</b>	At Majiwade, Thane (W), Maharashtra			
<b>Total Plot Area</b>	3,09,176.40 m <sup>2</sup>			
<b>Net Plot area</b>	3,09,176.40 m <sup>2</sup>			
<b>Permissible FSI (Including TDR etc.)</b>	3,09,176.40 m <sup>2</sup>			
<b>Proposed Built-up Area (FSI &amp; Non-FSI)</b>		<b>Completed Area (m<sup>2</sup>)</b>	<b>Proposed Area (m<sup>2</sup>)</b>	<b>Total Area (m<sup>2</sup>)</b>
	<b>FSI Area</b>	70,634.43	3,00,055.46	3,70,689.89
	<b>Non-FSI Area</b>	77,150.23	3,20,215.34	3,97,365.57
	<b>Constriction Area</b>	1,47,784.66	6,20,270.80	7,68,055.46
<b>Ground coverage percentage</b>	36%			
<b>Estimated cost of the project</b>	Rs. 2,440 Cr.			

No. of Buildings & its	Sr. No.	Description	No. of Bldg.	No. of Floors	No. of Tenement	Population																												
	<b>COMPLETED BUILDING/UNDER/WITH NO CHANGE</b>																																	
	1	Residential Plot 1	4	St+P+27Flrs	416	2,080																												
	2	Residential Plot 2	1	St+18+Flr	106	530																												
	3	Residential plot 5	2	St+P+32 Flrs	512	2,560																												
			1	St+p+11 Flrs	88	440																												
			1	St+16+Flrs	282	1,410																												
<b>UNDER CONSTRUCTION BUILDING/WITH AMENDMENTS</b>																																		
	4	Residential plot 4	4	St+P+20Flr	302	1,510																												
	5	Residential Plot 4(Commercial)	1	G+1	-	48																												
	6	Residential plot 6	99	St+4P+31 Flrs	414	2,070																												
	7	School Plot 1	1	B+G+7 Flrs	-	2,058																												
<b>PROPOSED BUILDINGS/CHANGE IN PLANING</b>																																		
	8	Residential plot+7	1	St+2P+31 Flrs	347	1,735																												
			2	St+2P Flrs	720	3,600																												
	9	Health+Comm+Plot1	1	B+G+18 Flrs	-	1,863																												
	10	Commercial plot 2	1	St+2P+25 Flrs	-	2,906																												
	11	School plot 3	1	B+G+3 Flrs	-	981																												
	12	Commercial plot 1	1	St+P+18	-	981																												
		<b>Total</b>			<b>1,067</b>	<b>11,085</b>																												
		<b>Total for Township</b>	<b>37nos.</b>		<b>4,780</b>	<b>35,753</b>																												
<b>Number of tenants and shops</b>	Total Flats: 4,780 Nos. (3,376 Prop+1,404 constructed) Shops: 72 Nos. (Prop.)																																	
<b>Number of expected residents/users</b>	Total Population of project: 35,753 Nos. (completed + proposed) (7,020 nos comp.+28,733 nos prop)																																	
<b>Height of the buildings(s)</b>	Max height:115m																																	
<b>Right of way</b>	The proposed site is accessible by 60 m wide Mumbai Nashik Highway																																	
<b>Turning radius</b>	Min 6 m Turning radius																																	
<b>Existing Structure</b>	Yes																																	
<b>Total Water requirement</b>	<table border="1"> <thead> <tr> <th colspan="2"><b>Dry Season</b></th> </tr> </thead> <tbody> <tr> <td>Fresh Water(CMD)</td> <td align="right">1,697 KLD</td> </tr> <tr> <td>Source</td> <td align="right">TMC</td> </tr> <tr> <td>Recycled Water (CMD)</td> <td align="right">2,616 KLD</td> </tr> <tr> <td>Total water requirement(CMD)</td> <td align="right">2,812 KLD</td> </tr> <tr> <td>Swimming pool make up (m<sup>3</sup>)</td> <td></td> </tr> <tr> <td>Firefighting (m<sup>3</sup>)</td> <td align="right">3,400 m<sup>3</sup> One time requirement</td> </tr> <tr> <th colspan="2"><b>Wet Season</b></th> </tr> <tr> <td>Fresh water (CMD)</td> <td align="right">1,245 KLD</td> </tr> <tr> <td>Source</td> <td align="right">TMC</td> </tr> <tr> <td>Recycled Water (CMD)</td> <td align="right">2,616 KLD</td> </tr> <tr> <td>Total water requirement(CMD)</td> <td align="right">2812 KLD</td> </tr> <tr> <td>Swimming pool make up (m<sup>3</sup>)</td> <td></td> </tr> <tr> <td>Firefighting (m<sup>3</sup>)</td> <td align="right">3,400 m<sup>3</sup> One time requirement</td> </tr> </tbody> </table>						<b>Dry Season</b>		Fresh Water(CMD)	1,697 KLD	Source	TMC	Recycled Water (CMD)	2,616 KLD	Total water requirement(CMD)	2,812 KLD	Swimming pool make up (m <sup>3</sup> )		Firefighting (m <sup>3</sup> )	3,400 m <sup>3</sup> One time requirement	<b>Wet Season</b>		Fresh water (CMD)	1,245 KLD	Source	TMC	Recycled Water (CMD)	2,616 KLD	Total water requirement(CMD)	2812 KLD	Swimming pool make up (m <sup>3</sup> )		Firefighting (m <sup>3</sup> )	3,400 m <sup>3</sup> One time requirement
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<b>Sewage and waste water</b>	Sewage generation (CMD)	2,642 KLD
	STP Technology	MBBR
	Capacity of STP (CMD)	Total Capacity:3,041 KLD
	Location of the STP	Below ground
	DG sets (during emergency)	DG sets will be provided as alternate supply for essential services such as STP, Fire Fighting, and Lift etc. DG sets provided of total capacity: 5,995 kVA
Budgetary allocation	Capital Cost: Rs.703 Lakh O & M: 56 Lakh	
<b>Solid waste management</b>	<b>Waste generation in the pre-construction and construction phase</b>	
	Disposal of the construction way debris The demolition waste will be disposed at designated disposal site as approved by the collector. Construction waste will be utilized at project site for filling purpose.	
	<b>Waste generation in the Operation phase</b>	
	Dry Waste (kg/day)	6,487 kg/day
	Wet Waste (kg/day)	4,323 kg/day
	STP Sludge (dry sludge) (kg/day)	26 KLD
	Mode of Disposal of Waste	
	Dry Waste	Dry garbage will be segregated & disposed off to recyclers
	Wet Waste	Wet garbage will be composted using Mechanical Composting Technology and used as organic manure for landscaping
	STP Sludge (dry sludge)	Sludge use as manure for gardening
	Location and total are provided for the storage and treatment of the solid waste.	On ground
	Budgetary allocation	Capital Cost:Rs.161 Lakh O & M Cost: Rs.13 Lakh/year
<b>Green Belt Development</b>	Total RG Area	46,379.63 m <sup>2</sup> (prop+comp) (39,631.89 m <sup>2</sup> proposed) (6,747.74 m <sup>2</sup> completed)
	RG area other than green belt (please specify for playground etc.)	13,183.67 m <sup>2</sup>
	RG area under green belt	33,195.96 m <sup>2</sup> (prop+comp) (26,448.22 m <sup>2</sup> proposed) (6,747.74 m <sup>2</sup> completed)
	RG on ground	14,541.00 m <sup>2</sup> (prop+comp) (13,365.57 m <sup>2</sup> proposed) (1,175.43 m <sup>2</sup> completed)
	RG on Podium	18,654.96 m <sup>2</sup> (prop+comp) (13,082.65 m <sup>2</sup> proposed) (5,572.31 m <sup>2</sup> completed)
	Budgetary allocation	Capital Cost: Rs.370 Lakh O & M Cost: Rs.44 Lakh/year
<b>Energy</b>	<b>Power supply</b>	
	Maximum demand	48 MW
	Connect load	107 MW
	Source	MSEDCL
	% of saving	20%
	Budgetary allocation	Capital Cost: Rs.486 Lakh O & M: Rs.19 Lakh/Annum
	<b>DG Set</b>	
	Number and capacity of the DG sets to be used	Total: 5,995 kVA
	Type of fuel used	Diesel

<b>Environment Management Plan</b>	<b>Budgetary Allocation</b>			
	<b>Component</b>	<b>Capital Cost (Rs. In Lakh)</b>	<b>O &amp; M Cost (Rs. In Lakh/year)</b>	<b>Frequency</b>
	STP (Tertiary)	703	56	Continuous O & M Environment Monitoring: Monthly, STP outlet water quality for pH, BOD, COD, SS and O&G
	Solar System	486	19	Weekly
	Rainwater harvesting	100	11	During rainy season (cleaning of UG tanks and filtration units before rainy season)
	Solid Waste Composting plant	161	13	Continuous O & M Environment Monitoring: Monthly to assess the compost quality
	Landscape	370	44	Daily
	Environmental Monitoring	10	-	
	<b>Total Cost</b>	<b>1,830</b>	<b>144</b>	
<b>Traffic Management</b>	<b>Nos. of the junction to the main road &amp; design of confluence: 2 Junctions</b>			
	<b>Parking details</b>			
	Number & area of basement	8,687.57 m <sup>2</sup>		
	Number & area of podium	1,26,677.16 m <sup>2</sup> (prop+comp) (1,15,821.91 m <sup>2</sup> proposed) (10,855.25 m <sup>2</sup> completed)		
	Total Parking Area	1,35,364.73 m <sup>2</sup> (prop+comp) (1,24,509.48 m <sup>2</sup> proposed)(10,855.25 m <sup>2</sup> completed)		
	Area per car	32 m <sup>2</sup> avg		
	2-Wheeler	5,618 Nos.		
	4-Wheeler	6,685 Nos.		

3. The proposal has been considered by SEIAA in its 61<sup>st</sup> & 66<sup>th</sup> meetings & decided to accord Environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions:

**Conditions of Environmental Clearance**  
**Letter No. SEAC-2013/CR-344/TC-1 Dated. 25<sup>th</sup>March, 2014**

Sr.	Conditions	Compliance	Annex	Photo
(i)	This environmental clearance is issued subject to land use verification. Local authority / planning authority should ensure this with respect to Rules, Regulations, Notifications, Government Resolutions, Circulars, etc. issued if any. Judgments/orders issued by Hon'ble High Court, Hon'ble NGT, Hon'ble Supreme Court regarding DCR provisions, environmental issues applicable in this matter should be verified. If any discrepancy found in the plans submitted or details provided in the above para may be reported to environment department. This environmental clearance issued with respect to the environmental consideration and it does not mean that State Level Impact Assessment Authority (SEIAA) approved the proposed land use.	Amendment in Environmental clearance is issued having File No: SEAC-2013/CR-344/TC-1 Dated 25 <sup>th</sup> March, 2014 The EC copy is attached.  The project area falls under residential zone. The Plans are approved by Thane Municipal Corporation.	✓	
(ii)	The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. Plan approving authority should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.	Yes. The plans are approved by Thane Municipal Corporation.		
(iii)	"Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.	We have obtained Consent to Establish from Maharashtra Pollution Control Board, under air & water act. Dated 10.11.2006  CTE Copy is attached.  We had applied for the amendment Consent to Establish	✓	
(iv)	All required sanitary and hygienic	The sanitation facility is		✓

Sr.	Conditions	Compliance	Annex	Photo
	measures should be in place before starting construction activities and to be maintained throughout the construction phase.	provided separately for gents and ladies.		
(v)	Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement in Para 2. Prior certification from appropriate authority shall be obtained.	<p>We have installed STP of total 3,041 KLD capacity at site.</p> <p>The MBBR technology of STP is used.</p> <p>Treated effluent emanating from STP will be recycled to the maximum extent possible.</p> <p>Green belt will be developed according to the CPCB guidelines. Different types of trees and shrubs will be planted.</p>		✓
(vi)	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 and First Aid Room etc.	<p>We have provided basic necessary facility to the laborers.</p> <p>Provided with sanitary facility, drinking water facility, fuel for cooking, medical health care, crèche and First Aid Room etc.</p> <p>We have not provided the labour camp facility on site.</p> <p>labour are coming on site on daily basis.</p>		✓
(vii)	Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.	We have provided drinking water facility and sanitary facilities to the workers at site.		✓
(viii)	The solid waste generated should be properly collected and segregated. dry/inert solid waste should be disposed-off to the approved sites for land filling after recovering recyclable material	We have segregate the solid waste. And dry waste is handover to municipal corporation. Land filling is not applicable.		
(ix)	Wet garbage should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for	We are using the OWC facility on site. Wet waste is treated in OWC. We are not disposed any		✓

Sr.	Conditions	Compliance	Annex	Photo
	gardening. And, no wet garbage will be disposed outside the premises. Local authority should ensure this.	type of waste or garbage out site the premises.		
(x)	Arrangement shall be made that waste water and storm water do not get mixed.	Yes we have complied this condition.		
(xi)	All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.	Excavated soil used for landscape developments within the project site.		
(xii)	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	The excavated soil is used for leveling of land within the project site.		
(xiii)	Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.	Green belt is in process. Part portion of green belt was developed according to the CPCB guidelines. Remaining is in under progress. Different types of trees and shrubs are planted.		✓
(xiv)	Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for -8-general safety and health aspects of people, only in approved sites with the approval of competent authority	We will agree with the condition		
(xv)	Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	The soil and ground water samples from the project site have been tested.  Monitoring report for December 2016 to May, 2017 is provided.	✓	
(xvi)	Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.	Noted		
(xvii)	Any hazardous waste generated during construction phase should be disposed-off as per applicable rules and norms with necessary approvals of the Maharashtra	No hazardous waste will be generated.		

Sr.	Conditions	Compliance	Annex	Photo
	Pollution Control Board.			
(xviii)	The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.	We will comply with the condition.		
(xix)	The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.	No diesel has been stored at the site. At the time of requirement, vendor will make availability of the diesel.		
(xx)	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during nonpeak hours.	The vehicle hired for bringing construction material to the site is checked for PUC at main gate.  Vehicle without PUC certificate are not allowed on site. All suppliers and vendors are communicated for the same and same put in practice.		
(xxi)	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.	The noise levels as well as Air pollution has been monitored regularly from MoEF recognized laboratory.  Air and Noise Monitoring report for period of December 2016 to May, 2017 is attached.	✓	
(xxii)	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September 1999 and amended as on 27 <sup>th</sup> August, 2003.(The above condition is applicable only if the project site is located within the 100 km of Thermal Power Stations).	We had used fly ash base material for building construction.		
(xxiii)	Ready mixed concrete must be used in building construction.	We have provided the RMC plat on site.		
(xxiv)	The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of firefighting equipment's etc. as per National	We will comply with the condition		

Sr.	Conditions	Compliance	Annex	Photo
	Building Code including measures from lighting.			
(xxv)	Storm water control and its re-use as per CGWB and BIS standards for various applications.	We will comply with the condition		
(xxvi)	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	We have given out source. So demand of water is not required.		
(xxvii)	The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.	Not applicable		
(xxviii)	The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Discharge of this unused treated affluent, if any should be discharge in the sewer line. Treated effluent emanating from STP shall be recycled/refused to the maximum extent possible. Discharge of this unused treated affluent, if any should be discharge in the sewer line. Treatment of 100% gray water by decentralized treatment should be clone. Necessary measures should be made to mitigate the odour problem from STP.	We have installed STP.  Treated effluent emanating from STP will be recycled to the maximum extent possible.  Green belt will be developed according to the CPCB guidelines.		
(xxix)	Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc.	Noted		
(xxx)	Permission to draw ground water and construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.	Not applicable		
(xxxii)	Separation of gray and black water should be clone by the use of dual plumbing line for separation of gray and black water.	We have provided separate pipe line for gray & black water.		
(xxxiii)	Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.	We have provided low fixture for showers, toilet flushing and drinking.		
(xxxiiii)	Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air	As this is a residential & commercial project We is using 4 mm plain flat		

Sr.	Conditions	Compliance	Annex	Photo
	conditioning. If necessary, use high quality double glass with special reflective coating in windows.	glass only for windows pans.		
(xxxiv)	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement	We will use thermal insulation material to fulfill requirement.		
(xxxv)	Energy conservation measures like installation of CFLs /TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed-off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible like installing solar street lights, common solar water heaters system. Project proponent should install, after checking feasibility, solar plus hybrid non-conventional energy source as source of energy.	Solar energy will be utilized for the purpose of lightening in the common area, like passages/ lift shaft/ lift, lobby /staircase / slit area/ car parking area, landscaping/ garden areas, signage etc.  Solar panels are provided for solar water heater system.		
(xxxvi)	Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.	We have provided DG Set at construction site. South urbania - 500 kVA & Landword - 125 kVA		✓
(xxxvii)	Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.	Within project area, the day and night ambient noise levels are monitored through MoEF approved lab. Noise levels are within the limits. i.e. For Day time within 55 dB and for Night time	✓	

Sr.	Conditions	Compliance	Annex	Photo
		within 45 dB  Noise Monitoring report for December 2016 to May, 2017 is provided.		
(xxxviii)	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.	We have provided propose entry and exit gate with security and well monitored. Operational phase, parking area is providing within the project area.		
(xxxix)	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfill requirement	We will comply with the condition.		
(xl)	The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.	We have provided adequate distance between the buildings to allow the circulation of air, natural light & ventilation.		
(xli)	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.	We will agree with the condition		
(xlii)	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.	Noted		
(xlili)	Six monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.	We had submitted the six monthly monitoring reports to the MPCB department Regional Officer, MoEF, Nagpur. The Acknowledgement copy of previous report is attached. We are submitting the monitoring report for the month December 2016 to May, 2017	✓	
(xliv)	A complete set of all the documents submitted to	We have submitted complete set of all		

Sr.	Conditions	Compliance	Annex	Photo
	Department should be forwarded to the Local authority and MPCB.	documents to Environment Department as well as MPCB RO & HQ		
(xlv)	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.	We agree with the condition.		
(xlvi)	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	We has provided management cell with qualified staff for the implementation of the stipulated environmental safeguards.		
(xlvii)	Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-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 reported to the MPCB & this department.	We has allotted separate funds for environmental protection measures/EMP.		
(xlviii)	The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at <a href="http://ec.maharashtra.gov.in">http://ec.maharashtra.gov.in</a>	We have published advertisement in the newspapers.		
(xlix)	Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1 <sup>st</sup> June & 1 <sup>st</sup> December of each calendar year.	We had submitted the six monthly monitoring report to the MPCB department Regional Officer, MoEF Nagpur. The Acknowledgement copy of previous report is provided. We are submitting the monitoring report for the month December 2016 to May, 2017		

Sr.	Conditions	Compliance	Annex	Photo
(I)	A copy of clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also put on the website of the Company by the proponent.	Noted		
(ii)	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of mentioned 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 SPCB. The criteria pollutant levels namely; SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical sector 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	We will comply with the condition		
(iii)	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 respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	We had submitted the Six monthly monitoring reports to the MPCB department Regional Officer, MoEF, Nagpur. The Acknowledgement copy of previous report is provided. We are submitting the monitoring report for the month December 2016 to May, 2017		
(liii)	The Environmental statement for each financial year ending 31 <sup>st</sup> March in Form- V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail	We submitted environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V to the concerned State Pollution Control Board.  The copy of the same is attached	✓	

Sr.	Conditions	Compliance	Annex	Photo
4.	The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.	Environment clearance is issued on dated 25 <sup>th</sup> March, 2014.  We have not violated any environmental laws.		
5.	In case of submission of false document and non-compliance of stipulated conditions, Authority/Environment Department will revoke or suspend the Environmental clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.	We agree with the condition		
6.	The Environment Department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.	We agree with the condition.		
7.	<b>Validity of Environment Clearance:</b> The environmental clearance accorded shall be valid for a period of 5 years.	We have received Environment Clearance on dated 25.03.2014 copy attached. According to the MoEF Notification dated 29.04.2015 validity of Environmental Clearance is extending up to 2021. Copy of MoEF notification is attached	✓	
8.	In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.	We agree with the condition.		

Sr.	Conditions	Compliance	Annex	Photo
9.	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, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	Noted		
10.	Any appeal against this environmental clearance shall lie with National Green Tribunal, Van Vigyan Bhawan, Sec-5, R.K. Puram, New Delhi-110022, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	NO.		

## Consent to Establish

RETYPED

### ORANGE/LSI

Consent No. BO/RO/ (P&P)/700

Date: 10/11/2006

Consent to Establish is granted to **Kapstone Constructions Pvt. Ltd., "Rustomjee 100 Acres" at S. Nos. 12/1-4, 13/1-3,15/1-5, 16/1(p) 2(p), 3-6, 17/3, 4(p), 5,6(p), 18/3(p), 4(p),6(p), 19/1(p)-5(p), 20/1-4, 35/1-8, 36/1-7, 37/1-4, 4(p), 6,7(p), 9(p), 38/1(p), 2,41/1-9, 42/1-7, 43/1-12, 44/16, 45/1,2(p), 3,4, (p), 5(p), 7(p), 8(p), 9, 10, 46/1(p)2, 3(p), 4(p), 6(p), 7(p), 8,47/1(p), 3(p), 4-8, 48/1-8, 49/1-3, 50/1-3, 51/1-9, 54/1-4, 55/1-5, 84(p), 89(p), 327A-2/1-9, 329/1-4, 5(p), 6(p), 345/1-17, 383, 423-A/1-8, 423C, 424-A/1-4, 424C, 22(p), at Majiwade, Thane.**

located in the area declared under the provisions of Water Act (P&CP) 1974, Air Act (P&CP), 1981 and Authorization under the provisions of H.W. (M&H) Rules and amendments thereto subject to the provisions of the Acts and the Rules and the Orders that may be mad further and subject to the following terms and conditions:-

The Consent to Establish is issued to Kapstone Constructions Pvt. Ltd., **"Rustomjee 100 Acres" at S. Nos. 12/1-4, 13/1-3,15/1-5, 16/1(p) 2(p), 3-6, 17/3, 4(p), 5,6(p), 18/3(p), 4(p),6(p), 19/1(p)-5(p), 20/1-4, 35/1-8, 36/1-7, 37/1-4, 4(p), 6, 7(p), 9 (p), 38/1(p), 2,41/1-9, 42/1-7, 43/1-12, 44/16, 45/1,2(p), 3,4, (p), 5(p), 7(p), 8(p), 9, 10, 46/1(p)2, 3(p), 4(p), 6(p), 7(p), 8,47/1(p), 3(p), 4-8, 48/1-8, 49/1-3, 50/1-3, 51/1-9, 54/1-4, 55/1-5, 84(p), 89(p), 327A-2/1-9, 329/1-4, 5(p), 6(p), 345/1-17, 383, 423-A/1-8, 423C, 424-A/1-4, 424C, 22(p), at Majiwade, Thane.**

For development of land/plot as new construction activates named as Kapstone Constructions Pvt. Ltd., "Rustomjee 100 Acres" at S. Nos. 12/1-4, 13/1-3, 15/1-5, 16/1(p), 2(p), 3-6, 17/3, 4(p), 5,6(p), 18/3(p), 4(p), 6(p), 19/1(p), 5(p), 20/1-4, 35/1-8, 36/1-7, 37/1-4, 4(p), 6,7(p), 9(p), 38/1(p), 2,41/1-9, 42/1-7, 43/1-12, 44/16, 45/1, 2(p), 3, 4, (p), 5(p), 7(p), 8(p), 9, 10, 46/1(p)2, 3(p), 4(p), 6(p), 7(p), 8, 47/1(p), 3(p), 4-8, 48/1-8, 49/1-3, 50/1-3, 51/1-9, 54/1-4, 55/1-5, 84(p), 89(p), 327A-2/1-9, 329/1-4, 5(p), 6(p), 345/1-17, 383, 423-A/1-8, 423C, 424-A/1-4, 424C, 22(p), at Majiwade, Thane. On 4,39,437 m<sup>2</sup> including utilities and services such as residential & commercial 6,500 no. of flats etc. as per construction commencement certificate issued by local body.

## Condition of Consent

Sr.	Condition	Compliance	Annex	Photo																																						
	<b>Conditions under water Act:</b>																																									
(i)	The daily quantity of (a) sewage effluent from above construction project including (b) waste water from swimming tank/water sports shall not exceed 4,714 m <sup>3</sup> /day	We agree with the condition.																																								
(ii)	<p><b>Sewage Effluent Treatment:</b> The Applicant shall provide a comprehensive sewage treatment plant as is warranted with reference to influent quality and corresponding mode of disposal and operate and maintain the same continuously so as to achieve the quality of treated effluent to the following standards:-</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Parameters</th> <th rowspan="2" style="text-align: center;">Limit</th> <th colspan="3" style="text-align: center;">Standards for sub-streams</th> </tr> <tr> <th style="text-align: center;">(A)</th> <th style="text-align: center;">(B)</th> <th style="text-align: center;">(C)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">PH</td> <td style="text-align: center;">In between</td> <td style="text-align: center;">5.5 to 9</td> <td style="text-align: center;">7 to 8.5</td> <td></td> </tr> <tr> <td style="text-align: center;">Suspended Solids</td> <td style="text-align: center;">Not to exceed</td> <td style="text-align: center;">100</td> <td style="text-align: center;">10</td> <td style="text-align: center;">mg/l</td> </tr> <tr> <td style="text-align: center;">B.O.D. 3 days 27°C</td> <td style="text-align: center;">Not to exceed</td> <td style="text-align: center;">30</td> <td style="text-align: center;">10</td> <td style="text-align: center;">mg/l</td> </tr> <tr> <td style="text-align: center;">Dissolved Phosphates (as p)</td> <td style="text-align: center;">Not to exceed</td> <td style="text-align: center;">10</td> <td style="text-align: center;">NIL</td> <td style="text-align: center;">mg/l</td> </tr> <tr> <td style="text-align: center;">Dissolved Oxygen</td> <td style="text-align: center;">Not to exceed</td> <td style="text-align: center;">5</td> <td style="text-align: center;">5</td> <td style="text-align: center;">mg/l</td> </tr> <tr> <td style="text-align: center;">R. Chlorine</td> <td style="text-align: center;">Not to exceed</td> <td style="text-align: center;">0.1</td> <td style="text-align: center;">0.1</td> <td style="text-align: center;">mg/l</td> </tr> </tbody> </table>	Parameters	Limit	Standards for sub-streams			(A)	(B)	(C)	PH	In between	5.5 to 9	7 to 8.5		Suspended Solids	Not to exceed	100	10	mg/l	B.O.D. 3 days 27°C	Not to exceed	30	10	mg/l	Dissolved Phosphates (as p)	Not to exceed	10	NIL	mg/l	Dissolved Oxygen	Not to exceed	5	5	mg/l	R. Chlorine	Not to exceed	0.1	0.1	mg/l	We have provided STP of capacity 3,041 KLD. The quality of treated effluent will be in accordance to the standards.		
Parameters	Limit			Standards for sub-streams																																						
		(A)	(B)	(C)																																						
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(iii)	<p><b>Sewage effluent Disposal:-</b> Domestic treated effluent shall be disposed of on land for gardening/irrigation/lawns/ tree plantations within own premises. Excess treated sewage effluent shall be disposed into to underground drainage scheme provided by local body. In no case, effluent shall find its way to any water body directly/indirectly at any time.</p>	Treated effluent will be reused for gardening, irrigation, lawns, tree plantations within the own premises.																																								
(iv)	<p><b>Non-Hazardous Solid Waste:-</b> The total quantity shall not exceed 26,284 kg per day and shall be segregated and treated as follows:-</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Sr. No</th> <th style="text-align: center;">Type of Segregated Solid waste</th> <th style="text-align: center;">Quantity kg/day</th> <th style="text-align: center;">Treatment</th> <th style="text-align: center;">Disposal</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">Organic</td> <td style="text-align: center;">13,142</td> <td style="text-align: center;">In vessel Composting at site only</td> <td style="text-align: center;">Self-use</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">Inert</td> <td rowspan="4" style="text-align: center;">12,000</td> <td style="text-align: center;">Segregation</td> <td style="text-align: center;">At approved landfill</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">Paper packing</td> <td style="text-align: center;">Segregation</td> <td style="text-align: center;">Sale</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">Rubber</td> <td style="text-align: center;">Segregation</td> <td style="text-align: center;">AT approved landfill</td> </tr> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">Glass</td> <td style="text-align: center;">Segregation</td> <td style="text-align: center;">Sale</td> </tr> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">Miscellaneous (STP Sludge)</td> <td style="text-align: center;">1,142</td> <td style="text-align: center;">Segregation</td> <td style="text-align: center;">Sale at approve landfill</td> </tr> </tbody> </table>	Sr. No	Type of Segregated Solid waste	Quantity kg/day	Treatment	Disposal	1	Organic	13,142	In vessel Composting at site only	Self-use	2	Inert	12,000	Segregation	At approved landfill	3	Paper packing	Segregation	Sale	4	Rubber	Segregation	AT approved landfill	5	Glass	Segregation	Sale	6	Miscellaneous (STP Sludge)	1,142	Segregation	Sale at approve landfill	The total solid waste generation will be 26,284 KLD The biodegradable waste generated on site will be composted using OWC Composting Technology and used as manure for landscaping. The non-biodegradable waste generated segregated and be disposed of to recyclers								
Sr. No	Type of Segregated Solid waste	Quantity kg/day	Treatment	Disposal																																						
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Sr.	Condition	Compliance	Annex	Photo
<b>3.</b>	<b>Other Conditions:-</b>			
	1. All activities shall be in resonance with the provisions of Indian Forest Act. 1927 (16 of 1927), Forest (Conservation) Act, 1980 (69 to 1980) and wildlife (protection) Act, 1972 (53 to 1972), CRZ notification, and special notifications published for Dahanu, MurudJangira, Matheran and Mahabaleshwar area wherever applicable and all the Environmental Statutes and Instruments.	We have received the CRZ clearance. Copy attached	✓	
	2. This Consent to establish is issued only for Developing Construction Project Purposes.	The CTE is obtained The copy of CTE is provided.	✓	
	3. No quarrying activities shall be commenced in the area unless appropriate permissions are obtained for a limited quarrying material required for construction of local residential housing and traditional road maintenance work provided that such quarrying is not done on Forest Lands and the material is not exported to not export to the outside area.	We agree with the condition.		
	4. There shall be no felling of trees whether on Forest, Government, Revenue or Private lands except as per prevailing Rules.	Noted		
	5. Extraction of Groundwater for the residential complex shall require prior permission of the State Ground Water Authority or other relevant authorities, as applicable	Not applicable		
	6. Near the activities that are related to water (like activity of water parks, water sports) and/or in the vicinity of Lake Dissolved Oxygen shall not be less than 5 mg/litter.	Noted		
	7. In order to ensure that the water from this residential complex do not enter into outside environment, the nallas crossing the township/complex premises, shall be lined, covered and made water tight by the applicant within the premises with intermittent inspection f chambers following good engineering practices as per the regulations of local body. This management shall be such as also to help in excluding the external pollutants degrading the internal environment of residential complex.	We agree with the condition.		

Sr.	Condition	Compliance	Annex	Photo
	8. The Applicant shall prepare management plan for water harvesting, roof-water reclamation,	We have provided rain water harvesting tanks to collecting the roof top rain water.		
	9. The applicant shall draw plans for the segregation of solid wastes into biodegradable and non-biodegradable components. The biodegradable material shall be recycled through scientific in-house composting with the approval of local body and the inorganic material shall be disposed of at approved Municipal Solid Waste landfill site of local body environmentally acceptable location and method. It is clarified that the term solid waste includes domestic, commercial, and garden wastes, but does not include hazardous and bio-medical wastes. The activities of bio-composting and engineered land fill shall be as per the Municipal Solid Waste (M&H) Rules, 2000	The biodegradable waste generated on site is composted at site only using OWC Composting Technology and is used as organic manure for landscaping.  The non-biodegradable waste generated is segregated and be disposed of to recyclers.		
	10. Applicant shall be responsible to take adequate precautionary measures as detailed in this consent.	We agree with the condition.		
	11. The applicant/generator shall be responsible for safe and scientific collection, transportation, treatment and disposal of Bio-medical waste as per the provisions made under the Bio-Medical Waste (Management & Handling) Rules, 1998. Any activity as denied under BMW (M&H) Rules has to obtain a separate Authorization from Maharashtra Pollution Control Board.	Noted		
	12. The applicant, during the construction stage shall provide a) Septic tank and soak pit of adequate capacity for the domestic effluent generated due to workers residing at site b) Proper loading and unloading of construction material, excavated material and its proper disposal as per MSW (M&H) Rules 2000. Cutting of trees is not permitted, however in unavoidable conditions necessary permission from the local body shall be obtained. c) Green belt of 33% of the open space shall be developed excluding lawns.	We agree with the condition.		

Sr.	Condition	Compliance	Annex	Photo																										
4	<p>The application shall comply with all the provisions of the water (prevention and Control of pollution) Cess Act 1977 (to be referred as Cess Act) and Rules as Amended, 2003 and Rules there under:- The daily water consumption for the following category shall not exceed, as under</p> <table border="1"> <thead> <tr> <th>i</th> <th>Domestic</th> <th>From ULB (In CMD)</th> <th>From other sources (In CMD)</th> </tr> </thead> <tbody> <tr> <td>a)</td> <td>During construction stage</td> <td>----</td> <td>1,000</td> </tr> <tr> <td>b)</td> <td>After completion</td> <td>5,893</td> <td>-----</td> </tr> <tr> <td>c)</td> <td>For Fire Fighting (make up water)</td> <td>-----</td> <td>-----</td> </tr> </tbody> </table> <p>The applicant shall regularly submit to the Board, the returns of water consumption in the prescribed form and pay the CESS as specified under section 3 of the said Act.</p>	i	Domestic	From ULB (In CMD)	From other sources (In CMD)	a)	During construction stage	----	1,000	b)	After completion	5,893	-----	c)	For Fire Fighting (make up water)	-----	-----	<p>During operational phase, total water requirement for the proposed project is about 2,812 KLD.</p>												
i	Domestic	From ULB (In CMD)	From other sources (In CMD)																											
a)	During construction stage	----	1,000																											
b)	After completion	5,893	-----																											
c)	For Fire Fighting (make up water)	-----	-----																											
5	<p><b>CONDITIONS UNDER AIR ACT:-</b></p> <p>The Applicant may install number of diesel generating sets (DG Sets). Of capacity 5995 kVA and shall be equipped with comprehensive control system as is warranted with reference to generations of emissions and operate maintain the same continuously so as to achieve the level of pollutants to the following standards:</p> <p><b>(i) Standards for emissions of air Pollutants</b></p> <table border="1"> <tbody> <tr> <td>i)</td> <td>SPM/TPM</td> <td>Not to Exceed</td> <td>150</td> <td>mg/Nm<sup>3</sup></td> </tr> <tr> <td>ii)</td> <td>SO<sub>2</sub></td> <td>Not to Exceed</td> <td>50</td> <td>WEM</td> </tr> <tr> <td>iii)</td> <td>NO<sub>x</sub></td> <td>Not to Exceed</td> <td>60</td> <td>WEM</td> </tr> <tr> <td>iv)</td> <td>SO<sub>2</sub> (D.G Set)</td> <td>Not to Exceed</td> <td>48</td> <td>kg/8hrs</td> </tr> </tbody> </table> <p><b>(ii) The Applicant shall observe the following fuel patterns</b></p> <table border="1"> <thead> <tr> <th>No.</th> <th>Type of Fuel</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>----</td> <td>-----</td> </tr> </tbody> </table>	i)	SPM/TPM	Not to Exceed	150	mg/Nm <sup>3</sup>	ii)	SO <sub>2</sub>	Not to Exceed	50	WEM	iii)	NO <sub>x</sub>	Not to Exceed	60	WEM	iv)	SO <sub>2</sub> (D.G Set)	Not to Exceed	48	kg/8hrs	No.	Type of Fuel	Quantity	1.	----	-----	<p>We has installed the DG set at site of capacity 5,995 kVA.</p> <p>DG set will be provided as alternate supply for essential services such as STP, fire fighting &amp; Lift etc. (During Emergency)</p> <p>We agree with the condition.</p> <p>As per requirement.</p>		
i)	SPM/TPM	Not to Exceed	150	mg/Nm <sup>3</sup>																										
ii)	SO <sub>2</sub>	Not to Exceed	50	WEM																										
iii)	NO <sub>x</sub>	Not to Exceed	60	WEM																										
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No.	Type of Fuel	Quantity																												
1.	----	-----																												

Sr.	Condition	Compliance	Annex	Photo						
	<p><b>(iii) The Applicant shall erect the Chimney (s) of the following specifications</b></p> <table border="1" data-bbox="371 360 992 443"> <thead> <tr> <th data-bbox="371 360 488 398">No.</th> <th data-bbox="488 360 735 398">Chimney attached to</th> <th data-bbox="735 360 992 398">Height above roof level</th> </tr> </thead> <tbody> <tr> <td data-bbox="371 398 488 443">1.</td> <td data-bbox="488 398 735 443">-----</td> <td data-bbox="735 398 992 443">-----</td> </tr> </tbody> </table> <p>a) The Applicant shall provide ports in the chimney and facilities such as ladder, platform etc for monitoring. The air emissions and the same shall be open for inspection to/and for use of the Board's staff. The Chimneys shall be numbered as S-1, S-2 etc and these shall be painted /displayed to facilitate identification.</p> <p>b) Water spraying shall be done on ground to avoid fugitive emissions.</p> <p>c) Construction material shall be carried in enclosed vehicle during construction activities.</p>	No.	Chimney attached to	Height above roof level	1.	-----	-----	<p>This is Residential project exhaust attached to DG Set.</p>		
No.	Chimney attached to	Height above roof level								
1.	-----	-----								
	<p><b>(iv) Conditions for DG Sets:-</b></p> <p>1. Noise from DG Sets shall be controlled by providing acoustic enclose or by treating the room acoustically.</p>	<p>We has provided DG set of enclosed type.</p>								
	<p>2. Applicant should provide acoustic enclose for control of noise. The acoustic enclosure/ acoustic treatment Of the room shall be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise Standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss shall be done at different point at 0.5 meters from acoustic Enclosure/ room and then average.</p>	<p>We has provided DG set of acoustic enclosure. And noise level generated is within the prescribed limits.</p>								
	<p>3. The applicant should make efforts to bring down noise level due on to DG set, outside the premises, with ambient noise level requirements by proper setting and control measures.</p>	<p>The day and night ambient noise levels within project area are monitored through MoEF approved lab. Monitoring reports for December 2016 to May, 2017 are provided.</p>								
	<p>4. Installation of DG Set must be strictly in compliance with recommendations of DG set manufacturer.</p>	<p>We agree with the condition.</p>								

Sr.	Condition	Compliance	Annex	Photo
	5. A proper routine and preventive maintenance procedure for DG set shall be set and followed in consultation with the DG manufacturers. This would help to prevent noise levels of DG Sets from deteriorating with use.	We agree with the condition.		
	6. The DG Set shall be operated only in case of power failure. The applicant shall make arrangement for regular electrical power.	We will operate the DG set only in case of power failure. (During emergency)		
	7. The Applicant shall not cause any nuisance in the surrounding area due to operation of DG sets.	We will comply with the condition.		
	8. In case of problems, the D.G. set shall not be operated until it is set back to satisfactory position.	We agree with the condition.		
	<b>(v) Conditions for Utilities like Kitchen, Eating Places etc. –</b> 1. The Kitchen shall be provided with exhaust system chimney with oil catcher connected to chimney with oil catcher connected to chimney through ducting 2. The toilet shall be provided with exhaust system connected to chimney through ducting. 3. The air conditioner shall be vibration proof and the noise shall not exceed 68 db (A). 4. The exhaust hot air from A.C shall be attached to chimney at least 5 mtrs. Higher than the nearest tallest building through ducting and shall discharge into open air in such way that no nuisance is caused to neighbors.	We agree with the condition.		
	(i) The Applicant shall take adequate measures for control of noise levels from its own sources within the complex (residential cum Commercial) in respect of noise to less than 55 dB(A) during day time and 45 dB(A) during the night time. Day time is reckoned as between 6 a.m. to 10 p.m. and night time is reckoned between 10 p.m. to 6 a.m.	We have provided DG set of acoustic enclosure. We will ensure that the noise level generated is within the prescribed limits.		
	(ii) Construction equipment's generating noise of less than 65/90 db (A) are permitted.	We agree with the condition.		
	(iii) No construction work is permitted during night time.	We agree with the condition.		
6	<b>CONDITIONS UNDER HW (M &amp; H) &amp; AMENDMENT RULES 2003</b>			

Sr.	Condition	Compliance	Annex	Photo
	The Applicant shall not generate or handle any hazardous waste.	Noted		
7.	The proposed activity comes under Entry 31 (New Construction Project) listed in schedule I of the EIA Notification dated January 27, 1994 (as amended till date) issued by Ministry of Environment & Forest, Govt. of India, New Delhi and therefore, Environment Clearance from Govt. Of India (MoEF) shall be required as per conditions in the amended EIA Notification dated July 07, 2004.	Noted		
8.	The applicant shall certify that the bricks used in construction are manufactured using the ash from Thermal Power stations if it is within a radius of 100 km. From Thermal power Plant and submit the names of bricks manufacturer.	Noted there is no thermal power stations within radius of 100 km.		
9.	This "consent to Establish" is issued subject to the planning permission and permission for non-agriculture (N.A) use for the Competent Authority.	We has obtained CTE is obtained. The CTE copy is provided.	✓	
10.	The applicant shall obtain Environmental Clearance from MoEF, GOI before taking any steps to develop/ start construction the site.	Environment Clearance is obtained. And copy enclose	✓	
11.	The applicant shall not-Handover the residential complex unless obtain Consent to Operate/NOC from Maharashtra Pollution Control Board and compliance of Environment clearance granted by MoEF Government of India.	We agrees with the condition.		
12.	The applicant shall take the proper remediation measures to ensure that the ground water and soil contamination is prevented and follow due diligence at the construction stage.	We agree with the condition.		
13.	This board reserves the right amend or any conditions in this consent and the same shall be binding on the Applicant.	We agree with the condition.		
14.	This consent is issued with the post fact to approval of the consent appraisal committee.	Noted		

To,

**M/s. Kapstone Constructions Pvt. Ltd.,**

**"Rustomjee 100 Acres" at S. Nos. 12/1-4, 13/1-3,15/1-5, 16/1(p) 2(p), 3-6, 17/3, 4(p), 5,6(p), 18/3(p), 4(p),6(p), 19/1(p)-5(p), 20/1-4, 35/1-8, 36/1-7, 37/1-4, 4(p), 6,7(p), 9(p), 38/1(p), 2,41/1-9, 42/1-7, 43/1-12, 44/16, 45/1,2(p), 3,4, (p), 5(p), 7(p), 8(p), 9, 10, 46/1(p)2, 3(p), 4(p), 6(p), 7(p), 8,47/1(p), 3(p), 4-8, 48/1-8, 49/1-3, 50/1-3, 51/1-9, 54/1-4, 55/1-5, 84(p), 89(p), 327A-2/1-9, 329/1-4, 5(p), 6(p), 345/1-17, 383, 423-A/1-8, 423C, 424-A/1-4, 424C, 22(p), at Majiwade, Thane.**

Copy forwarded with compliments to:  
The Collector, Thane  
Received Consent fee of

Sr. No.	Amount (Rs.)	DD No.	Date	Drawn On
1	10,08,000/-	050295	24.06.2006	Punjab National Bank

**Copy to:**

1. Regional Office, MPCB, Thane
2. Sub Regional Officer, MPCB, Thane-I
3. Chief Accounts Officer, MPCB, Mumbai.
4. Cess Branch, MPCB, Mumbai
5. Master File.
6. EIC, M.P.C. Board, Mumbai

## Annexure I Previous Compliance Report Acknowledgement copy

*Kapstone Constructions Pvt. Ltd.*

Registered & Corp. Office : 702, NATRAJ, M. V. Road Junction, Western Express Highway,  
Andheri (East), Mumbai - 400 069. Tel.: +91 - 22 - 6676 6988, Fax: +91 - 22 - 6676 6999.  
E-mail: comehome@rustomjee.com, Web : www.rustomjee.com, CIN : U45200MH2003PTC140091

---

20<sup>th</sup> December 2016

To,  
✓ **The Director**  
**Regional Office (West Central Zone),**  
**Ministry of Environment, Forest and Climate Change,**  
Ground Floor, East wing,  
New Secretariat Building,  
Civil lane, Nagpur-440001

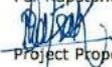
**Subject: Half-yearly Environmental and CRZ Compliance Report:  
June to November 2016**

**Project: Rustomjee 100 acres**

**EC No. SEAC-2013/CR-344/TC-1 dated 25th March, 2014  
F.No. 11-74/2009-IA.III dated 18th May, 2012**

Dear Sir,

We are submitting half-yearly Compliance Report (hard & soft copy) in respect of the stipulated terms and conditions of 'Prior Environmental Clearance' as specified in 'Environment Clearance' Notification Clause No. 10(ii).

Thanking you,  
Yours faithfully,  
For Kapstone Construction Pvt. Ltd.,  
  
Project Proponent

**Enclosure:** 1. A hard copy of the compliance and monitoring report  
2. A CD containing the same report

**CC copy to:** 1. Regional officer, Maharashtra Pollution Control Board,  
Pune Thane (SRD-I)  
2. Member Secretary, Maharashtra Pollution Control  
Board, Sion, Mumbai  
3. Member Secretary, State Environmental Impact  
Assessment Authority, Govt. of Maharashtra, Mumbai

  
28-12-16

पर्यावरण, वन एवं जलवायु परिवर्तन विभाग  
Ministry of Environment, Forest & Climate Change  
पश्चिम मध्य क्षेत्र (वेस्ट सेंट्रल जोन)  
Region Office (Western Central Zone)  
पू-तल, पूर्व खण्ड / Ground Floor, East Wing  
नया सचिवालय भवन / New Secretariat Building  
सिविल लाईन्स / Civil Lines  
नागपुर / Nagpur-440 001

ole

*Kapstone Constructions Pvt. Ltd.*

Registered & Corp. Office : 702, NATRAJ, M. V. Road Junction, Western Express Highway,  
Andheri (East), Mumbai - 400 069. Tel.: +91 - 22 - 6676 6888, Fax: +91 - 22 - 6676 6999.  
E-mail: comehome@rustomjee.com, Web : www.rustomjee.com, CIN : U45200MH2003PTC140091

20<sup>th</sup> December 2016

To,  
**The Director**  
**Regional Office (West Central Zone),**  
**Ministry of Environment, Forest and Climate Change,**  
Ground Floor, East wing,  
New Secretariat Building,  
Civil lane, Nagpur-440001

*Res*  
*26/12/16*  
आवक लिपिक  
पर्यावरण विभाग  
मंत्रालय, पुणे-४२.

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*[Signature]*  
Project Proponent

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Thane (SROI)  
✓ 2. Member Secretary, Maharashtra Pollution Control  
Board, Sion, Mumbai  
3. Member Secretary, State Environmental Impact  
Assessment Authority, Govt. of Maharashtra, Mumbai

*23/12/2016*  
Regional Office  
**M.P.C Board**  
Office Complex Bldg., 5th Floor  
Near Mulund Check Naka,  
Sion, Thane-400 36

*26/12/16*  
**Maharashtra Pollution Control Board**  
Kajalanga Point, 2/3-4th Floor,  
Sion, Matunga Scheme, Road No. 8,  
Opp. Sion Circle, Sion (East),  
MUMBAI - 400 022.  
Phone : 24010437 / 24020784

o/c

**Annexure II**  
**Site Photograph**  
**Building Entrance**



**Construction site front view**



**Construction site front view**



**Construction work in process**



**Construction Site**



**Construction Site**



**Project surrounding area**



**DG set**



**Construction site top view**



**Construction site with background**



**Construction site**



**Construction site**



### Fire Pump Room



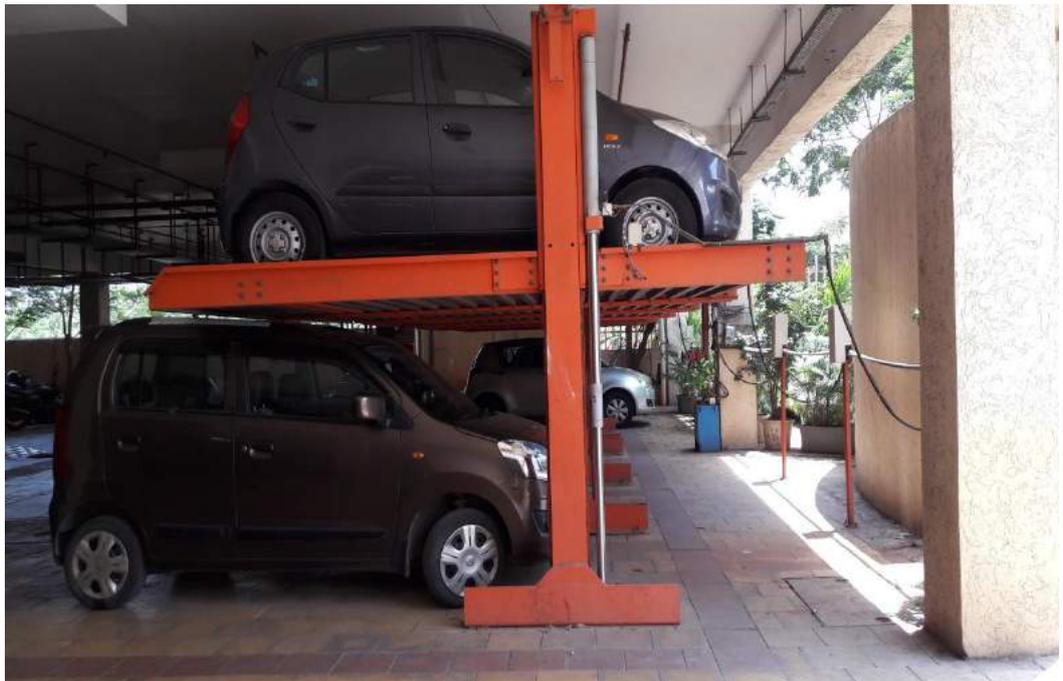
### fly ash brick



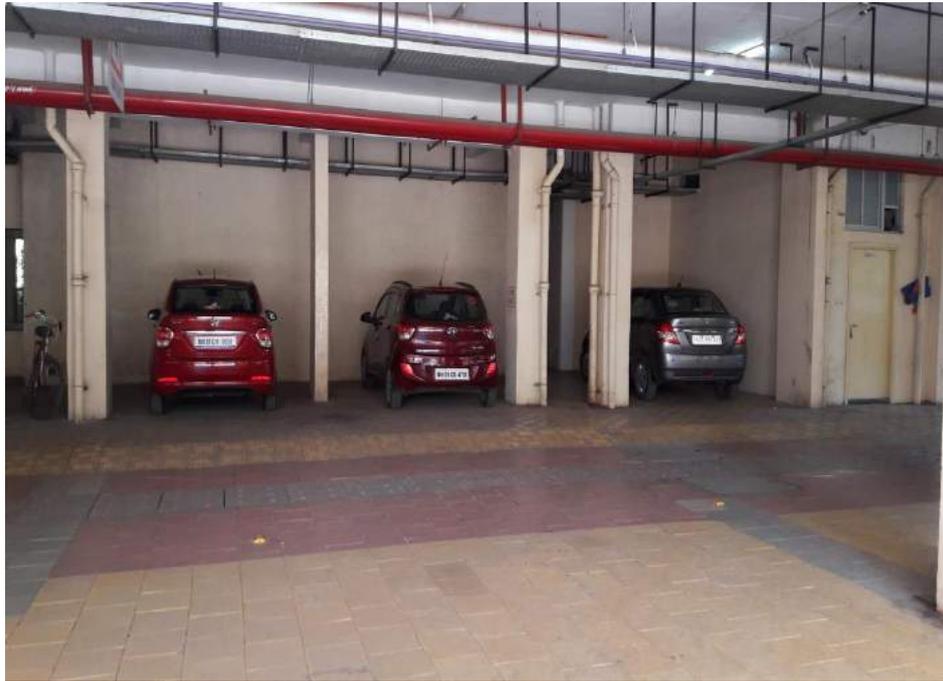
**PARKING AREA**



**Parking area**



### Parking area



### Safety Board



### Safety park Board



### Sprinkler header



**Solar panel**



**Annexure III**  
**CRZ Clearance copy**  
(As per Consent condition: 3(1))

F. No. 11-74/2009-IA.III  
Government of India  
Ministry of Environment & Forests  
(IA-III Division)

Paryavaran Bhawan,  
CGO Complex, Lodhi Road,  
New Delhi - 110 003.

Dated: 18<sup>th</sup> May, 2012

To  
M/s Kapstone Consultants Pvt. Ltd.,  
702, Natraj, M.V. Road Junction,  
Western Express Highway, Andheri (East)  
Mumbai - 400 069



Subject: Environmental and CRZ Clearance for the construction of Residential and Commercial Complex - Rustomjee 100 Acres - at village Majiwadi Thane Municipal Corporation District Thane, Maharashtra by M/s. Kapstone Construction Pvt. Ltd. - Reg.

\*\*\*

This has reference to your letter dated 13.07.2009, 13.08.2009, 12.01.2010, 17.02.2010, 18.02.2010, 14.04.2010, 17.06.2010, 01.07.2010, 15.9.2011, 13.01.2012 and 18.04.2012 seeking Environmental Clearance under the Environment Impact Assessment Notification, 2006 and Coastal Regulation Zone (CRZ) Notification, 1991/2011. The proposal has been appraised as per prescribed procedure in the light of provisions under the Environment Impact Assessment Notification, 2006 and Coastal Regulation Zone Notification, 1991/2011 on the basis of the mandatory documents enclosed with the application viz., the Questionnaire, EIA, EMP, and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee constituted by the competent authority in its meetings held on 27<sup>th</sup> - 28<sup>th</sup> August 2009, 27<sup>th</sup> - 28<sup>th</sup> January 2010, 25<sup>th</sup> - 26<sup>th</sup> March 2010 and 28<sup>th</sup> - 29<sup>th</sup> June 2010.

2. It is interalia, noted that the proposal involves construction of Residential and Commercial Complex -Rustomjee 100 Acres on a plot area of 2,01,436.62 Sq.m. at village Majiwadi, Thane Municipal Corporation, District Thane. 1,45,834 sq.m is affected by the CRZ and 55,602.43 sq.m is outside CRZ. The total built up area of the project including the CRZ area is 1, 63,446 sq.m. There will be 2 commercial buildings (1, 02,677 m<sup>2</sup>) of 10 and 17 storey, 4 residential buildings with built up area of 50,896.35 sq.m one school building with built up area of 9490 m<sup>2</sup>. The total cost of the project proposed is Rs. 310.00 Crores. The Thane Municipal Corporation has assured the water supply for the project. The water requirement for the proposed project is about 1,089 KLD (fresh water requirement will be 217 KLD). The capacity of 6 STPs proposed is 1000 KLD. The Flushing and the Gardening requirement of water are met by the water recycled from the STP. 242.7 m<sup>3</sup>/day of rain water will be harvested from the roof top area of 11,503.58 Sq.mt. Provisions of 7 rain water harvesting tanks of various capacities are made to collect the roof top rain water. Solid waste generation will be about 5,970 kg/day of which 3,585 kg/day is biodegradable. MSEDCL Ltd. has assured the project with electricity supply. 2500 KVA DG set backup is proposed for the project. A provision of 440 Nos. of Solar Heating Panels is made to provide hot water to the residential population and for Food court in commercial buildings. Solar lights will be provided for street lighting and garden lighting.



3. As per CZMP of Maharashtra and as well as CRZ map prepared by CESS, under CRZ Notification 1991/2011, the site under reference falls in CRZ-1(i) and CRZ II. The proposed development is falling in CRZ II. The MCZMA has recommended the project to MoEF for CRZ clearance vide letter No. MCZMA 2009/CR.103/TC, dated 3<sup>rd</sup> July, 2009. The environmental clearance for the Phase I area has been issued by SEIAA of Maharashtra on 6.7.2009.

4. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, site visit report of the sub-committee, have recommended for the grant of Environmental and CRZ Clearance for the project. Accordingly, the Ministry hereby accords necessary Environment Clearance and CRZ Clearance for the above project as per the provisions of Environment Impact Assessment Notification, 2006 and its subsequent amendments and CRZ Notification, 1991/2011, subject to strict compliance of the terms and conditions as follows:

5. **SPECIFIC CONDITIONS :**

- (i) "Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.
- (ii) As per the undertaking submitted on 13.01.2012, the area up to 10 mts from the HTL along Mangrove area, 10 mts over and above the 50 meters buffer zone shall be excluded from the development.
- (iii) Construction shall be carried out strictly as per the provisions of CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification 2011 shall be carried out in Coastal Regulation Zone area
- (iv) All height and coverage of the construction work shall confirm the provisions of the CRZ Notification, 2011.
- (v) There shall be no disposal of solid and liquid wastes in to the Coastal areas.
- (vi) Sewage Treatment facility should be provided in accordance with the CRZ Notification. Treated sewage shall be reused for flushing of toilets and horticulture purposes.
- (vii) The solid waste shall be properly collected, segregated and disposed as per the provision of Solid Waste (Management and Handling) Rules, 2000.
- (viii) Standby arrangements shall be made for power for the operation of STP during the electricity failure. Installation and operation of DG set if any shall comply with the guidelines of CPCB.
- (ix) 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.

- (x) A First Aid Room will be provided in the project both during construction and operation of the project.
- (xi) All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
- (xii) Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- (xiii) Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
- (xiv) Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.
- (xv) Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the Maharashtra State Pollution Control Board.
- (xvi) The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.
- (xvii) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosive shall be taken.
- (xviii) Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
- (xix) Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/ MSPCB.
- (xx) Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27<sup>th</sup> August, 2003.

A handwritten signature in blue ink, located at the bottom right of the page.



- (xxi) Ready mixed concrete must be used in building construction.
- (xxii) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xxiii) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xxiv) Permission to draw ground water shall be obtained from the competent Authority prior to construction/ operation of the project.
- (xxv) Separation of gray and black water should be done by the use of dual plumbing line for separation of gray and black water.
- (xxvi) Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
- (xxvii) Use of glass may be reduced by up to 40% to reduce the electricity consumption and load on air-conditioning. If necessary, use high quality double glass with special reflective e coating in windows.
- (xxviii) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.
- (xxix) Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air conditioned spaces by use of appropriate thermal insulation material to fulfill requirement.
- (xxx) The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc, as per National Building Code including protection measures from lightning etc.
- (xxxix) Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.
- (xxxixii) Under the provisions of Environment (Protection) Act, 1986 legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.

## II. Operation Phase

- i) The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Treated effluent emanating from STP shall be recycled/ reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Discharge of unused treated effluent shall conform to the norms and standards

NOTA

of the Maharashtra State Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.

- ii) The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/ inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.
- iii) Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra State Pollution Control Board.
- iv) Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- v) The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.
- vi) Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchments area during the monsoon period.
- vii) Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease.
- viii) The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.
- ix) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.
- x) A report on the energy conservation measures confirming to energy conservation norms finalize by Bureau of Energy Efficiency should be prepared incorporating detgails about building materials and technology, R & U Factors etc and submit to the Ministry in three months time.
- xi) Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.



- xii) Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.
- xiii) The building should have adequate distance between them to Allow movement of fresh air and passage of natural light, air and ventilation.
- xiv) The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- xv) The project proponent shall take up mangrove plantation/green belt in the project area, wherever possible. Adequate budget shall be provided in the Environment Management Plan for such mangrove development.
- xvi) The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.
- xvii) Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevent regulations.
- xviii) Efforts may be made to use solar energy to the maximum extent possible.

6. **GENERAL CONDITIONS :**

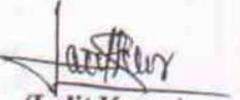
- (i) Adequate provision for infrastructure facilities including water supply fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.
- (ii) Full support shall be extended to the officers of this Ministry/Regional Office at Bhopal by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.
- (ii) Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.
- (iii) The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.
- (iv) In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.
- (v) The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.



- (vi) A copy of the clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.
- (vii) Maharashtra Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tehsildar's office for 30 days.
7. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.
8. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
9. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Maharashtra Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bhopal.
10. Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.
11. Any appeal against this Clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.
12. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.
13. 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.
14. 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 respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.

15. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

  
(Lalit Kapur)  
Director (IA-III)

Copy to:

1. The Secretary, Department of Environment, Govt. of Maharashtra, Mantralaya, Mumbai - 400 032.
2. The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32.
3. The Chairman, Maharashtra Coastal Zone Management Authority, Room No.217 (Annexe), Mantralaya, Mumbai - 400 032.
4. The Chairman, Maharashtra Pollution Control Board.
5. The Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No. 3, Ravishankar Nagar, Bhopal - 462016 (M.P.)
6. Guard File.
7. Monitoring Cell.

(Lalit Kapur)  
Director (IA-III)



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R. S. PANDEY  
ADVOCATE & NOTARY  
THANE-MAHARASHTRA  
24 MAY 2012

**Annexure IV**  
**Monitoring Report**  
(As per EC condition: xxi)



# Mahabal Enviro Engineers Pvt. Ltd.

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## Stack Emission Monitoring Report

<b>Report No.:</b> ME-TH2802-161219-SA-RA-THANE		<b>Date:</b> 19.12.2016	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Verbal Discussion
<b>Sample Description/Type</b>	Stack Emission Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. D G Set 650 kVA 2. D G Set 320 kVA 3. D G Set 625 kVA	<b>Sample Quantity/Packing</b>	Thimble: 1 X 3 No. SO <sub>2</sub> : 30 mL X 3 No. PVC Bottle NO <sub>x</sub> : 25 mL X 3 No. PVC Bottle
<b>Date of Sampling</b>	12.12.2016	<b>Date of Receipt of Sample</b>	16.12.2016
<b>Sampling Procedure</b>	As per Method Reference		
<b>Date of Start of Analysis</b>	16.12.2016	<b>Date of Completion of Analysis</b>	19.12.2016

<b>Stack Details</b>		<b>Stack 1</b>	<b>Stack 2</b>	<b>Stack 3</b>	
Stack Identity		1	2	3	-
Stack attached to		D.G.Set	D.G.Set	D.G.Set	-
Capacity		650 kVA	320 kVA	625 kVA	
Material of construction		M.S.	M.S.	M.S.	-
Stack height above ground level		5	5	3	Meter
Stack diameter		0.2	0.2	0.2	Meter
Stack shape at top		Round	Round	Round	-
Type of fuel		H.S.D.	H.S.D.	H.S.D.	-
Consumption		95	51	100	L/h
<b>Parameter</b>	<b>Unit</b>	<b>Result</b>			<b>Method Reference</b>
Flue gas temperature	°C	206	198	202	IS:11255 (Part 3):2008
Flue gas velocity	m/s	17.14	16.25	16.92	IS:11255 (Part 3):2008
Total gas quantity	Nm <sup>3</sup> /h	1205	1162	1200	IS:11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm <sup>3</sup>	33	31	36	IS 11255 (Part 1): 1985, RA 2003 (Gravimetric Method)
Sulphur Dioxide (SO <sub>2</sub> )	kg/day	3.66	2.06	4.20	CPCB, Emission Regulations, Part 3(Titrimetric IPA Thorine)
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	43	39	44	IS 11255 (Part 7): 2005 (PDSA Colorimetric Method )
<b>Remark:</b>					

-----END-----

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi

**TECHNICAL MANAGER**



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## Ambient Air Quality Monitoring Report

<b>Report No.:</b> ME-TH2751-161219-SA-RA-THANE		<b>Date:</b> 19.12.2016	
<b>Name and address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference:</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Ambient Air Quality Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	Filter Paper (PM <sub>10</sub> ): 1 X 3 No. Filter Paper (PM <sub>2.5</sub> ): 1 X 1 No. SO <sub>2</sub> : 30 mL X 6 No. PVC Bottle NO <sub>2</sub> : 30 mL X 6 No. PVC Bottle
<b>Date of Sampling</b>	12.12.2016	<b>Date of Receipt of Sample</b>	16.12.2016
<b>Sampling Procedure</b>	As per Method reference		
<b>Date of Start of Analysis</b>	16.12.2016	<b>Date of Completion of Analysis</b>	19.12.2016

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
3.1 km/h	NW	70	46	32	24
<b>Location</b>	Project Site 2		<b>Duration of Survey</b>		24 hours
Parameter	Unit	Result	*NAAQM Standard	Method Reference	
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	5.6	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6	
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	9.4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10	
Particulate Matter (size less than 10µm) or PM <sub>10</sub>	µg/m <sup>3</sup>	60	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14	
Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub>	µg/m <sup>3</sup>	29	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30	
<b>Remarks:</b> TWA - Time Weighted Average, *- NAAQS specified as: 24 h. TWA in case of SO <sub>2</sub> , NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>					

-END-

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Hajish Mendhi

**TECHNICAL MANAGER**



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## Noise Level Monitoring Report

<b>Report No. :</b> ME-TH2752-161219-SA-RA-THANE		<b>Date:</b> 19.12.2016
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane	<b>Order Reference:</b>
		Telephonic Discussion
<b>Date of Sampling</b>	12.12.2016	
<b>Sampling Procedure</b>	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	<b>A. Project Site 2</b>			
	Day	10:00	46	42
	Night	22:00	44	40
<b>Noise Level Standard</b>				
Area Code	Area Type	Limit in dB(A) weighted scale		
		Day	Night	
C	Residential	55	45	

-----END-----

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## Water Sample Analysis Report

Report No.: ME-TH2753-161219-SA-RA-THANE		Date: 19.12.2016	
Name and Address of Customer	RUSTOMJEE 100 ACRES At Majiwade, Thane		Order Reference:
			Telephonic Discussion
Sample Description/Type	Drinking Water	Sample Collected by	Laboratory
Sampling Location	Project Site 2	Sample Quantity/Packing	2 L X 2 No. PVC Can 500mL X 1 No. Sterile Glass Bottle
Date of Sampling	12.12.2016	Date of Receipt of Sample	16.12.2016
Sampling Procedure	IS 1622:1981, RA 2009 & IS 3025 (Part-1):1987, RA 1998 & APHA 22 <sup>nd</sup> Ed. 2012, 1060 B,1-39,9060 B,9-35		
Date of Start of Analysis	16.12.2016	Date of Completion of Analysis	19.12.2016

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Turbidity	NTU	0.1	APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13
4	pH	-	7.4	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
5	Total Dissolved Solids	mg/L	84	IS 3025 (Part 16):1984 Reaffirmed 2006
6	Alkalinity Total (as CaCO <sub>3</sub> )	mg/L	44	IS 3025 (Part 23):1986 Reaffirmed 2009
7	Total Hardness (as CaCO <sub>3</sub> )	mg/L	56	APHA 22 <sup>nd</sup> Ed. 2012, 2340-C, 2-44,45
8	Calcium (as Ca)	mg/L	12	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Ca-B, 3-67
9	Magnesium (as Mg)	mg/L	6.32	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Mg- B, 3-84
10	Free Chlorine (Residual)	mg/L	0.20	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl G, 4-69
11	Chloride	mg/L	11.5	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate	mg/L	17.6	APHA 22 <sup>nd</sup> Ed. 2012, 4500- SO <sub>4</sub> -E, 4-190
13	Nitrite	mg/L	2.88	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
14	Fluoride	mg/L	0.23	APHA 22 <sup>nd</sup> Ed. 2012, 4500-F- B & D, 4-84, 4-87
15	Iron	mg/L	<0.08	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
<b>Microbiological Analysis</b>				
16	Total Coliforms	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-D, 9-73
17	E. coli	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-G, 9-76
Remarks:				

-END-

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## Effluent Sample Analysis Report

<b>Report No.:</b> ME-TH2803-161219-SA-RA-THANE		<b>Date:</b> 19.12.2016	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Sewage Effluent	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. STP Inlet 2. STP Outlet	<b>Sample Quantity/Packing</b>	2 L X 2 No. PVC Can 100 mL X 2 No. PVC Can 1 L X 2 No. Glass Bottle 500 mL X 2 No. PVC Can
<b>Date of Sampling</b>	12.12.2016	<b>Date of Receipt of Sample</b>	16.12.2016
<b>Sampling Procedure</b>	IS: 3025(Part I):1987 RA 2003; APHA 22 <sup>nd</sup> Ed. 2012, 1060-B, 1-39		
<b>Date of Start of Analysis</b>	16.12.2016	<b>Date of Completion of Analysis</b>	19.12.2016

Sr. No.	Parameter	Unit	Result		Method Reference
			1	2	
1	pH	mg/L	7.1	7.4	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
2	Dissolved Oxygen	mg/L	<0.5	4.9	APHA 22 <sup>nd</sup> Ed. 2012, 4500-O, B & C, 4-136, 4-139
3	Biochemical Oxygen Demand (3 days, 27°C)	mg/L	64	16	IS 3025 (Part 44): 1993, Reaffirmed 2003, Amds. 1
4	Chemical Oxygen Demand	mg/L	196	52	APHA 22 <sup>nd</sup> Ed. 2012, 5220-B, 5-17
5	Oil & Grease	mg/L	1.2	<1	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
6	Iron (as Fe)	mg/L	1.02	0.56	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
7	Total Dissolved Solids	mg/L	632	268	IS 3025 (Part 16):1984 Reaffirmed 2006
8	Cadmium (as Cd)	mg/L	<0.05	<0.05	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
9	Nitrate-Nitrogen (as NO <sub>3</sub> -N)	mg/L	3.12	7.81	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
10	Dissolved Phosphate (as PO <sub>4</sub> )	mg/L	2.13	1.05	APHA 22 <sup>nd</sup> Ed. 2012, 4500-P B, 4-151, E, 4-155
11	Lead (as Pb)	mg/L	<0.1	<0.1	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18

Remarks:

-----END-----

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## Soil Sample Analysis Report

<b>Report No. :</b> ME-TH2754-161219-SA-RA-RAIGAD		<b>Date:</b> 19.12.2016	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b>		<b>Order Reference</b>
	At Majiwade, Thane		Telephonic Discussion
<b>Sample Description/Type</b>	Soil	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	1 kg X No. Polyethene bag
<b>Date of Sampling</b>	12.12.2016	<b>Date of Receipt of Sample</b>	16.12.2016
<b>Sampling Procedure</b>	Manual on Soil, Plant & Water Analysis		
<b>Date of Start of Analysis</b>	16.12.2016	<b>Date of Completion of Analysis</b>	19.12.2016

Sr. No.	Parameter	Unit	Result	Method Reference
1	pH	-	7.5	IS 2720 (Part 26) : 1987, RA 2002
2	Moisture Content	%	5.6	IS 2720 (Part II): 1973, RA 2002, Ed. 3.1
3	Water holding capacity	%	48.9	IBM Manual Page 264
4	Organic Carbon	%	0.52	WLII Sec. B7, Page No. 10
5	Total Kjeldahl Nitrogen	mg/kg	96.4	APHA 22 <sup>nd</sup> Ed. 2012
6	Available Potassium	mg/kg	350	FAO Sec. III .8-1, Page No. 115
7	Available Magnesium	meq/100qm	10.6	FAO Sec. III .8-1, Page No. 115
8	Available Calcium	meq/100qm	20.2	FAO Sec. III .8-1, Page No. 115
9	Cation Exchange Capacity	meq/100qm	36.8	FAO Sec. III .7-2, Page No. 104
10	Boron as B	mg/kg	4.2	FAO Sec. III,16-6, Page No. 200
11	Cadmium	mg/kg	<2	USEPA method No. 200, 200.2
12	Chromium	mg/kg	18.8	USEPA method No. 200, 200.2
13	Copper	mg/kg	39.6	USEPA method No. 200, 200.2
14	Lead	mg/kg	17.2	USEPA method No. 200, 200.2
15	Nickel	mg/kg	30.6	USEPA method No. 200, 200.2
16	Sodium	mg/kg	1020	USEPA method No. 200, 200.2
17	Zinc	mg/kg	92.4	USEPA method No. 200, 200.2
18	Sulphate	mg/kg	266	IS 2720 (Part XXVII):1977, RA 2001.
19	Chloride	mg/kg	144	USEPA / SW 846/ 9253
20	Available Phosphate	mg/kg	10.8	WLII Sec.B10 A, Page No.16
21	Mercury	mg/kg	0.84	USEPA /SW 846/7471 B

**Remarks:** N.D. – Not Detected

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## Stack Emission Monitoring Report

<b>Report No.:</b> ME-TH3182-170120-SA-RA-THANE		<b>Date:</b> 20.01.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Verbal Discussion
<b>Sample Description/Type</b>	Stack Emission Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. D G Set 650 kVA 2. D G Set 320 kVA 3. D G Set 625 kVA	<b>Sample Quantity/Packing</b>	Thimble: 1 X 3 No. SO <sub>2</sub> : 30 mL X 3 No. PVC Bottle NO <sub>x</sub> : 25 mL X 3 No. PVC Bottle
<b>Date of Sampling</b>	13.01.2017	<b>Date of Receipt of Sample</b>	17.01.2017
<b>Sampling Procedure</b>	As per Method Reference		
<b>Date of Start of Analysis</b>	17.01.2017	<b>Date of Completion of Analysis</b>	20.01.2017

<b>Stack Details</b>		<b>Stack 1</b>	<b>Stack 2</b>	<b>Stack 3</b>	
Stack Identity		1	2	3	-
Stack attached to		D.G.Set	D.G.Set	D.G.Set	-
Capacity		650 kVA	320 kVA	625 kVA	
Material of construction		M.S.	M.S.	M.S.	-
Stack height above ground level		5	5	3	Meter
Stack diameter		0.2	0.2	0.2	Meter
Stack shape at top		Round	Round	Round	-
Type of fuel		H.S.D.	H.S.D.	H.S.D.	-
Consumption		95	51	100	L/h
<b>Parameter</b>	<b>Unit</b>	<b>Result</b>			<b>Method Reference</b>
Flue gas temperature	°C	202	202	205	IS:11255 (Part 3):2008
Flue gas velocity	m/s	17.19	16.33	16.90	IS:11255 (Part 3):2008
Total gas quantity	Nm <sup>3</sup> /h	1219	1158	1191	IS:11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm <sup>3</sup>	35	34	31	IS 11255 (Part 1): 1985, RA 2003 (Gravimetric Method)
Sulphur Dioxide (SO <sub>2</sub> )	kg/day	3.72	1.98	3.90	CPCB, Emission Regulations, Part 3(Titrimetric IPA Thorine)
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	43	40	44	IS 11255 (Part 7): 2005 (PDSA Colorimetric Method )
<b>Remark:</b>					

-----END-----

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## Ambient Air Quality Monitoring Report

<b>Report No.:</b> ME-TH3138-160120-SA-RA-THANE		<b>Date:</b> 20.01.2017	
<b>Name and address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference:</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Ambient Air Quality Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	Filter Paper (PM <sub>10</sub> ): 1 X 3 No. Filter Paper (PM <sub>2.5</sub> ): 1 X 1 No. SO <sub>2</sub> : 30 mL X 6 No. PVC Bottle NO <sub>2</sub> : 30 mL X 6 No. PVC Bottle
<b>Date of Sampling</b>	13.01.2017	<b>Date of Receipt of Sample</b>	17.01.2017
<b>Sampling Procedure</b>	As per Method reference		
<b>Date of Start of Analysis</b>	17.01.2017	<b>Date of Completion of Analysis</b>	20.01.2017

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
2.2 km/h	NW	70	46	32	24
<b>Location</b>	Project Site 2		<b>Duration of Survey</b>		24 hours
Parameter	Unit	Result	*NAAQM Standard	Method Reference	
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	6.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6	
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	8.7	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10	
Particulate Matter (size less than 10µm) or PM <sub>10</sub>	µg/m <sup>3</sup>	63	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14	
Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub>	µg/m <sup>3</sup>	34	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30	
<b>Remarks:</b> TWA - Time Weighted Average, *- NAAQS specified as: 24 h. TWA in case of SO <sub>2</sub> , NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>					

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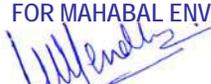
## Noise Level Monitoring Report

<b>Report No. :</b> ME-TH3139-170120-SA-RA-THANE		<b>Date:</b> 20.01.2017
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane	<b>Order Reference:</b>
		Telephonic Discussion
<b>Date of Sampling</b>	13.01.2017	
<b>Sampling Procedure</b>	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	<b>A. Project Site 2</b>			
	Day	10:00	47	43
	Night	22:00	42	41
<b>Noise Level Standard</b>				
Area Code	Area Type	Limit in dB(A) weighted scale		
		Day	Night	
C	Residential	55	45	

-----END-----

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## Water Sample Analysis Report

Report No.: ME-TH3140-170120-SA-RA-THANE		Date: 20.01.2017	
Name and Address of Customer	RUSTOMJEE 100 ACRES At Majiwade, Thane		Order Reference:
			Telephonic Discussion
Sample Description/Type	Drinking Water	Sample Collected by	Laboratory
Sampling Location	Project Site 2	Sample Quantity/Packing	2 L X 2 No. PVC Can 500mL X 1 No. Sterile Glass Bottle
Date of Sampling	13.01.2017	Date of Receipt of Sample	17.01.2017
Sampling Procedure	IS 1622:1981, RA 2009 & IS 3025 (Part-1):1987, RA 1998 & APHA 22 <sup>nd</sup> Ed. 2012, 1060 B,1-39,9060 B,9-35		
Date of Start of Analysis	17.01.2017	Date of Completion of Analysis	20.01.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Turbidity	NTU	0.3	APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13
4	pH	-	7.5	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
5	Total Dissolved Solids	mg/L	92	IS 3025 (Part 16):1984 Reaffirmed 2006
6	Alkalinity Total (as CaCO <sub>3</sub> )	mg/L	48	IS 3025 (Part 23):1986 Reaffirmed 2009
7	Total Hardness (as CaCO <sub>3</sub> )	mg/L	62	APHA 22 <sup>nd</sup> Ed. 2012, 2340-C, 2-44,45
8	Calcium (as Ca)	mg/L	13.6	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Ca-B, 3-67
9	Magnesium (as Mg)	mg/L	6.8	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Mg- B, 3-84
10	Free Chlorine (Residual)	mg/L	0.18	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl G, 4-69
11	Chloride	mg/L	12.5	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate	mg/L	18.8	APHA 22 <sup>nd</sup> Ed. 2012, 4500- SO <sub>4</sub> -E, 4-190
13	Nitrite	mg/L	2.76	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
14	Fluoride	mg/L	0.27	APHA 22 <sup>nd</sup> Ed. 2012, 4500-F- B & D, 4-84, 4-87
15	Iron	mg/L	<0.08	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
<b>Microbiological Analysis</b>				
16	Total Coliforms	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-D, 9-73
17	E. coli	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-G, 9-76
Remarks:				

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## Effluent Sample Analysis Report

<b>Report No.:</b> ME-TH3183-170120-SA-RA-THANE		<b>Date:</b> 20.01.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Sewage Effluent	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. STP Inlet 2. STP Outlet	<b>Sample Quantity/Packing</b>	2 L X 2 No. PVC Can 100 mL X 2 No. PVC Can 1 L X 2 No. Glass Bottle 500 mL X 2 No. PVC Can
<b>Date of Sampling</b>	13.01.2017	<b>Date of Receipt of Sample</b>	17.01.2017
<b>Sampling Procedure</b>	IS: 3025(Part I):1987 RA 2003; APHA 22 <sup>nd</sup> Ed. 2012, 1060-B, 1-39		
<b>Date of Start of Analysis</b>	17.01.2017	<b>Date of Completion of Analysis</b>	20.01.2017

Sr. No.	Parameter	Unit	Result		Method Reference
			1	2	
1	pH	mg/L	7.2	7.5	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
2	Dissolved Oxygen	mg/L	<0.5	4.7	APHA 22 <sup>nd</sup> Ed. 2012, 4500-O, B & C, 4-136, 4-139
3	Biochemical Oxygen Demand (3 days, 27°C)	mg/L	52	13	IS 3025 (Part 44): 1993, Reaffirmed 2003, Amds.1
4	Chemical Oxygen Demand	mg/L	172	44	APHA 22 <sup>nd</sup> Ed. 2012, 5220-B, 5-17
5	Oil & Grease	mg/L	<1	<1	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
6	Iron (as Fe)	mg/L	1.56	0.78	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
7	Total Dissolved Solids	mg/L	554	277	IS 3025 (Part 16):1984 Reaffirmed 2006
8	Cadmium (as Cd)	mg/L	<0.05	<0.05	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
9	Nitrate-Nitrogen (as NO <sub>3</sub> -N)	mg/L	4.28	10.12	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
10	Dissolved Phosphate (as PO <sub>4</sub> )	mg/L	1.88	0.98	APHA 22 <sup>nd</sup> Ed. 2012, 4500-P B, 4-151, E, 4-155
11	Lead (as Pb)	mg/L	<0.1	<0.1	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18

**Remarks:**

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## Stack Emission Monitoring Report

<b>Report No.:</b> ME-TH3582-170220-SA-RA-THANE		<b>Date:</b> 20.02.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Verbal Discussion
<b>Sample Description/Type</b>	Stack Emission Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. D G Set 650 kVA 2. D G Set 320 kVA 3. D G Set 625 kVA	<b>Sample Quantity/Packing</b>	Thimble: 1 X 3 No. SO <sub>2</sub> : 30 mL X 3 No. PVC Bottle NO <sub>x</sub> : 25 mL X 3 No. PVC Bottle
<b>Date of Sampling</b>	13.02.2017	<b>Date of Receipt of Sample</b>	17.02.2017
<b>Sampling Procedure</b>	As per Method Reference		
<b>Date of Start of Analysis</b>	17.02.2017	<b>Date of Completion of Analysis</b>	20.02.2017

<b>Stack Details</b>		<b>Stack 1</b>	<b>Stack 2</b>	<b>Stack 3</b>	
Stack Identity		1	2	3	-
Stack attached to		D.G.Set	D.G.Set	D.G.Set	-
Capacity		650 kVA	320 kVA	625 kVA	
Material of construction		M.S.	M.S.	M.S.	-
Stack height above ground level		5	5	3	Meter
Stack diameter		0.2	0.2	0.2	Meter
Stack shape at top		Round	Round	Round	-
Type of fuel		H.S.D.	H.S.D.	H.S.D.	-
Consumption		95	51	100	L/h
<b>Parameter</b>	<b>Unit</b>	<b>Result</b>			<b>Method Reference</b>
Flue gas temperature	°C	198	196	200	IS:11255 (Part 3):2008
Flue gas velocity	m/s	17.16	16.29	16.99	IS:11255 (Part 3):2008
Total gas quantity	Nm <sup>3</sup> /h	1227	1170	1210	IS:11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm <sup>3</sup>	31	28	33	IS 11255 (Part 1): 1985, RA 2003 (Gravimetric Method)
Sulphur Dioxide (SO <sub>2</sub> )	kg/day	3.92	2.24	4.32	CPCB, Emission Regulations, Part 3(Titrimetric IPA Thorine)
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	44	39	45	IS 11255 (Part 7): 2005 (PDSA Colorimetric Method )
<b>Remark:</b>					

-----END-----

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## Ambient Air Quality Monitoring Report

<b>Report No.:</b> ME-TH3538-170220-SA-RA-THANE		<b>Date:</b> 20.02.2017	
<b>Name and address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference:</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Ambient Air Quality Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	Filter Paper (PM <sub>10</sub> ): 1 X 3 No. Filter Paper (PM <sub>2.5</sub> ): 1 X 1 No. SO <sub>2</sub> : 30 mL X 6 No. PVC Bottle NO <sub>2</sub> : 30 mL X 6 No. PVC Bottle
<b>Date of Sampling</b>	13.02.2017	<b>Date of Receipt of Sample</b>	17.02.2017
<b>Sampling Procedure</b>	As per Method reference		
<b>Date of Start of Analysis</b>	17.02.2017	<b>Date of Completion of Analysis</b>	20.02.2017

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
3 km/h	NW	76	47	34	26
<b>Location</b>	Project Site 2		<b>Duration of Survey</b>		24 hours
Parameter	Unit	Result	*NAAQM Standard	Method Reference	
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	4.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6	
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	6.8	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10	
Particulate Matter (size less than 10µm) or PM <sub>10</sub>	µg/m <sup>3</sup>	66	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14	
Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub>	µg/m <sup>3</sup>	32	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30	
<b>Remarks:</b> TWA - Time Weighted Average, *- NAAQS specified as: 24 h. TWA in case of SO <sub>2</sub> , NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>					

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## Noise Level Monitoring Report

<b>Report No. :</b> ME-TH3539-170220-SA-RA-THANE		<b>Date:</b> 20.02.2017
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane	<b>Order Reference:</b>
		Telephonic Discussion
<b>Date of Sampling</b>	13.02.2017	
<b>Sampling Procedure</b>	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	<b>A. Project Site 2</b>			
	Day	10:00	50	48
	Night	22:00	44	42
<b>Noise Level Standard</b>				
Area Code	Area Type	Limit in dB(A) weighted scale		
		Day	Night	
C	Residential	55	45	

-----END-----

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

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## Water Sample Analysis Report

<b>Report No.:</b> ME-TH3540-170220-SA-RA-THANE		<b>Date:</b> 20.02.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b>		<b>Order Reference:</b>
	At Majiwade, Thane		Telephonic Discussion
<b>Sample Description/Type</b>	Drinking Water	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	2 L X 2 No. PVC Can 500mL X 1 No. Sterile Glass Bottle
<b>Date of Sampling</b>	13.02.2017	<b>Date of Receipt of Sample</b>	17.02.2017
<b>Sampling Procedure</b>	IS 1622:1981, RA 2009 & IS 3025 (Part-1):1987, RA 1998 & APHA 22 <sup>nd</sup> Ed. 2012, 1060 B,1-39,9060 B,9-35		
<b>Date of Start of Analysis</b>	17.02.2017	<b>Date of Completion of Analysis</b>	20.02.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Turbidity	NTU	0.2	APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13
4	pH	-	7.4	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
5	Total Dissolved Solids	mg/L	88	IS 3025 (Part 16):1984 Reaffirmed 2006
6	Alkalinity Total (as CaCO <sub>3</sub> )	mg/L	42	IS 3025 (Part 23):1986 Reaffirmed 2009
7	Total Hardness (as CaCO <sub>3</sub> )	mg/L	60	APHA 22 <sup>nd</sup> Ed. 2012, 2340-C, 2-44,45
8	Calcium (as Ca)	mg/L	11.2	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Ca-B, 3-67
9	Magnesium (as Mg)	mg/L	7.78	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Mg- B, 3-84
10	Free Chlorine (Residual)	mg/L	0.20	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl G, 4-69
11	Chloride	mg/L	14.0	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate	mg/L	18.0	APHA 22 <sup>nd</sup> Ed. 2012, 4500- SO <sub>4</sub> -E, 4-190
13	Nitrite	mg/L	2.89	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
14	Fluoride	mg/L	0.31	APHA 22 <sup>nd</sup> Ed. 2012, 4500-F- B & D, 4-84, 4-87
15	Iron	mg/L	<0.08	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
<b>Microbiological Analysis</b>				
16	Total Coliforms	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-D, 9-73
17	E. coli	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-G, 9-76
<b>Remarks:</b>				

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## Effluent Sample Analysis Report

<b>Report No.:</b> ME-TH3583-170220-SA-RA-THANE		<b>Date:</b> 20.02.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Sewage Effluent	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. STP Inlet 2. STP Outlet	<b>Sample Quantity/Packing</b>	2 L X 2 No. PVC Can 100 mL X 2 No. PVC Can 1 L X 2 No. Glass Bottle 500 mL X 2 No. PVC Can
<b>Date of Sampling</b>	13.02.2017	<b>Date of Receipt of Sample</b>	17.02.2017
<b>Sampling Procedure</b>	IS: 3025(Part I):1987 RA 2003; APHA 22 <sup>nd</sup> Ed. 2012, 1060-B, 1-39		
<b>Date of Start of Analysis</b>	17.02.2017	<b>Date of Completion of Analysis</b>	20.02.2017

Sr. No.	Parameter	Unit	Result		Method Reference
			1	2	
1	pH	mg/L	6.8	7.2	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
2	Dissolved Oxygen	mg/L	<0.5	4.9	APHA 22 <sup>nd</sup> Ed. 2012, 4500-O, B & C, 4-136, 4-139
3	Biochemical Oxygen Demand (3 days, 27°C)	mg/L	68	17	IS 3025 (Part 44): 1993, Reaffirmed 2003, Amds.1
4	Chemical Oxygen Demand	mg/L	212	56	APHA 22 <sup>nd</sup> Ed. 2012, 5220-B, 5-17
5	Oil & Grease	mg/L	1.2	<1	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
6	Iron (as Fe)	mg/L	0.98	0.44	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
7	Total Dissolved Solids	mg/L	588	271	IS 3025 (Part 16):1984 Reaffirmed 2006
8	Cadmium (as Cd)	mg/L	<0.05	<0.05	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
9	Nitrate-Nitrogen (as NO <sub>3</sub> -N)	mg/L	3.02	8.88	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
10	Dissolved Phosphate (as PO <sub>4</sub> )	mg/L	2.52	1.32	APHA 22 <sup>nd</sup> Ed. 2012, 4500-P B, 4-151, E, 4-155
11	Lead (as Pb)	mg/L	<0.1	<0.1	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18

Remarks:

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## Stack Emission Monitoring Report

<b>Report No.:</b> ME-TH3884-170321-SA-RA-THANE		<b>Date:</b> 21.03.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Verbal Discussion
<b>Sample Description/Type</b>	Stack Emission Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. D G Set 650 kVA 2. D G Set 320 kVA 3. D G Set 625 kVA	<b>Sample Quantity/Packing</b>	Thimble: 1 X 3 No. SO <sub>2</sub> : 30 mL X 3 No. PVC Bottle NO <sub>x</sub> : 25 mL X 3 No. PVC Bottle
<b>Date of Sampling</b>	14.03.2017	<b>Date of Receipt of Sample</b>	18.03.2017
<b>Sampling Procedure</b>	As per Method Reference		
<b>Date of Start of Analysis</b>	18.03.2017	<b>Date of Completion of Analysis</b>	21.03.2017

Stack Details		Stack 1	Stack 2	Stack 3	
Stack Identity		1	2	3	-
Stack attached to		D.G.Set	D.G.Set	D.G.Set	-
Capacity		650 kVA	320 kVA	625 kVA	
Material of construction		M.S.	M.S.	M.S.	-
Stack height above ground level		5	5	3	Meter
Stack diameter		0.2	0.2	0.2	Meter
Stack shape at top		Round	Round	Round	-
Type of fuel		H.S.D.	H.S.D.	H.S.D.	-
Consumption		95	51	100	L/h
Parameter	Unit	Result			Method Reference
Flue gas temperature	°C	203	204	206	IS:11255 (Part 3):2008
Flue gas velocity	m/s	17.21	16.34	16.93	IS:11255 (Part 3):2008
Total gas quantity	Nm <sup>3</sup> /h	1218	1154	1191	IS:11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm <sup>3</sup>	33	32	30	IS 11255 (Part 1): 1985, RA 2003 (Gravimetric Method)
Sulphur Dioxide (SO <sub>2</sub> )	kg/day	3.68	1.84	4.16	CPCB, Emission Regulations, Part 3(Titrimetric IPA Thorine)
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	44	40	45	IS 11255 (Part 7): 2005 (PDSA Colorimetric Method )
<b>Remark:</b>					

-----END-----

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## Ambient Air Quality Monitoring Report

<b>Report No.:</b> ME-TH3838-170321-SA-RA-THANE		<b>Date:</b> 21.03.2017	
<b>Name and address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference:</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Ambient Air Quality Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	Filter Paper (PM <sub>10</sub> ): 1 X 3 No. Filter Paper (PM <sub>2.5</sub> ): 1 X 1 No. SO <sub>2</sub> : 30 mL X 6 No. PVC Bottle NO <sub>2</sub> : 30 mL X 6 No. PVC Bottle
<b>Date of Sampling</b>	14.03.2017	<b>Date of Receipt of Sample</b>	18.03.2017
<b>Sampling Procedure</b>	As per Method reference		
<b>Date of Start of Analysis</b>	18.03.2017	<b>Date of Completion of Analysis</b>	21.03.2017

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
3.4 km/h	W	85	71	32	26
<b>Location</b>	Project Site 2		<b>Duration of Survey</b>		24 hours
Parameter	Unit	Result	*NAAQM Standard	Method Reference	
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	5.7	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6	
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	7.5	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10	
Particulate Matter (size less than 10µm) or PM <sub>10</sub>	µg/m <sup>3</sup>	71	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14	
Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub>	µg/m <sup>3</sup>	38	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30	
<b>Remarks:</b> TWA - Time Weighted Average, *- NAAQS specified as: 24 h. TWA in case of SO <sub>2</sub> , NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>					

-----END-----

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Harish Mendhi

**TECHNICAL MANAGER**



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## Noise Level Monitoring Report

<b>Report No. :</b> ME-TH3839-170321-SA-RA-THANE		<b>Date:</b> 21.03.2017
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane	<b>Order Reference:</b>
		Telephonic Discussion
<b>Date of Sampling</b>	14.03.2017	
<b>Sampling Procedure</b>	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	<b>A. Project Site 2</b>			
	Day	10:00	52	50
	Night	22:00	41	38
<b>Noise Level Standard</b>				
Area Code	Area Type	Limit in dB(A) weighted scale		
		Day	Night	
C	Residential	55	45	

-END-

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## Water Sample Analysis Report

Report No.: ME-TH3840-170321-SA-RA-THANE		Date: 21.03.2017	
Name and Address of Customer	RUSTOMJEE 100 ACRES At Majiwade, Thane		Order Reference:
			Telephonic Discussion
Sample Description/Type	Drinking Water	Sample Collected by	Laboratory
Sampling Location	Project Site 2	Sample Quantity/Packing	2 L X 2 No. PVC Can 500mL X 1 No. Sterile Glass Bottle
Date of Sampling	14.03.2017	Date of Receipt of Sample	18.03.2017
Sampling Procedure	IS 1622:1981, RA 2009 & IS 3025 (Part-1):1987, RA 1998 & APHA 22 <sup>nd</sup> Ed. 2012, 1060 B,1-39,9060 B,9-35		
Date of Start of Analysis	18.03.2017	Date of Completion of Analysis	21.03.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Turbidity	NTU	0.5	APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13
4	pH	-	7.5	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
5	Total Dissolved Solids	mg/L	96	IS 3025 (Part 16):1984 Reaffirmed 2006
6	Alkalinity Total (as CaCO <sub>3</sub> )	mg/L	50	IS 3025 (Part 23):1986 Reaffirmed 2009
7	Total Hardness (as CaCO <sub>3</sub> )	mg/L	68	APHA 22 <sup>nd</sup> Ed. 2012, 2340-C, 2-44,45
8	Calcium (as Ca)	mg/L	14.4	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Ca-B, 3-67
9	Magnesium (as Mg)	mg/L	7.78	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Mg- B, 3-84
10	Free Chlorine (Residual)	mg/L	0.16	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl G, 4-69
11	Chloride	mg/L	14.5	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate	mg/L	19.9	APHA 22 <sup>nd</sup> Ed. 2012, 4500- SO <sub>4</sub> -E, 4-190
13	Nitrite	mg/L	2.96	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
14	Fluoride	mg/L	0.33	APHA 22 <sup>nd</sup> Ed. 2012, 4500-F- B & D, 4-84, 4-87
15	Iron	mg/L	<0.08	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
<b>Microbiological Analysis</b>				
16	Total Coliforms	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-D, 9-73
17	E. coli	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-G, 9-76
Remarks:				

-END-

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## Effluent Sample Analysis Report

<b>Report No.:</b> ME-TH3885-170321-SA-RA-THANE		<b>Date:</b> 21.03.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Sewage Effluent	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. STP Inlet 2. STP Outlet	<b>Sample Quantity/Packing</b>	2 L X 2 No. PVC Can 100 mL X 2 No. PVC Can 1 L X 2 No. Glass Bottle 500 mL X 2 No. PVC Can
<b>Date of Sampling</b>	14.03.2017	<b>Date of Receipt of Sample</b>	18.03.2017
<b>Sampling Procedure</b>	IS: 3025(Part I):1987 RA 2003; APHA 22 <sup>nd</sup> Ed. 2012, 1060-B, 1-39		
<b>Date of Start of Analysis</b>	18.03.2017	<b>Date of Completion of Analysis</b>	21.03.2017

Sr. No.	Parameter	Unit	Result		Method Reference
			1	2	
1	pH	mg/L	6.9	7.3	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
2	Dissolved Oxygen	mg/L	<0.5	4.9	APHA 22 <sup>nd</sup> Ed. 2012, 4500-O, B & C, 4-136, 4-139
3	Biochemical Oxygen Demand (3 days, 27°C)	mg/L	76	19	IS 3025 (Part 44): 1993, Reaffirmed 2003, Amds.1
4	Chemical Oxygen Demand	mg/L	236	60	APHA 22 <sup>nd</sup> Ed. 2012, 5220-B, 5-17
5	Oil & Grease	mg/L	1.5	<1	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
6	Iron (as Fe)	mg/L	1.32	0.66	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
7	Total Dissolved Solids	mg/L	622	255	IS 3025 (Part 16):1984 Reaffirmed 2006
8	Cadmium (as Cd)	mg/L	<0.05	<0.05	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
9	Nitrate-Nitrogen (as NO <sub>3</sub> -N)	mg/L	2.78	7.83	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
10	Dissolved Phosphate (as PO <sub>4</sub> )	mg/L	2.76	1.48	APHA 22 <sup>nd</sup> Ed. 2012, 4500-P B, 4-151, E, 4-155
11	Lead (as Pb)	mg/L	<0.1	<0.1	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18

Remarks:

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## Stack Emission Monitoring Report

<b>Report No.:</b> ME-TH0329-170428-SA-RA-THANE		<b>Date:</b> 28.04.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Verbal Discussion
<b>Sample Description/Type</b>	Stack Emission Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. D G Set 650 kVA 2. D G Set 320 kVA 3. D G Set 625 kVA	<b>Sample Quantity/Packing</b>	Thimble: 1 X 3 No. SO <sub>2</sub> : 30 mL X 3 No. PVC Bottle NO <sub>x</sub> : 25 mL X 3 No. PVC Bottle
<b>Date of Sampling</b>	12.04.2017	<b>Date of Receipt of Sample</b>	14.04.2017
<b>Sampling Procedure</b>	As per Method Reference		
<b>Date of Start of Analysis</b>	14.04.2017	<b>Date of Completion of Analysis</b>	18.04.2017

<b>Stack Details</b>		<b>Stack 1</b>	<b>Stack 2</b>	<b>Stack 3</b>	
Stack Identity		1	2	3	-
Stack attached to		D.G.Set	D.G.Set	D.G.Set	-
Capacity		650 kVA	320 kVA	625 kVA	
Material of construction		M.S.	M.S.	M.S.	-
Stack height above ground level		5	5	3	Meter
Stack diameter		0.2	0.2	0.2	Meter
Stack shape at top		Round	Round	Round	-
Type of fuel		H.S.D.	H.S.D.	H.S.D.	-
Consumption		95	51	100	L/h
<b>Parameter</b>	<b>Unit</b>	<b>Result</b>			<b>Method Reference</b>
Flue gas temperature	°C	205	199	209	IS:11255 (Part 3):2008
Flue gas velocity	m/s	17.25	16.26	16.88	IS:11255 (Part 3):2008
Total gas quantity	Nm <sup>3</sup> /h	1216	1160	1180	IS:11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm <sup>3</sup>	30	36	32	IS 11255 (Part 1): 1985, RA 2003 (Gravimetric Method)
Sulphur Dioxide (SO <sub>2</sub> )	kg/day	3.74	2.04	3.98	CPCB, Emission Regulations, Part 3(Titrimetric IPA Thorine)
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	45	40	44	IS 11255 (Part 7): 2005 (PDSA Colorimetric Method )
<b>Remark:</b>					

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Opp. Patel Petrol Pump, Chhindwara Road, Koradi, Dist.Nagpur-441111

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## Ambient Air Quality Monitoring Report

<b>Report No.:</b> ME-TH0285-170428-SA-RA-THANE		<b>Date:</b> 28.04.2017	
<b>Name and address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference:</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Ambient Air Quality Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	Filter Paper (PM <sub>10</sub> ): 1 X 3 No. Filter Paper (PM <sub>2.5</sub> ): 1 X 1 No. SO <sub>2</sub> : 30 mL X 6 No. PVC Bottle NO <sub>2</sub> : 30 mL X 6 No. PVC Bottle
<b>Date of Sampling</b>	20.04.2017	<b>Date of Receipt of Sample</b>	24.04.2017
<b>Sampling Procedure</b>	As per Method reference		
<b>Date of Start of Analysis</b>	24.04.2017	<b>Date of Completion of Analysis</b>	28.04.2017

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
3.6 km/h	W	85	68	33	28
<b>Location</b>	Project Site 2		<b>Duration of Survey</b>		24 hours
Parameter	Unit	Result	*NAAQM Standard	Method Reference	
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	<4	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6	
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	8.1	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10	
Particulate Matter (size less than 10µm) or PM <sub>10</sub>	µg/m <sup>3</sup>	73	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14	
Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub>	µg/m <sup>3</sup>	41	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30	
<b>Remarks:</b> TWA - Time Weighted Average, *- NAAQS specified as: 24 h. TWA in case of SO <sub>2</sub> , NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>					

-END-

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## Noise Level Monitoring Report

<b>Report No. :</b> ME-TH0286-170428-SA-RA-THANE		<b>Date:</b> 28.04.2017
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane	<b>Order Reference:</b>
		Telephonic Discussion
<b>Date of Sampling</b>	20.04.2017	
<b>Sampling Procedure</b>	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	<b>A. Project Site 2</b>			
	Day	10:00	55	53
	Night	22:00	43	41
<b>Noise Level Standard</b>				
Area Code	Area Type	Limit in dB(A) weighted scale		
		Day	Night	
C	Residential	55	45	

-----END-----

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## Water Sample Analysis Report

<b>Report No.:</b> ME-TH0287-170428-SA-RA-THANE		<b>Date:</b> 28.04.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b>		<b>Order Reference:</b>
	At Majiwade, Thane		Telephonic Discussion
<b>Sample Description/Type</b>	Drinking Water	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	2 L X 2 No. PVC Can 500mL X 1 No. Sterile Glass Bottle
<b>Date of Sampling</b>	20.04.2017	<b>Date of Receipt of Sample</b>	24.04.2017
<b>Sampling Procedure</b>	IS 1622:1981, RA 2009 & IS 3025 (Part-1):1987, RA 1998 & APHA 22 <sup>nd</sup> Ed. 2012, 1060 B,1-39,9060 B,9-35		
<b>Date of Start of Analysis</b>	24.04.2017	<b>Date of Completion of Analysis</b>	28.04.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	<1	APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Turbidity	NTU	0.4	APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13
4	pH	-	7.6	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
5	Total Dissolved Solids	mg/L	92	IS 3025 (Part 16):1984 Reaffirmed 2006
6	Alkalinity Total (as CaCO <sub>3</sub> )	mg/L	46	IS 3025 (Part 23):1986 Reaffirmed 2009
7	Total Hardness (as CaCO <sub>3</sub> )	mg/L	64	APHA 22 <sup>nd</sup> Ed. 2012, 2340-C, 2-44,45
8	Calcium (as Ca)	mg/L	13.6	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Ca-B, 3-67
9	Magnesium (as Mg)	mg/L	7.29	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Mg- B, 3-84
10	Free Chlorine (Residual)	mg/L	0.15	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl G, 4-69
11	Chloride	mg/L	13.0	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate	mg/L	18.8	APHA 22 <sup>nd</sup> Ed. 2012, 4500- SO <sub>4</sub> -E, 4-190
13	Nitrite	mg/L	3.02	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
14	Fluoride	mg/L	0.38	APHA 22 <sup>nd</sup> Ed. 2012, 4500-F- B & D, 4-84, 4-87
15	Iron	mg/L	0.098	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
<b>Microbiological Analysis</b>				
16	Total Coliforms	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-D, 9-73
17	E. coli	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-G, 9-76
<b>Remarks:</b>				

-END-

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## Effluent Sample Analysis Report

<b>Report No.:</b> ME-TH0330-170428-SA-RA-THANE		<b>Date:</b> 28.04.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Sewage Effluent	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. STP Inlet 2. STP Outlet	<b>Sample Quantity/Packing</b>	2 L X 2 No. PVC Can 100 mL X 2 No. PVC Can 1 L X 2 No. Glass Bottle 500 mL X 2 No. PVC Can
<b>Date of Sampling</b>	20.04.2017	<b>Date of Receipt of Sample</b>	24.04.2017
<b>Sampling Procedure</b>	IS: 3025(Part I):1987 RA 2003; APHA 22 <sup>nd</sup> Ed. 2012, 1060-B, 1-39		
<b>Date of Start of Analysis</b>	24.04.2017	<b>Date of Completion of Analysis</b>	28.04.2017

Sr. No.	Parameter	Unit	Result		Method Reference
			1	2	
1	pH	mg/L	7.2	7.5	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
2	Dissolved Oxygen	mg/L	<0.5	4.8	APHA 22 <sup>nd</sup> Ed. 2012, 4500-O, B & C, 4-136, 4-139
3	Biochemical Oxygen Demand (3 days, 27°C)	mg/L	62	15	IS 3025 (Part 44): 1993, Reaffirmed 2003, Amds.1
4	Chemical Oxygen Demand	mg/L	192	48	APHA 22 <sup>nd</sup> Ed. 2012, 5220-B, 5-17
5	Oil & Grease	mg/L	1.3	<1	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
6	Iron (as Fe)	mg/L	1.12	0.59	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
7	Total Dissolved Solids	mg/L	608	268	IS 3025 (Part 16):1984 Reaffirmed 2006
8	Cadmium (as Cd)	mg/L	<0.05	<0.05	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
9	Nitrate-Nitrogen (as NO <sub>3</sub> -N)	mg/L	2.96	8.04	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
10	Dissolved Phosphate (as PO <sub>4</sub> )	mg/L	2.04	1.1	APHA 22 <sup>nd</sup> Ed. 2012, 4500-P B, 4-151, E, 4-155
11	Lead (as Pb)	mg/L	<0.1	<0.1	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18

Remarks:

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## Stack Emission Monitoring Report

<b>Report No.:</b> ME-TH0834-170526-SA-RA-THANE		<b>Date:</b> 26.05.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Verbal Discussion
<b>Sample Description/Type</b>	Stack Emission Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. D G Set 650 kVA 2. D G Set 320 kVA 3. D G Set 625 kVA	<b>Sample Quantity/Packing</b>	Thimble: 1 X 3 No. SO <sub>2</sub> : 30 mL X 3 No. PVC Bottle NO <sub>x</sub> : 25 mL X 3 No. PVC Bottle
<b>Date of Sampling</b>	16.05.2017	<b>Date of Receipt of Sample</b>	18.05.2017
<b>Sampling Procedure</b>	As per Method Reference		
<b>Date of Start of Analysis</b>	18.05.2017	<b>Date of Completion of Analysis</b>	23.05.2017

<b>Stack Details</b>		<b>Stack 1</b>	<b>Stack 2</b>	<b>Stack 3</b>	
Stack Identity		1	2	3	-
Stack attached to		D.G.Set	D.G.Set	D.G.Set	-
Capacity		650 kVA	320 kVA	625 kVA	
Material of construction		M.S.	M.S.	M.S.	-
Stack height above ground level		5	5	3	Meter
Stack diameter		0.2	0.2	0.2	Meter
Stack shape at top		Round	Round	Round	-
Type of fuel		H.S.D.	H.S.D.	H.S.D.	-
Consumption		95	51	100	L/h
<b>Parameter</b>	<b>Unit</b>	<b>Result</b>			<b>Method Reference</b>
Flue gas temperature	°C	201	194	213	IS:11255 (Part 3):2008
Flue gas velocity	m/s	17.18	16.31	16.95	IS:11255 (Part 3):2008
Total gas quantity	Nm <sup>3</sup> /h	1221	1176	1175	IS:11255 (Part 3):2008
Particulate Matter (PM)	mg/Nm <sup>3</sup>	34	33	35	IS 11255 (Part 1): 1985, RA 2003 (Gravimetric Method)
Sulphur Dioxide (SO <sub>2</sub> )	kg/day	3.82	2.12	3.88	CPCB, Emission Regulations, Part 3(Titrimetric IPA Thorine)
Oxides of Nitrogen (NO <sub>x</sub> )	mg/Nm <sup>3</sup>	44	40	44	IS 11255 (Part 7): 2005 (PDSA Colorimetric Method )
<b>Remark:</b>					

-----END-----

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## Ambient Air Quality Monitoring Report

<b>Report No.:</b> ME-TH0685-170526-SA-RA-THANE		<b>Date:</b> 26.05.2017	
<b>Name and address of Customer</b>	RUSTOMJEE 100 ACRES At Majiwade, Thane		<b>Order Reference:</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Ambient Air Quality Monitoring	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	Filter Paper (PM <sub>10</sub> ): 1 X 3 No. Filter Paper (PM <sub>2.5</sub> ): 1 X 1 No. SO <sub>2</sub> : 30 mL X 6 No. PVC Bottle NO <sub>2</sub> : 30 mL X 6 No. PVC Bottle
<b>Date of Sampling</b>	18.05.2017	<b>Date of Receipt of Sample</b>	22.05.2017
<b>Sampling Procedure</b>	As per Method reference		
<b>Date of Start of Analysis</b>	22.05.2017	<b>Date of Completion of Analysis</b>	26.05.2017

Meteorological Data/Environmental Conditions					
Avg. Wind Velocity	Prominent Wind Direction	Relative Humidity (%)		Temperature (°C)	
		Max.	Min.	Max.	Min.
3.7 km/h	W	84	73	40	29
<b>Location</b>	Project Site 2		<b>Duration of Survey</b>		24 hours
Parameter	Unit	Result	*NAAQM Standard	Method Reference	
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	4.9	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.1-6	
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	9.0	80	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.7-10	
Particulate Matter (size less than 10µm) or PM <sub>10</sub>	µg/m <sup>3</sup>	69	100	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.11-14	
Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub>	µg/m <sup>3</sup>	36	60	CPCB Guidelines for the Measurement of Ambient Air Pollutants, Volume I, 2012-13, Page No.15-30	
<b>Remarks:</b> TWA - Time Weighted Average, *- NAAQS specified as: 24 h. TWA in case of SO <sub>2</sub> , NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub>					

-END-

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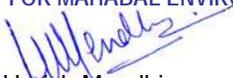
## Noise Level Monitoring Report

<b>Report No. :</b> ME-TH0686-170526-SA-RA-THANE		<b>Date:</b> 26.05.2017
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane	<b>Order Reference:</b>
		Telephonic Discussion
<b>Date of Sampling</b>	18.05.2017	
<b>Sampling Procedure</b>	IS 9876:1981 & manufacturer Manual	

Sr. No.	Location	Time	Sound Level dB(A) Fast Response	Sound Level dB(A) Slow Response
1	<b>A. Project Site 2</b>			
	Day	10:00	51	48
	Night	22:00	45	43
<b>Noise Level Standard</b>				
Area Code	Area Type	Limit in dB(A) weighted scale		
		Day	Night	
C	Residential	55	45	

-----END-----

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## Water Sample Analysis Report

<b>Report No.:</b> ME-TH0687-170526-SA-RA-THANE		<b>Date:</b> 26.05.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b>		<b>Order Reference:</b>
	At Majiwade, Thane		Telephonic Discussion
<b>Sample Description/Type</b>	Drinking Water	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	Project Site 2	<b>Sample Quantity/Packing</b>	2 L X 2 No. PVC Can 500mL X 1 No. Sterile Glass Bottle
<b>Date of Sampling</b>	18.05.2017	<b>Date of Receipt of Sample</b>	22.05.2017
<b>Sampling Procedure</b>	IS 1622:1981, RA 2009 & IS 3025 (Part-1):1987, RA 1998 & APHA 22 <sup>nd</sup> Ed. 2012, 1060 B,1-39,9060 B,9-35		
<b>Date of Start of Analysis</b>	22.05.2017	<b>Date of Completion of Analysis</b>	26.05.2017

Sr. No.	Parameter	Unit	Result	Method Reference
1	Colour	Hazen	1	APHA 22 <sup>nd</sup> Ed. 2012, 2120-B, 2-6
2	Odour	-	Agreeable	IS 3025 (Part 5):1983, Reaffirmed 2006
3	Turbidity	NTU	0.6	APHA 22 <sup>nd</sup> Ed. 2012, 2130-B, 2-13
4	pH	-	7.7	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
5	Total Dissolved Solids	mg/L	104	IS 3025 (Part 16):1984 Reaffirmed 2006
6	Alkalinity Total (as CaCO <sub>3</sub> )	mg/L	52	IS 3025 (Part 23):1986 Reaffirmed 2009
7	Total Hardness (as CaCO <sub>3</sub> )	mg/L	72	APHA 22 <sup>nd</sup> Ed. 2012, 2340-C, 2-44,45
8	Calcium (as Ca)	mg/L	15.2	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Ca-B, 3-67
9	Magnesium (as Mg)	mg/L	8.26	APHA 22 <sup>nd</sup> Ed. 2012, 3500-Mg- B, 3-84
10	Free Chlorine (Residual)	mg/L	0.18	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl G, 4-69
11	Chloride	mg/L	15.5	APHA 22 <sup>nd</sup> Ed. 2012, 4500-Cl-B, 4-72
12	Sulphate	mg/L	20.4	APHA 22 <sup>nd</sup> Ed. 2012, 4500- SO <sub>4</sub> -E, 4-190
13	Nitrite	mg/L	23.06	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
14	Fluoride	mg/L	0.41	APHA 22 <sup>nd</sup> Ed. 2012, 4500-F- B & D, 4-84, 4-87
15	Iron	mg/L	0.108	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18

### Microbiological Analysis

16	Total Coliforms	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-D, 9-73
17	E. coli	MPN/100mL	Absent	APHA 22 <sup>nd</sup> Ed. 2012, 9221-G, 9-76

Remarks:

-END-

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

*Harish Mendhi*

Harish Mendhi

**TECHNICAL MANAGER**



Note:

1. The result listed refers only to the tested sample(s) and applicable parameter(s).
2. This report is not to be reproduced except in full, without written approval of the laboratory.



# Mahabal Enviro Engineers Pvt. Ltd.

Engineers, Consultants, Environmental Monitoring Laboratory & Contractors

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## Effluent Sample Analysis Report

<b>Report No.:</b> ME-TH0835-170526-SA-RA-THANE		<b>Date:</b> 26.05.2017	
<b>Name and Address of Customer</b>	<b>RUSTOMJEE 100 ACRES</b> At Majiwade, Thane		<b>Order Reference</b>
			Telephonic Discussion
<b>Sample Description/Type</b>	Sewage Effluent	<b>Sample Collected by</b>	Laboratory
<b>Sampling Location</b>	1. STP Inlet 2. STP Outlet	<b>Sample Quantity/Packing</b>	2 L X 2 No. PVC Can 100 mL X 2 No. PVC Can 1 L X 2 No. Glass Bottle 500 mL X 2 No. PVC Can
<b>Date of Sampling</b>	18.05.2017	<b>Date of Receipt of Sample</b>	22.05.2017
<b>Sampling Procedure</b>	IS: 3025(Part I):1987 RA 2003; APHA 22 <sup>nd</sup> Ed. 2012, 1060-B, 1-39		
<b>Date of Start of Analysis</b>	22.05.2017	<b>Date of Completion of Analysis</b>	26.05.2017

Sr. No.	Parameter	Unit	Result		Method Reference
			1	2	
1	pH	mg/L	7.0	7.3	APHA 22 <sup>nd</sup> Ed. 2012, 4500-H <sup>+</sup> -B, 4-92
2	Dissolved Oxygen	mg/L	<0.5	5.0	APHA 22 <sup>nd</sup> Ed. 2012, 4500-O, B & C, 4-136, 4-139
3	Biochemical Oxygen Demand (3 days, 27°C)	mg/L	56	14	IS 3025 (Part 44): 1993, Reaffirmed 2003, Amds.1
4	Chemical Oxygen Demand	mg/L	168	44	APHA 22 <sup>nd</sup> Ed. 2012, 5220-B, 5-17
5	Oil & Grease	mg/L	1.1	<1	IS 3025 (Part 39): 1991, RA 2003, Ed. 2.1
6	Iron (as Fe)	mg/L	0.88	0.42	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
7	Total Dissolved Solids	mg/L	576	288	IS 3025 (Part 16):1984 Reaffirmed 2006
8	Cadmium (as Cd)	mg/L	<0.05	<0.05	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18
9	Nitrate-Nitrogen (as NO <sub>3</sub> -N)	mg/L	3.56	10.12	APHA 22 <sup>nd</sup> Ed. 2012, 4500-NO <sub>3</sub> -E, 4-125
10	Dissolved Phosphate (as PO <sub>4</sub> )	mg/L	1.9	0.98	APHA 22 <sup>nd</sup> Ed. 2012, 4500-P B, 4-151, E, 4-155
11	Lead (as Pb)	mg/L	<0.1	<0.1	APHA 22 <sup>nd</sup> Ed. 2012, 3111-B, 3-18

Remarks:

-----END-----

FOR MAHABAL ENVIRO ENGINEERS PVT. LTD.

Harish Mendhi

**TECHNICAL MANAGER**



Note:

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Page 1 of 1

## SCHEDULE

(see rule 3(1) and 4(1))

### Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area / Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

- Note:-
1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
  2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
  3. Silence zone is an area comprising not less than 100 metres around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority
  4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

\* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq: It is an energy mean of the noise level over a specified period.



## National Ambient Air Quality Standards: Central Pollution Control Board

In exercise of the powers conferred by Sub-section (2) (h) of section 16 of the Air (Prevention and Control of Pollution) Act, 1981 (Act No.14 of 1981), and in suppression of the Notification No(s). S.O.384(E), dated 11<sup>th</sup> April, 1994 and S.O.935(E), dated 14<sup>th</sup> October, 1998, the Central Pollution Control Board hereby notify the National Ambient Air Quality Standards **with immediate effect**, namely:

Sr. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Areas	Ecologically Sensitive Areas (Notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Annual *	50	20	– Improved West and Gaeke – Ultraviolet fluorescence
		24 hours **	80	80	
2	Nitrogen Dioxide (NO <sub>2</sub> ) $\mu\text{g}/\text{m}^3$	Annual *	40	30	– Modified Jacob & Hochheiser (Na-Arsenite) – Chemiluminescence
		24 hours **	80	80	
3	Particulate Matter (size less than 10 $\mu\text{m}$ ) or PM <sub>10</sub> $\mu\text{g}/\text{m}^3$	Annual *	60	60	– Gravimetric – TOEM – Beta attenuation
		24 hours **	100	100	
4	Particulate Matter (size less than 2.5 $\mu\text{m}$ ) or PM <sub>2.5</sub> $\mu\text{g}/\text{m}^3$	Annual *	40	40	– Gravimetric – TOEM – Beta attenuation
		24 hours **	60	60	
5	Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{m}^3$	8 hours **	100	100	– UV photometric – Chemiluminescence – Chemical Method
		1 hour **	180	180	
6	Lead (Pb) $\mu\text{g}/\text{m}^3$	Annual *	0.50	0.50	– AAS/ICP method after sampling on EPM 2000 or equivalent filter paper – EDXRF using Teflon filter
		24 hours **	1.0	1.0	
7	Carbon Monoxide (CO) $\text{mg}/\text{m}^3$	8 hours **	02	02	– Non Dispersive Infra Red (NDIR) spectroscopy
		1 hour **	04	04	
8	Ammonia (NH <sub>3</sub> ) $\mu\text{g}/\text{m}^3$	Annual *	100	100	– Chemiluminescence – Indophenol blue method
		24 hours **	400	400	
9	Benzene (C <sub>6</sub> H <sub>6</sub> ) $\mu\text{g}/\text{m}^3$	Annual *	05	05	– Gas Chromatography based continuous analyzer – Adsorption and Desorption followed by GC analysis
10	Benzo (a) Pyrene (BaP) – particulate phase only, $\text{ng}/\text{m}^3$	Annual *	01	01	– Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As) $\text{ng}/\text{m}^3$	Annual *	06	06	– AAS/ICP method after sampling on EPM 2000 or equivalent filter paper.
12	Nickel (Ni) $\text{ng}/\text{m}^3$	Annual *	20	20	– AAS/ICP method after sampling on EPM 2000 or equivalent filter paper.

\* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

\*\* 24 hourly or 08 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2 % of the time, they may exceed the limits but not on two consecutive days of monitoring.

**Note:** Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

**SANT PRASAD GAUTAM, Chairman, Central Pollution Control Board [ADVT-III/4/184/09/Exty.]**

**Note:** The notifications on National Ambient Air Quality Standards were published by the Central Pollution Control Board in the Gazette of India. Extraordinary vide notification No(s). S.O. 384(E), dated 11<sup>th</sup> April, 1994 and S.O. 935(E), dated 14<sup>th</sup> October, 1998.

*Indian Standard*

## DRINKING WATER — SPECIFICATION

*( Second Revision )***1 SCOPE**

This standard prescribes the requirements and the methods of sampling and test for drinking water.

**2 REFERENCES**

The standards listed in Annex A contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in Annex A.

**3 TERMINOLOGY**

For the purpose of this standard the following definition shall apply.

**3.1 Drinking Water** — Drinking water is water intended for human consumption for drinking and cooking purposes from any source. It includes water (treated or untreated) supplied by any means for human consumption.

**4 REQUIREMENTS**

Drinking water shall comply with the requirements given in Tables 1 to 4. The analysis of pesticide residues given in Table 3 shall be conducted by a recognized laboratory using internationally established test method meeting the residue limits as given in Table 5.

Drinking water shall also comply with bacteriological requirements (*see 4.1*), virological requirements (*see 4.2*) and biological requirements (*see 4.3*).

**4.1 Bacteriological Requirements****4.1.1 Water in Distribution System**

Ideally, all samples taken from the distribution system including consumers' premises, should be free from coliform organisms and the following bacteriological quality of drinking water collected in the distribution system, as given in Table 6 is, therefore specified when tested in accordance with IS 1622.

**4.2 Virological Requirements**

**4.2.1** Ideally, all samples taken from the distribution

**Table 1 Organoleptic and Physical Parameters***(Foreword and Clause 4)*

SI No.	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	Method of Test, Ref to Part of IS 3025	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
i)	Colour, Hazen units, <i>Max</i>	5	15	Part 4	Extended to 15 only, if toxic substances are not suspected in absence of alternate sources
ii)	Odour	Agreeable	Agreeable	Part 5	a) Test cold and when heated b) Test at several dilutions
iii)	pH value	6.5-8.5	No relaxation	Part 11	—
iv)	Taste	Agreeable	Agreeable	Parts 7 and 8	Test to be conducted only after safety has been established
v)	Turbidity, NTU, <i>Max</i>	1	5	Part 10	—
vi)	Total dissolved solids, mg/l, <i>Max</i>	500	2 000	Part 16	—

NOTE — It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under 'acceptable' render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicated under 'permissible limit in the absence of alternate source' in col 4, above which the sources will have to be rejected.

**Table 2 General Parameters Concerning Substances Undesirable in Excessive Amounts**  
(Foreword and Clause 4)

Sl No.	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	Method of Test, Ref to	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
i)	Aluminium (as Al), mg/l, <i>Max</i>	0.03	0.2	IS 3025 (Part 55)	—
ii)	Ammonia (as total ammonia-N), mg/l, <i>Max</i>	0.5	No relaxation	IS 3025 (Part 34)	—
iii)	Anionic detergents (as MBAS) mg/l, <i>Max</i>	0.2	1.0	Annex K of IS 13428	—
iv)	Barium (as Ba), mg/l, <i>Max</i>	0.7	No relaxation	Annex F of IS 13428* or IS 15302	—
v)	Boron (as B), mg/l, <i>Max</i>	0.5	1.0	IS 3025 (Part 57)	—
vi)	Calcium (as Ca), mg/l, <i>Max</i>	75	200	IS 3025 (Part 40)	—
vii)	Chloramines (as Cl <sub>2</sub> ), mg/l, <i>Max</i>	4.0	No relaxation	IS 3025 (Part 26)* or APHA 4500-Cl G	—
viii)	Chloride (as Cl), mg/l, <i>Max</i>	250	1 000	IS 3025 (Part 32)	—
ix)	Copper (as Cu), mg/l, <i>Max</i>	0.05	1.5	IS 3025 (Part 42)	—
x)	Fluoride (as F) mg/l, <i>Max</i>	1.0	1.5	IS 3025 (Part 60)	—
xi)	Free residual chlorine, mg/l, <i>Min</i>	0.2	1	IS 3025 (Part 26)	To be applicable only when water is chlorinated. Tested at consumer end. When protection against viral infection is required, it should be minimum 0.5 mg/l
xii)	Iron (as Fe), mg/l, <i>Max</i>	0.3	No relaxation	IS 3025 (Part 53)	Total concentration of manganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xiii)	Magnesium (as Mg), mg/l, <i>Max</i>	30	100	IS 3025 (Part 46)	—
xiv)	Manganese (as Mn), mg/l, <i>Max</i>	0.1	0.3	IS 3025 (Part 59)	Total concentration of manganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xv)	Mineral oil, mg/l, <i>Max</i>	0.5	No relaxation	Clause 6 of IS 3025 (Part 39) Infrared partition method	—
xvi)	Nitrate (as NO <sub>3</sub> ), mg/l, <i>Max</i>	45	No relaxation	IS 3025 (Part 34)	—
xvii)	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, <i>Max</i>	0.001	0.002	IS 3025 (Part 43)	—
xviii)	Selenium (as Se), mg/l, <i>Max</i>	0.01	No relaxation	IS 3025 (Part 56) or IS 15303*	—
xix)	Silver (as Ag), mg/l, <i>Max</i>	0.1	No relaxation	Annex J of IS 13428	—
xx)	Sulphate (as SO <sub>4</sub> ) mg/l, <i>Max</i>	200	400	IS 3025 (Part 24)	May be extended to 400 provided that Magnesium does not exceed 30
xxi)	Sulphide (as H <sub>2</sub> S), mg/l, <i>Max</i>	0.05	No relaxation	IS 3025 (Part 29)	—
xxii)	Total alkalinity as calcium carbonate, mg/l, <i>Max</i>	200	600	IS 3025 (Part 23)	—
xxiii)	Total hardness (as CaCO <sub>3</sub> ), mg/l, <i>Max</i>	200	600	IS 3025 (Part 21)	—
xxiv)	Zinc (as Zn), mg/l, <i>Max</i>	5	15	IS 3025 (Part 49)	—

## NOTES

1 In case of dispute, the method indicated by '\*' shall be the referee method.

2 It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under 'acceptable' render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicated under 'permissible limit in the absence of alternate source' in col 4, above which the sources will have to be rejected.

**Table 5 Pesticide Residues Limits and Test Method**  
(Foreword and Table 3)

Sl No.	Pesticide	Limit µg/l	Method of Test, Ref to	
			USEPA (4)	AOAC/ ISO (5)
(1)	(2)	(3)	(4)	(5)
i)	Alachlor	20	525.2, 507	—
ii)	Atrazine	2	525.2, 8141 A	—
iii)	Aldrin/ Dieldrin	0.03	508	—
iv)	Alpha HCH	0.01	508	—
v)	Beta HCH	0.04	508	—
vi)	Butachlor	125	525.2, 8141 A	—
vii)	Chlorpyrifos	30	525.2, 8141 A	—
viii)	Delta HCH	0.04	508	—
ix)	2,4- Dichlorophenoxyacetic acid	30	515.1	—
x)	DDT ( <i>o, p</i> and <i>p, p</i> – Isomers of DDT, DDE and DDD)	1	508	AOAC 990.06
xi)	Endosulfan (alpha, beta, and sulphate)	0.4	508	AOAC 990.06
xii)	Ethion	3	1657 A	—
xiii)	Gamma — HCH (Lindane)	2	508	AOAC 990.06
xiv)	Isoproturon	9	532	—
xv)	Malathion	190	8141 A	—
xvi)	Methyl parathion	0.3	8141 A	ISO 10695
xvii)	Monocrotophos	1	8141 A	—
xviii)	Phorate	2	8141 A	—

NOTE — Test methods are for guidance and reference for testing laboratory. In case of two methods, USEPA method shall be the reference method.

**Table 6 Bacteriological Quality of Drinking Water<sup>1)</sup>**  
(Clause 4.1.1)

Sl No.	Organisms	Requirements
(1)	(2)	(3)
i)	<i>All water intended for drinking:</i>	
a)	<i>E. coli</i> or thermotolerant coliform bacteria <sup>2), 3)</sup>	Shall not be detectable in any 100 ml sample
ii)	<i>Treated water entering the distribution system:</i>	
a)	<i>E. coli</i> or thermotolerant coliform bacteria <sup>2)</sup>	Shall not be detectable in any 100 ml sample
b)	Total coliform bacteria	Shall not be detectable in any 100 ml sample
iii)	<i>Treated water in the distribution system:</i>	
a)	<i>E. coli</i> or thermotolerant coliform bacteria	Shall not be detectable in any 100 ml sample
b)	Total coliform bacteria	Shall not be detectable in any 100 ml sample

<sup>1)</sup>Immediate investigative action shall be taken if either *E.coli* or total coliform bacteria are detected. The minimum action in the case of total coliform bacteria is repeat sampling; if these bacteria are detected in the repeat sample, the cause shall be determined by immediate further investigation.

<sup>2)</sup>Although, *E. coli* is the more precise indicator of faecal pollution, the count of thermotolerant coliform bacteria is an acceptable alternative. If necessary, proper confirmatory tests shall be carried out. Total coliform bacteria are not acceptable indicators of the sanitary quality of rural water supplies, particularly in tropical areas where many bacteria of no sanitary significance occur in almost all untreated supplies.

<sup>3)</sup>It is recognized that, in the great majority of rural water supplies in developing countries, faecal contamination is widespread. Under these conditions, the national surveillance agency should set medium-term targets for progressive improvement of water supplies.

**Annexure V**  
**Consent to Establish letter attached**  
(As per EC Condition: iii)

# MAHARASHTRA POLLUTION CONTROL BOARD

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2nd, 3rd & 4th floor,  
Opp. Cineplanet,  
Near Sion Circle, Sion (E),  
Mumbai - 400 022.

ORANGE/LSI

Consent No. BO/RO (P&P)/ 900

Consent to Establish is granted to

Date: 10/11/2006.

M/s. Kapstone Construction Pvt. Ltd.,

'Rustomjee 100 Acres' at S. Nos. 12/1-4, 13/1-3, 15/1-5, 16/1(p), 2(p), 3-6, 17/3, 4(p), 5, 6(p), 18/3(p), 4(p), 6(p), 19/1(p)-5(p), 20/1-4, 35/1-8, 36/1-7, 37/1-4, 5(p), 6, 7(p), 9(p), 38/1(p), 2, 4/1-9, 42/1-7, 43/1-12, 44/16, 45/1, 2(p), 3, 4, (p), 5(p), 7(p), 8(p), 9, 10, 46/1(p) 2, 3 (p), 4(p), 6(p), 7(p), 8, 47/1(p), 3(p), 4-8, 48/1-8, 49/1-3, 50/1-3, 51/1-9, 54/1-4, 55/1-5, 84(p), 89(p), 327A-2/1-9, 329/1-4, 5(p), 6(p), 345/1-17, 383, 423-A/1-8, 423C, 424-A/1-4, 424C, 22(p), at Majiwade, Thane.

located in the area declared under the provisions of Water Act (P&CP) 1974, Air Act (P&CP), 1981 and Authorization under the provisions of H.W (M & H) Rules and amendments thereto subject to the provisions of the Acts and the Rules and the Orders that may be made further and subject to the following terms and conditions :-

1. The Consent to Establish is issued to M/s. Kapstone Construction Pvt. Ltd.,

'Rustomjee 100 Acres' at S. Nos. 12/1-4, 13/1-3, 15/1-5, 16/1(p), 2(p), 3-6, 17/3, 4(p), 5, 6(p), 18/3(p), 4(p), 6(p), 19/1(p)-5(p), 20/1-4, 35/1-8, 36/1-7, 37/1-4, 5(p), 6, 7(p), 9(p), 38/1(p), 2, 4/1-9, 42/1-7, 43/1-12, 44/16, 45/1, 2(p), 3, 4, (p), 5(p), 7(p), 8(p), 9, 10, 46/1(p) 2, 3 (p), 4(p), 6(p), 7(p), 8, 47/1(p), 3(p), 4-8, 48/1-8, 49/1-3, 50/1-3, 51/1-9, 54/1-4, 55/1-5, 84(p), 89(p), 327A-2/1-9, 329/1-4, 5(p), 6(p), 345/1-17, 383, 423-A/1-8, 423C, 424-A/1-4, 424C, 22(p), at Majiwade, Thane.

For development of land/plot as new construction activities named as M/s. Kapstone Construction Pvt. Ltd., 'Rustomjee 100 Acres' at S. Nos. 12/1-4, 13/1-3, 15/1-5, 16/1(p), 2(p), 3-6, 17/3, 4(p), 5, 6(p), 18/3(p), 4(p), 6(p), 19/1(p)-5(p), 20/1-4, 35/1-8, 36/1-7, 37/1-4, 5(p), 6, 7(p), 9(p), 38/1(p), 2, 4/1-9, 42/1-7, 43/1-12, 44/16, 45/1, 2(p), 3, 4, (p), 5(p), 7(p), 8(p), 9, 10, 46/1(p) 2, 3 (p), 4(p), 6(p), 7(p), 8, 47/1(p), 3(p), 4-8, 48/1-8, 49/1-3, 50/1-3, 51/1-9, 54/1-4, 55/1-5, 84(p), 89(p), 327A-2/1-9, 329/1-4, 5(p), 6(p), 345/1-17, 383, 423-A/1-8, 423C, 424-A/1-4, 424C, 22(p), at Majiwade, Thane on 4,39,437 sq mtrs including utilities and services such as residential & commercial 6500 no. of flats etc. as per construction commencement certificate issued by local body.

2. CONDITION UNDER WATER ACT :-

- The daily quantity of (a) sewage effluent from above construction project including (b) waste water from swimming tank/water sports shall not exceed 4,714 cubic meters per day
- Sewage Effluent Treatment :** The Applicant shall provide a comprehensive sewage treatment plant as is warranted with reference to influent quality and corresponding mode of disposal and operate and maintain the same continuously so as to achieve the quality of treated effluent to the following standards:-

PARAMETERS	Limit	Standards for sub-streams		
		(A)	(B)	Unit
pH	In between	5.5 to 9	7 to 8.5	
Suspended Solids	Not to exceed	100	10	mg/l
B.O.D. 3 days 27 C	Not to exceed	30	10	mg/l
Oil & Grease	Not to exceed	10	NIL	mg/l
Dissolved Phosphates (as P)	Not to exceed	5	5	mg/l
Dissolved Oxygen	Not less than	5	5	mg/l
R. Chlorine	Not to exceed	0.1	0.1	Mg/l

(iii) Sewage effluent Disposal:-

Domestic treated effluent shall be disposed of on land for gardening/ irrigation/ lawns/ tree-plantations within own premises. Excess treated sewage effluent shall be disposed into to under ground drainage scheme provided by local body. In no case, effluent shall find its way to any water body directly/indirectly at any time.





**Non-Hazardous Solid Waste:-**

The total quantity shall not exceed 26284 Kg per day and shall be segregated and treated as follows:-

Sl. No.	Type of Segregated solid waste	Quantity Kg/day	Treatment	Disposal
1	Organic	13142	Invessel Composting at site only	Self-use
2	Inert	12000	Segregation	At approved landfill
3	Paper Packing		Segregation	Sale
4	Rubber		Segregation	At approved landfill
5	Glass		Segregation	Sale
6	Miscellaneous(STP Sludge)	1142	Segregation	Sale/At approved landfill

**3. Other Conditions:-**

1. All activities shall be in resonance with the provisions of Indian Forest Act, 1927 (16 of 1927), Forest (Conservation) Act, 1980 (69 of 1980) and Wildlife (Protection) Act, 1972 (53 of 1972), CRZ notification, and special notifications published for Dahanu, Murud Jangira, Matheran and Mahableshwar area wherever applicable and all the Environmental Statutes and Instruments.
2. This Consent to Establish is issued only for Developing Construction Project purposes.
3. No quarrying activities shall be commenced in the area unless appropriate permissions are obtained for a limited quarrying material required for construction of local residential housing and traditional road maintenance work, provided that such quarrying is not done on Forest Lands and the material is not exported to the outside area.
4. There shall be no felling of trees whether on Forest, Government, Revenue or Private lands except as per prevailing Rules.
5. Extraction of Groundwater for the residential complex shall require prior permission of the State Ground Water Authority or other relevant authorities, as applicable.
6. Near the activities that are related to water (like activity of water parks, water sports) and/or in the vicinity of lake, Dissolved Oxygen shall not be less than 5 mg/liter.
7. In order to ensure that the water from this residential complex do not enter into outside environment, the nallas crossing the township/complex premises, shall be lined, covered and made water tight by the applicant within the premises with intermittent inspection of chambers following good engineering practices as per the regulations of local body. This management shall be such as also to help in excluding the external pollutants degrading the internal environment of residential complex.
8. The Applicant shall prepare management plan for water harvesting, roof-water reclamation, water/storm water conservation and implement the same before handling over of complex for occupation.
9. The Applicant shall draw plans for the segregation of solid wastes into biodegradable and non-biodegradable components. The biodegradable material shall be recycled through scientific in-house composting with the approval of local body and the inorganic material shall be disposed off at approved Municipal Solid Waste landfill site of local body environmentally acceptable location and method. It is clarified that the term solid waste includes domestic, commercial, and garden wastes, but does not include hazardous and bio-medical wastes. The activities of bio-composting and engineered land fill shall be as per the Municipal Solid Waste (M&H) Rules, 2000
10. Applicant shall be responsible to take adequate precautionary measures as detailed in this consent
11. The applicant/generator shall be responsible for safe and scientific collection, transportation, treatment and disposal of Bio-Medical Waste as per the provisions made under the Bio-Medical Waste (Management & Handling) Rules, 1998. Any activity as defined under BMW (M & H) Rules has to obtain a separate Authorization from Maharashtra Pollution Control Board.
12. The applicant, during the construction stage shall provide.
  - a) Septic tank and soak pit of adequate capacity for the domestic effluent generated due to workers residing at site.
  - b) Proper loading and unloading of construction material, excavated material and its proper disposal as per MSW (M&H) Rules 2000.
  - c) Cutting of trees is not permitted, however in unavoidable conditions necessary permission from the local body shall be obtained.
  - d) Green belt of 33% of the open space shall be developed excluding lawns.





The Applicant shall comply with all the provisions of, the Water (Prevention and Control of Pollution) Cess Act, 1977 (to be referred as Cess Act) and Rules as Amended, 2003 and Rules there under :-

The daily water consumption for the following categories shall not exceed, as under

	From ULB (In CMD)	From other sources (In CMD)
(i) Domestic		
a) During construction stage	-----	1000
b) After completion	5893	-----
c) For Fire Fighting (make up water)	-----	-----

The Applicant shall regularly submit to the Board, the returns of water consumption in the prescribed form and pay the Cess as specified under Section 3 of the said Act.

**5. CONDITIONS UNDER AIR ACT :-**

The Applicant may install ----- numbers of diesel generating sets (DG Sets), of capacity -----, and shall be equipped with comprehensive control system as is warranted with reference to generations of emissions and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards:-

**(i) Standards for emissions of air Pollutants**

	Not to Exceed		
i) SPM/TPM	Not to Exceed	150	mg/Nm3
ii) SO2	Not to Exceed	50	PPM
iii) NOx	Not to Exceed	60	PPM
iv) SO2 (D.G Set)	Not to Exceed	48	Kg/8 Hrs.

**(ii) The Applicant shall observe the following fuel patterns**

No.	Type of Fuel	Quantity
1	----	-----

**(iii) The Applicant shall erect the Chimney (s) of the following specifications**

No.	Chimney attached to	Height above roof level
1.	----	-----

- a) The Applicant shall provide ports in the chimney and facilities such as ladder, platform etc for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's staff. The chimneys shall be numbered as S-1, S-2 etc and these shall be painted/ displayed to facilitate identification.
- b) Water spraying shall be done on ground to avoid fugitive emissions.
- c) Construction material shall be carried in enclosed vehicles during construction activities.

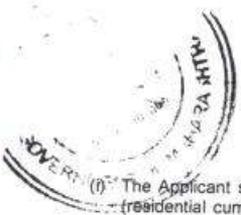
**(iv) Conditions for DG Sets :-**

1. Noise from DG Sets shall be controlled by providing acoustic enclosure or by treating the room acoustically.
2. Applicant should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room shall be designed for minimum 25 dB(A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB(A) shall also be provided. The measurement of insertion loss shall be done at different points at 0.5 meters from acoustic enclosure/ room and then average.
3. The Applicant should make efforts to bring down noise level due to DG Set, outside the premises, with ambient noise level requirements by proper setting and control measures.
4. Installation of DG Set must be strictly in compliance with recommendations of DG set manufacturer;
5. A proper routine and preventive maintenance procedure for DG Set shall be set and followed in consultation with the DG manufacturers, which would help to prevent noise levels of DG Sets from deteriorating with use.
6. The DG set shall be operated only in case of power failure. The applicant shall make arrangement for regular electrical power.
7. The Applicant shall not cause any nuisance in the surrounding area due to operation of DG sets.
8. In case of problems, the D.G. set shall not be operated until it is set back to satisfactory position.

**(v) Conditions For Utilities like Kitchen, Eating Places etc., :-**

1. The kitchen shall be provided with exhaust system chimney with oil catcher connected to chimney through ducting
2. The toilet shall be provided with exhaust system connected to chimney through ducting.
3. The air conditioner shall be vibration proof and the noise shall not exceed 68 dB (A).
4. The exhaust hot air from A.C. shall be attached to Chimney at least 5 mtrs. higher than the nearest tallest building through ducting and shall discharge into open air in such way that no nuisance is caused to neighbors.

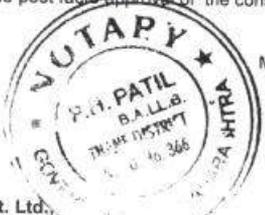




- (i) The Applicant shall take adequate measures for control of noise levels from its own sources within the complex (residential cum Commercial) in respect of noise to less than 55 dB(A) during day time and 45 dB(A) during the night time. Day time is reckoned as between 6 a.m. to 10 p.m. and night time is reckoned between 10 p.m. to 6 a.m.
- (ii) Construction equipments generating noise of less than 65/90 db(A) are permitted.
- (iii) No construction work is permitted during night time.

**6. CONDITIONS UNDER HW (M & H) & AMENDMENT RULES 2003**

- The Applicant shall not generate or handle any hazardous waste.
- 7. The proposed activity comes under Entry 31 (New Construction Project) listed in schedule I of the EIA Notification dated January 27, 1994 (as amended till date) issued by Ministry of Environment & Forest, Govt. of India, New Delhi and therefore, Environmental Clearance from Govt. of India (MoEF) shall be required as per conditions in the amended EIA Notification dated July 07, 2004.
- 8. The applicant shall certify that the bricks used in construction are manufactured using the ash from Thermal Power stations if it is within a radius of 100 km. from Thermal Power Plant and submit the names of bricks manufacturer.
- 9. This "Consent to Establish" is issued subject to the planning permission and permission for non-agricultural (N.A.) use from the Competent Authority.
- 10. The applicant shall obtain Environmental Clearance from MoEF, GOI before taking any steps to develop/ start construction the site.
- 11. The applicant shall not-handover the residential complex unless obtain Consent to Operate/NOC from Maharashtra Pollution Control Board and compliance of Environment Clearance granted by MoEF Government of India.
- 12. The applicant shall take the proper remediation measures to ensure that the ground water and soil contamination is prevented and follow due diligence at the construction stage.
- 13. This Board reserves the right to amend or add any conditions in this consent and the same shall be binding on the Applicant;
- 14. This consent is issued with the post facto approval of the consent appraisal committee.



For and on behalf of the Maharashtra Pollution Control Board

*Dr. D.B. Boralkar*  
(Dr. D.B. Boralkar)  
Member Secretary



To  
**M/s. Kapstone Construction Pvt. Ltd.,**  
 "Rustomjee 100 Acres" at S. Nos. 12/1-4, 13/1-3,15/1-5, 16/1(p), 2(p), 3-6, 17/3,4(p), 5,6(p), 18/3(p),4(p), 6(p), 19/1(p)-5(p), 20/1-4, 35/1-8, 36/1-7, 37/1-4, 5(p), 6,7(p), 9(p), 38/1(p),2,4/1-9, 42/1-7, 43/1-12, 44/16, 45/1,2(p), 3,4, (p), 5(p), 7(p), 8(p), 9,10,46/1(p)2,3 (p), 4(p), 6(p), 7(p), 8, 47/1(p), 3(p), 4-8, 48/1-8, 49/1-3, 50/1-3, 51/1-9, 54/1-4, 55/1-5, 84(p), 89(p), 327A-2/1-9, 329/1-4,5(p), 6(p), 345/1-17, 383, 423-A/1-8, 423C, 424-A/1-4, 424C, 22(p), at Majiwade, Thane.

Copy forwarded with compliments to

- 1. The Collector, Thane.
- Copy to
- 1. Regional Officer, MPCB, Thane.
- 2. Sub Regional Officer, MPCB, Thane-I.
- 3. Chief Accounts Officer, MPCB, Mumbai

Received consent fee of

Amount	DD No.	Date	Drawn on
Rs. 10,08,000/-	050295	24.06.2006	Punjab National Bank

- 4. Cess Branch, MPCB, Mumbai.
- 5. Master file.
- 6. EIC, M.P.C.Board, Mumbai.

20 JAN 2007

**TRUE COPY**  
Attested by *[Signature]*

*P.H. Patil*  
P. H. PATIL B.A.L.L.B.  
Advocate & Notary  
Thane

Seen original document on the basis of the said document I Attested.

**Annexure VI**  
**Environment Clearance letter attached**  
(As per EC condition: i)

**Government of Maharashtra**

SEAC-2013/CR- 344/TC-1  
Environment department  
Room No. 217, 2<sup>nd</sup> floor,  
Mantralaya Annexe,  
Mumbai- 400 032.  
Dated: 25<sup>th</sup> March, 2014

To,  
M/s. Kapstone Constructions Pvt. Ltd.  
702, Natraj, M.V. Road Junction,  
Western Express.  
Highway, Andheri (E), Mumbai

**Subject: Environmental clearance for Amendment in Environmental Clearance for Residential and Commercial Project at Majiwade, Thane by M/s Kapstone Constructions P L**

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered as per the EIA Notification - 2006, by the State Level Expert Appraisal Committee-II, Maharashtra in its 16<sup>th</sup> & 18<sup>th</sup> meetings decided to recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 61<sup>st</sup> & 66<sup>th</sup> Meetings.

2. It is noted that the proposal is for grant of Environmental Clearance for Amendment in Environmental Clearance for Residential and Commercial Project at Majiwade, Thane. SEAC considered the project under screening category 8(b) B1 as per EIA Notification 2006.

**Brief Information of the project submitted by Project Proponent is as:**

<b>Name of Project</b>	Expansion of Residential & Commercial Project			
<b>Name of Proponent</b>	M/s.Kapstone Constructions Pvt. Ltd.			
<b>Consultant</b>	M/s.Mahabal Enviro Engineers Pvt. Ltd.			
<b>Type of project</b>	Expansion of Residential & Commercial Project			
<b>Location of the project</b>	At Majiwade, Thane (W), Maharashtra			
<b>Total Plot Area</b>	3,09,176.40 m <sup>2</sup>			
<b>Net plot area</b>	3,09,176.40 m <sup>2</sup>			
<b>Permissible FSI</b>	3,09,176.40 m <sup>2</sup>			
<b>Proposed Built-up Area (FSI &amp; Non-FSI)</b>		<b>Completed Area (m<sup>2</sup>)</b>	<b>Proposed Area (m<sup>2</sup>)</b>	<b>Total Area (m<sup>2</sup>)</b>
	<b>FSI Area</b>	70,634.43	3,00,055.46	3,70,689.89
	<b>Non-FSI Area</b>	77,150.23	3,20,215.34	3,97,365.57

	<b>Construction Area</b>	1,47,784.66	6,20,270.80	7,68,055.46
<b>Ground coverage percentage</b>	36%			
<b>Estimated cost of the project</b>	Rs. 2440 Cr.			
<b>No. of Buildings &amp; its configuration</b>				

Sr. No.	Description	No. of Bldg.	No. of Floors	No. of Tenement	Population
<b>COMPLETED BUILDINGS/UNDER CONSTRUCTION WITH NO CHANGE</b>					
1	Residential Plot 1	4	St + P + 27 Flrs	416	2080
2	Residential Plot 2	1	St + 18 Flr	106	530
3	Residential Plot 5	2	St + P + 32 Flrs	512	2560
		1	St + P + 11 Flrs	88	440
		1	St + 16 Flrs	282	1410
<b>UNDER CONSTRUCTION BUILDING/WITH AMENDMENTS</b>					
4	Residential Plot 4	4	St + P + 20 Flr	302	1510
5	Residential Plot 4(Commercial)	1	G + 1	-	48
6	Residential Plot 6	9	St + 4P + 31 Flrs	1,593	7965
		3	St + 4P + 26 Flrs	414	2070
7	School Plot 1	1	B + G + 7 Flrs	-	2058
<b>PROPOSED BUILDINGS/CHANGE IN PLANNING</b>					
8	Residential Plot 7	1	St + 2P + 31 Flrs	347	1735
		2	St + 2P + 12 Flrs	720	3600
9	Health + Comm + Plot 1	1	B + G + 18 Flrs	-	1863
10	Commercial Plot 2	1	St + 2P + 25 Flrs	-	2906
11	School Plot 3	1	B + G + 3 Flrs	-	981
12	Commercial plot 1	1	St+P+18	-	3997
	Total			1,067	11,085
	Total for Township	37 nos.		4,780	35,753
<b>Number of tenants and shops</b>	Total Flats: 4780 Nos. (3376 Prop + 1404 constructed) Shops: 72 Nos.(Prop.)				
<b>Number of expected residents / users</b>	Total Population of project: 35,753 Nos. (completed + proposed) (7020 nos comp.+ 28733 nos prop.)				

<b>Height of the building(s)</b>	Max height: 115 m	
<b>Right of way</b>	The proposed site is accessible by 60 m wide Mumbai Nashik Highway	
<b>Turning radius</b>	Min 6 m turning radius	
<b>Existing Structure</b>	Yes	
<b>Total Water requirement</b>	<b>Dry Season</b>	
	Fresh water (CMD)	1697 KLD
	Source	TMC
	Recycled Water (CMD)	2616 KLD
	Total water requirement (CMD)	2812 KLD
	Swimming pool make up (cum)	
	Fire fighting (cum)	3400 m <sup>3</sup> One time requirement
	<b>Wet Season</b>	
	Fresh water (CMD)	1245 KLD
	Source	TMC
	Recycled Water (CMD)	2616 KLD
	Total water requirement (CMD)	2812 KLD
	Swimming pool make up (cum)	
	Fire fighting (cum)	3400 m <sup>3</sup> One time requirement

<b>Rain Water Harvesting (RWH)</b>	Level of ground water table	4 m
	Size and No. of RWH tanks and quantity	RWH tanks with total capacity of 904 m <sup>3</sup> (for two day storage) will be provided
	Budgetary allocation	Capital Cost: Rs.100 lakh/yr O & M: Rs. 11 lakh
<b>Storm Water Drainage</b>	Natural water drainage pattern	Towards South Side
	Quantity of storm water	13,467 m <sup>3</sup> /hr (for entire plot)
	Size of SWD	0.45 x 0.45m 0.45 x 0.35m 0.6 x 0.55m 0.5 x 0.5m
<b>Sewage and waste water</b>	Sewage generation (CMD)	2642 KLD
	STP Technology	MBBR

	Capacity of STP (CMD)	Total Capacity:3041 KLD
	Location of the STP	Below ground
	DG sets (during emergency)	DG sets will be provided as alternate supply for essential services such as STP, Fire Fighting, and Lift etc. DG sets provided of total capacity: 5995 kVA
	Budgetary allocation	Capital Cost: Rs. 703 Lacs O & M: 56 Lacs
<b>Solid waste management</b>	<b>Waste generation in the pre construction and construction phase</b>	
<b>Disposal of the construction way debris</b> <b>The demolition waste will be disposed at designated disposal site as approved by the collector. Construction waste will be utilized at project site for filling purpose</b>		
	<b>Waste generation in the Operation phase</b>	
	Dry Waste (kg/d)	6487 kg/day
	Wet Waste (kg/d)	4324 kg/day
	STP Sludge (dry sludge) (kg/d)	26 KLD
	Mode of Disposal of Waste	
	Dry Waste	Dry garbage will be segregated & disposed off to recyclers
	Wet Waste	Wet garbage will be composted using Mechanical Composting Technology and used as organic manure for landscaping.
	STP sludge (dry sludge)	Sludge use as manure for gardening
	Location and total area provided for the storage and treatment of the solid waste	On ground
	Budgetary allocation	Capital Cost: Rs. 161 Lacs. O & M Cost: Rs. 13 Lacs/year
<b>Green Belt Development</b>	<b>Total RG Area</b>	46,379.63 m <sup>2</sup> (prop.+comp). (39,631.89 m <sup>2</sup> proposed

		) (6,747.74 m <sup>2</sup> completed )
	<b>RG area other than green belt (please specify for playground, etc.)</b>	13,183.67 m <sup>2</sup>
	<b>RG area under green belt</b>	33,195.96 m <sup>2</sup> (prop.+comp.) (26448.22 m <sup>2</sup> proposed) (6747.74 m <sup>2</sup> completed)
	RG on ground	14,541.00 m <sup>2</sup> (prop.+comp.) (13365.57 m <sup>2</sup> proposed) (1175.43 m <sup>2</sup> completed)
	RG on Podium	18,654.96 m <sup>2</sup> (prop.+comp.) (13082.65 m <sup>2</sup> proposed) (5572.31 m <sup>2</sup> completed )
	<b>Budgetary allocation</b>	Capital Cost: Rs. 370 Lacs O & M Cost: 44 Lacs/year

<b>Energy</b>	<b>Power supply</b>	
	Maximum demand	48 MW
	Connect load	107 MW
	Source	MSEDCL
	% of saving	20%
	Budgetary allocation	Capital Cost: Rs.486 lakh; O & M: Rs. 19 Lacs/Annum
	<b>DG Set</b>	
	Number and capacity of the DG sets to be used	Total: 5995 kVA
	Type of fuel used	Diesel

**Environment Management Plan Budgetary Allocation**

Component	Capital Cost (Rs. In Lakhs)	O & M Cost (Rs. In Lakhs/year)	Frequency
STP (Tertiary)	703	56	Continuous O & M Environment Monitoring: Monthly,

			<b>STP outlet water quality for pH, BOD, COD, SS and O&amp;G</b>
<b>Solar System</b>	<b>486</b>	<b>19</b>	<b>Weekly</b>
<b>Rainwater harvesting</b>	<b>100</b>	<b>11</b>	<b>During rainy season (cleaning of UG tanks and filtration units before rainy season)</b>
<b>Solid Waste Composting plant</b>	<b>161</b>	<b>13</b>	<b>Continuous O &amp; M Environment Monitoring: Monthly to assess the compost quality</b>
<b>Landscape</b>	<b>370</b>	<b>44</b>	<b>Daily</b>
<b>Environmental Monitoring</b>	<b>10</b>	<b>-</b>	
<b>Total Cost</b>	<b>1830</b>	<b>144</b>	

<b>Traffic Management</b>	<b>Nos. of the junction to the main road &amp; design of confluence: 2 Junctions</b>	
	Parking details	
	Number & area of basement	8,687.57 m <sup>2</sup>
	Number & area of podium	126677.16 m <sup>2</sup> (prop.+comp) (115821.91 m <sup>2</sup> proposed ) (10855.25 m <sup>2</sup> completed )
	Total Parking Area	1,35,364.73 m <sup>2</sup> (prop.+comp.) (124509.48 m <sup>2</sup> proposed ) (10855.25 m <sup>2</sup> completed )
	Area per car	32 m <sup>2</sup> avg
	2-Wheeler	5618 Nos.
	4-Wheeler	6685 Nos..

3. The proposal has been considered by SEIAA in its 61<sup>st</sup> & 66<sup>th</sup> meetings & decided to accord 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) This environmental clearance is issued subject to land use verification. Local authority / planning authority should ensure this with respect to Rules, Regulations, Notifications, Government Resolutions, Circulars, etc. issued if any. Judgments/orders issued by Hon'ble High Court, Hon'ble NGT, Hon'ble Supreme Court regarding DCR provisions, environmental issues applicable in this matter should be verified. If any discrepancy found in the plans submitted or details provided in the above para may be reported to environment department. This environmental clearance issued with respect to the environmental consideration and it does not mean that State Level Impact Assessment Authority (SEIAA) approved the proposed land use.
- (ii) The height, Construction built up area of proposed construction shall be in accordance with the existing FSI/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. Plan approving authority should also ensure the zoning permissibility for the proposed project as per the approved development plan of the area.
- (iii) "Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.
- (iv) All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.
- (v) Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement in Para 2. Prior certification from appropriate authority shall be obtained.
- (vi) 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 and First Aid Room etc.
- (vii) Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
- (viii) The solid waste generated should be properly collected and segregated. dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material
- (ix) Wet garbage should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for gardening. And, no wet garbage will be disposed outside the premises. Local authority should ensure this.
- (x) Arrangement shall be made that waste water and storm water do not get mixed.
- (xi) All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.
- (xii) Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
- (xiii) Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.
- (xiv) Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for

general safety and health aspects of people, only in approved sites with the approval of competent authority.

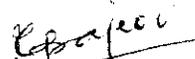
- (xv) Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
- (xvi) Construction spoils, including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.
- (xvii) Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.
- (xviii) The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.
- (xix) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.
- (xx) Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
- (xxi) Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.
- (xxii) Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September 1999 and amended as on 27th August, 2003. (The above condition is applicable only if the project site is located within the 100Km of Thermal Power Stations).
- (xxiii) Ready mixed concrete must be used in building construction.
- (xxiv) The approval of competent authority shall be obtained for structural safety of the buildings due to any possible earthquake, adequacy of fire fighting equipments etc. as per National Building Code including measures from lighting.
- (xxv) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xxvi) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xxvii) The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.
- (xxviii) The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treated effluent emanating from STP shall be recycled/refused to the maximum extent possible. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treatment of 100% gray water by decentralized treatment should be done. Necessary measures should be made to mitigate the odour problem from STP.
- (xxix) Local body should ensure that no occupation certification is issued prior to operation of STP/MSW site etc.
- (xxx) Permission to draw ground water and construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.
- (xxxi) Separation of gray and black water should be done by the use of dual plumbing line for separation of gray and black water.

- (xxxii) Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
- (xxxiii) Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.
- (xxxiv) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement
- (xxxv) Energy conservation measures like installation of CFLs /TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible like installing solar street lights, common solar water heaters system. Project proponent should install, after checking feasibility, solar plus hybrid non conventional energy source as source of energy.
- (xxxvi) Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.
  
- (xxxvii) Noise should be controlled to ensure that it does not exceed the prescribed standards. During nighttime the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
  
- (xxxviii) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.
  
- (xxxix) Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, which is proposed to be mandatory for all air-conditioned spaces while it is aspirational for non-air-conditioned spaces by use of appropriate thermal insulation material to fulfill requirement
  
- (xl) The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.
  
- (xli) Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.
  
- (xlii) Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.
  
- (xliii) Six monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.
  
- (xliv) A complete set of all the documents submitted to Department should be forwarded to the Local authority and MPCB.

- (xlv) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Department.
  - (xlvi) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
  - (xlvii) Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-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 reported to the MPCB & this department.
  - (xlviii) The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at <http://ec.maharashtra.gov.in>.
  - (xlix) Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1<sup>st</sup> June & 1<sup>st</sup> December of each calendar year.
    - (l) A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
    - (li) 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; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sector 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.
    - (lii) 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 respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
    - (liii) The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.
4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.
5. In case of submission of false document and non compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environmental Clearance

without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.

6. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.
7. **Validity of Environment Clearance:** The environmental clearance accorded shall be valid for a period of 5 years.
8. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
9. 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, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.
10. Any appeal against this environmental clearance shall lie with the National Green Tribunal, Van Vigyan Bhawan, Sec- 5, R.K. Puram, New Delhi – 110 022, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

  
(R.A. Rajeev)  
Principal Secretary,  
Environment department &  
MS, SEIAA

**Copy to:**

1. Shri. R. C. Joshi, IAS (Retd.), Chairman, SEIAA, Flat No. 26, Belvedere, Bhulabhai desai road, Breach candy, Mumbai- 400026.
2. Shri. Ravi Bhushan Budhiraja, Chairman, SEAC-II, 5-South, Dilwara Apartment, Cooperage, M.K.Road, Mumbai 400021
3. Additional Secretary, MOEF, 'Paryavaran Bhawan' CGO Complex, Lodhi Road, New Delhi – 110510
4. Member Secretary, Maharashtra Pollution Control Board, with request to display a copy of the clearance.
5. The CCF, Regional Office, Ministry of Environment and Forest (Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No- 3, E-5, Ravi-Shankar Nagar, Bhopal- 462 016). (MP).
6. Commissioner, Thane Municipal Corporation, Thane
7. Collector, Thane.

8. Regional Office, MPCB, Thane
9. IA- Division, Monitoring Cell, MoEF, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-110003.
10. Select file (TC-3).

(EC Uploaded on 25/3/14)

**Annexure VII**  
**Form -V ESR Report**  
(As per EC condition: Iiii)



# Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

## FORM V

Environmental Audit Report for the financial Year ending the 31st March 2017

### Company Information

**Company Name**

Kapstone Construction Pvt. Ltd.

**Application UAN number**

MPCB-CONSENT-0000018736

**Address**

Construction Office, Azziyano-J Wing, Mumbai Nashik Bypass Highway, Majiwade, Thane (West)

**Plot no**

327/2/1,327/2/4,423/A/4,423/A/2,423/A/6,424/A/4

**Taluka**

Thane

**Village**

Majiwade

**Capital Investment (In lakhs)**

400.00

**Scale**

S.S.I

**City**

Thane

**Pincode**

-

**Person Name**

Mr. BOMAN IRANI

**Designation**

Director

**Telephone Number**

9167929942

**Fax Number****Email**

prasaddhatrak@rustomjee.com

**Region**

SRO-Thane I

**Industry Category**

Green

**Industry Type**

G72 Ready mix cement concrete

**Last Environmental statement submitted online**

no

**Consent Number**

MPCB-CONSENT-0000018736

**Consent Issue Date**

20.03.2017

**Consent Valid Upto**

15.11.2017

### Product Information

**Product Name**

Ready Mix Concrete No. 1 & Ready Mix Concrete No. 2

**Consent Quantity**

60000

**Actual Quantity**

--

**UOM**

MT/A

### By-product Information

**By Product Name**

NA

**Consent Quantity**

NA

**Actual Quantity**

NA

**UOM**

MT/A

### 1) Water Consumption in m3/day

**Water Consumption for Process****Consent Quantity in m3/day**

63

**Actual Quantity in m3/day**

63

**Cooling**

0

0

**Domestic**

2

2

**All others**

0

0

**Total**

65

65

### 1) Effluent Generation in CMD / MLD

**Particulars**

Domestic Sewage

**Consent Quantity**

1

**Actual Quantity**

1

**UOM**

CMD

Effluent	0.2	0.2	CMD
----------	-----	-----	-----

**2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)**

<b>Name of Products (Production)</b>	<b>During the Previous financial Year</b>	<b>During the current Financial year</b>	<b>UOM</b>
RMC	2.64	2.64	CMD

**3) Raw Material Consumption (Consumption of raw material per unit of product)**

<b>Name of Raw Materials</b>	<b>During the Previous financial Year</b>	<b>During the current Financial year</b>	<b>UOM</b>
Cement	1900	1900	MT/A
Fly Ash	8000	8000	MT/A
Crush Sand	41100	41100	MT/A
M Sand	3000	3000	MT/A
Metal-I	33000	33000	MT/A
Metal-II	38880	38880	MT/A
Micro Silica	350	350	MT/A
MAPAI-DYNAMON 530	300	300	MT/A
SWC CHRYSO 3230	300	300	MT/A

**4) Fuel Consumption**

<b>Fuel Name</b>	<b>Consent quantity</b>	<b>Actual Quantity</b>	<b>UOM</b>
Diesel	18615	18615	Ltr/A

**Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)**

**[A] Water**

<b>Pollutants Detail</b>	<b>Quantity of Pollutants discharged (kL/day) Quantity</b>	<b>Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour Concentration</b>	<b>Percentage of variation from prescribed standards with reasons %variation</b>	<b>Standard</b>	<b>Reason</b>
NA	NA	NA	NA	NA	NA

**[B] Air (Stack)**

<b>Pollutants Detail</b>	<b>Quantity of Pollutants discharged (kL/day) Quantity</b>	<b>Concentration of Pollutants discharged(Mg/NM3) Concentration</b>	<b>Percentage of variation from prescribed standards with reasons %variation</b>	<b>Standard</b>	<b>Reason</b>
NA	NA	NA	NA	NA	NA

**HAZARDOUS WASTES**

**1) From Process**

<b>Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
0	NA	NA	

**2) From Pollution Control Facilities**

<b>Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
0	NA	NA	

**SOLID WASTES**

**1) From Process**

<b>Non Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
---------------------------------	---	--	------------

Organic	4796830	4796830	Kg/Annum
Inert, Paper packing, Rubber, Glass	4380000	4380000	Kg/Annum
Miscellaneous (STP Sludge)	416830	416830	Kg/Annum

### **2) From Pollution Control Facilities**

<b>Non Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
NA	NA	NA	CMD

### **3) Quantity Recycled or Re-utilized within the unit**

<b>Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
0	NA	NA	

**Please specify the characteristics(in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.**

#### **1) Hazardous Waste**

<b>Type of Hazardous Waste Generated</b>	<b>Qty of Hazardous Waste</b>	<b>UOM</b>	<b>Concentration of Hazardous Waste</b>
0	NA	CMD	NA

#### **2) Solid Waste**

<b>Type of Solid Waste Generated</b>	<b>Qty of Solid Waste</b>	<b>UOM</b>	<b>Concentration of Solid Waste</b>
Organic	4796830	Kg/Annum	Self-use
Inert, Paper Paking, Rubber, Glass	4380000	Kg/Annum	At approved landfill, Sale
Miscellaneous (STP Sludge)	416830	Kg/Annum	Sale at approve landfill

**Impact of the pollution Control measures taken on conservation of natural resources and consequently on the cost of production.**

<b>Description</b>	<b>Reduction in Water Consumption (M3/day)</b>	<b>Reduction in Fuel &amp; Solvent Consumption (KL/day)</b>	<b>Reduction in Raw Material (Kg)</b>	<b>Reduction in Power Consumption (KWH)</b>	<b>Capital Investment(in Lacs)</b>	<b>Reduction in Maintenance(in Lacs)</b>
NA	NA	NA	NA	NA	NA	NA

**Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution.**

#### **[A] Investment made during the period of Environmental Statement**

<b>Detail of measures for Environmental Protection</b>	<b>Environmental Protection Measures</b>	<b>Capital Investment (Lacks)</b>
STP	Water prevention	703
Rainwater harvesting	Water prevention	100
Solid Waste Composting plant	Soil prevention & protection	161

#### **[B] Investment Proposed for next Year**

<b>Detail of measures for Environmental Protection</b>	<b>Environmental Protection Measures</b>	<b>Capital Investment (Lacks)</b>
NA	NA	NA

**Any other particulars in respect of environmental protection and abatement of pollution.**

#### **Particulars**

NA

#### **Name & Designation**

# **Environmental Status Report (ESR)**

**As per EC condition (liii)**

**December 2016 to May 2017**

**“Kapstone Constructions Pvt. Ltd.”**  
**Expansion of Residential & Commercial**  
**Project**  
**at Majiwade, Thane(W)**

**Proposed by**

**Kapstone Constructions Pvt. Ltd.”**

**Mahabal Enviro Engineers Pvt. Ltd.**

Environmental Consultant (NABET Approved)

Plot No. F-7, Road No. 21, MIDC Wagle Estate, Thane West - 400604, Maharashtra, India

Phone: 2582 0658/ 3139/ 1663/ 3154 Fax: 91-22-25823543 [thane@mahabal.com](mailto:thane@mahabal.com)

## Environmental Status Report

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# Environmental Status Report

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## Environmental Status Report

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### Introduction

Kapstone Construction Pvt. Ltd. is grant of environment clearance for Proposed expansion of Residential & Commercial at At Majiwade, Thane (W), Maharashtra. SEAC considered the project under screening category 8(b) B1 as per EIA Notification 2006

Received Environment Clearance file no. SEAC-2013/CR-344/TC-1 Govt. of India from MoEF, dated 25.03.2014

Name	<b>Kapstone Construction Pvt. Ltd. Mr. Manish Sawant</b>
Address	702, Natraj, M.V. Road Junction, Western Express Highway, Andheri (East), Mumbai
Telephone	022 - 66766888
Fax	022 - 66766999
Email ID	manishsavant@rustomjee.com

### Project summary

We have started the construction in --

### Present status

#### Construction activity

Construction completed area – 4,05,014.16 m<sup>2</sup>

Construction completed floors and building details

Environmental facilities are

Sr.	Details	Status
1.	DG set	2 no. of 500 kVA & 125 kVA DG set provided onsite for construction phase
2.	Landscape area	13,183.67 m <sup>2</sup>
3.	Tree plantation	-
4.	STP work	Under construction
5.	Solid waste management : OWC details	Under construction
6.	Parking	Under construction
7.	Labour camp	Is provided

## Environmental Status Report

Sr.	Details	Status
8.	Excavation details	- m <sup>3</sup>
9.	Debris details and its management	This material is used for back filling and leveling of the plot and remaining will be disposed to authorized sites.
10.	Ground water recharge : Rain water harvesting	RWH is in progress
11.	Storm water harvesting	Under construction
12.	RMC plant and brick details	Concrete is outsourced
13.	Contact person on site	Mr.

### Construction facility on site

PP has provided safety personal protective equipment & safety net. PP has arranged training programmes for workers about EHS

### Facility provided on site for Labour

Labour camp has been provided for the labours with the all basic necessities like sanitary facilities, drinking water facility, and health check up for workers. Well-equipped first aid box is provided to the workers.

### Plot area details

Details	Total	Unit
Plot area	3,09,176.40	m <sup>2</sup>
<b>Net plot area</b>	<b>3,09,176.40</b>	<b>m<sup>2</sup></b>

### Proposed construction area details

	Completed Area(m <sup>2</sup> )	Proposed Area (m <sup>2</sup> )	Total Area (m <sup>2</sup> )
<b>FSI Area</b>	70,634.43	3,00,055.46	3,70,689.89
<b>Non-FSI Area</b>	77,150.23	3,20,215.34	3,97,365.57
<b>Constriction Area</b>	1,47,784.66	6,20,270.80	7,68,055.46

## Environmental Status Report

### Proposed Building Configuration details

Sr. No.	Description	No. of Bldg.	No. of Floors	No. of Tenement	Population
COMPLETED BUILDING/UNDER/WITH NO CHANGE					
1	Residential Plot 1	4	St+P+27Flrs	416	2,080
2	Residential Plot 2	1	St+18+Flr	106	530
3	Residential plot 5	2	St+P+32 Flrs	512	2,560
		1	St+p+11 Flrs	88	440
		1	St+16+Flrs	282	1,410
UNDER CONSTRUCTION BUILDING/WITH AMENDMENTS					
4	Residential plot 4	4	St+P+20Flr	302	1,510
5	Residential Plot 4(Commercial)	1	G+1	-	48
6	Residential plot 6	99	St+4P+31 Flrs	414	2,070
7	School Plot 1	1	B+G+7 Flrs	-	2,058
PROPOSED BUILDINGS/CHANGE IN PLANING					
8	Residential plot+7	1	St+2P+31 Flrs	347	1,735
		2	St+2P Flrs	720	3,600
9	Health+Comm+Plot1	1	B+G+18 Flrs	-	1,863
10	Commercial plot 2	1	St+2P+25 Flrs	-	2,906
11	School plot 3	1	B+G+3 Flrs	-	981
12	Commercial plot 1	1	St+P+18	-	981
	<b>Total</b>			<b>1,067</b>	<b>11,085</b>
	<b>Total for Township</b>	<b>37nos.</b>		<b>4,780</b>	<b>35,753</b>

### Land: Excavation details

Reutilization and recycling of the construction waste as well as municipal waste on site generating during excavation and from existing and labour camp.

Non compostable waste will be handling by authorised dealer.

Total excavation quantity is used for land filling on site.

### Water Supply

#### **Construction phase:**

For drinking, there is corporation water supply for the labour. We are doing regular water monitoring. Reports submitted along with Compliance Report.

## Environmental Status Report

---

### **Operational phase:**

Water supply source is TMC. Silt fences to reduce the run-off secondary containment and dykes in material storage area

### **Sewage Collection and Disposal System**

#### **Construction phase**

As on date, there are about 1,090 labours on site. We have provided 11 no of mobile toilets to the construction workers. Treated sewage is directed discharged to Municipal Sewer line commissioned.

#### **Operational phase**

We will provide the STP for proposed project of capacity 3,0410 m<sup>3</sup>/day. Existing municipal drainage line is also available on project site. Excess treated water will be drain and connected to the municipal drainage.

### **Storm Water Drain**

We have provided the proper storm water drainage layout along the periphery. And it is connected to the municipal drainage line which already existed. We have the received the permission.

### **Solid Waste Disposal**

#### **Construction phase**

Excavated quantity -m<sup>3</sup> is used in landscape area. Solid waste generation from Labour, municipal waste is handled in -- Kg/day

#### **Operational phase**

We have provided the 1 no. of OWC for management of the municipal solid waste having area is -.

For Non-Biodegradable waste is handover authorised dealer.

### **Power Supply and consumption**

#### **Construction phase**

We have received the power supply from MSEDCL, Pune

#### **Operational phase**

Connected load is 107 MW. We have provided the DG set having total capacity is 5,995 kVA.

### **Roads, Traffic and Transport.**

## **Environmental Status Report**

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### **Construction phase**

Project has well connectivity for road. Internal road having width is 6 m and proper Entry & Exit points. Nearest DP road is having 60 m width.

All incoming and outgoing vehicles during construction phase will be having direct access from the main road to project site, so there will not be any disturbance to existing traffic movement.

Well maintained the existing traffic by providing the internal road as per norm. (6 m internal driveway). We have maintained the proper entry record register of each vehicle was entered.

### **Operational phase**

We will provide proper 6 m internal road and its having proper connectivity to main road.

### **Housing and Slums**

We are providing the labour camp on site. (Proposed construction) and there was a contract basis labour in nearby area on daily basis.

Slums issue is not applicable for this project.

### **Air**

We have monitored the Air pollution every in month and 6<sup>th</sup> monthly report have sent to MoEF, Bhopal and RO & HQ of MPCB offices with the EC compliance condition.

### **Dust**

Use of water sprinkles during construction phase. Proposed road side plantation along the boundary of the proposed construction site and also within the project site.

Safety catch nets are provided around the construction are to ensure a safe walk way for the construction workers & machinery.

Use the RMC plant on site.

Cleaned the debris waste Or constriction waste every day.

Periodic maintenance of construction equipment. And use the good quality of fuels and use of personal protective equipments.

## **Environmental Status Report**

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### **Noise levels**

We have monitored the Air pollution every in month and 6<sup>th</sup> monthly report have sent to MoEF, Nagpur and RO & HQ of MPCB offices with the EC compliance condition.

No construction work will be done during night time

Construction equipment will be well maintained to reduce the noise pollution as per the standard limits.

We have provided the earplugs, muffs to the construction staff.

### **Industries, Wastes and Hazards**

It is a residential & commercial project. This issue is not applicable.

### **Health**

We have provided the regular facility of the Health Check-up to the labour. Provide the Medical facility to the labour and resident. Also provide the ambulance facility. Gym, physiotherapy and card room & indoor game facility, club house facility, Temple, Pool with bars, grab bars & Ramps is also provided for resident.

### **Facility**

Doctors Room, Doctor, Physiotherapist on call (24 hr.), Ambulance, Tie ups with leading hospitals, Health checkup, Tie-up with Health Spring, Shuttle Bus Service, Lifts with Stretcher Lift, Canteen, Bill pay service like MSEB, Telephone, Property Tax & Maid servants

### **Environmental Impacts**

The potential environmental impact, which needs to be regulated, is mentioned below:

- Air pollution due to the emission of Particulate Matter and gaseous pollutants;
- Noise pollution due to various noise generating equipment as well as vehicular movement;
- Wastewater generation from sanitary/domestic activities; and Solid waste disposal.

To ensure better environment in & around the project site as well as for the neighbouring population, an effective EMP is developed separately for construction and operational phases.

# Environmental Status Report

---

## 1.1 During construction phase

The proposed project will have certain construction activities. Pollution control during construction is of considerable importance and it is necessary to consider the potential of environmental pollution during this phase.

### **The following measures will be adopted during construction phase:**

- Construction materials will be stored in covered go-down or enclosed spaces to prevent the windblown fugitive emissions.
- Adequate and proper procedures for construction material handling / overhauling will be followed.
- Truck carrying soil, sand, stone dust, and stone will be duly covered to avoid spilling and fugitive emissions.
- Adequate dust suppression measures such as regular water sprinkling at vulnerable areas of construction sites will be done to control fugitive dust during material handling and hauling activities in dry seasons.
- During construction activity, labour may be employed from outside and require temporary housing. We will be providing Labour camp, drinking water, sanitary services for the workers.
- Noise control measures will be adopted at appropriate stages, the most effective being control at the source itself.
- The onsite workers using high noise equipment and those working in the noisy area will adopt noise protection devices like ear plugs/ muffs.
- Use fly ash in the building structure, walling as well as plasters and mortars.
- The vehicle maintenance area during construction will be located in such a manner as to prevent contamination of ground water by accidental spillage of oil.
- We will be providing separate parking area for unloading material vehicles within the site premises so as to avoid waiting of other vehicles.
- We will be providing Mobile Sewage treatment Plant for labour.
- Monitoring of air and water quality at regular intervals will be conducted during construction phase

## 1.2 During operation phase

Environment Monitoring Cell will be developed for environmental monitoring, analysis and control of all possible sources due to the proposed project. The responsibility of the cell will be to keep regular check on the pollution control measures adopted at proposed project site through a regular monitoring of various environmental parameters and strict implementation of the environment management plan adopted.

### 1.3 Land Environment

#### 1.3.1 Construction phase

Waste generated from construction activity includes construction debris, biomass from land clearing activities; waste from the Labour camp, etc.

The following section discusses management for each type of waste. Besides, management of topsoil is an important area for which management measures are required.

##### **Construction debris:**

Construction debris is bulky and heavy and re-utilization and recycling is an important strategy for management of such waste.

Recycled aggregate will be used for filler application, and as a sub-base for road construction. Mixed debris with high gypsum, plaster, will not be used for filling, as they are highly susceptible to contamination, and will be given to recyclers.

Construction contractors will remove metal scrap from structural steel, piping, concrete reinforcement and sheet metal work from the site. A significant portion of wood scrap can be reused on site. Recyclable wastes such as plastics, glass fiber insulation, roofing etc. will be sold to recyclers.

##### **Waste from Labour camp:**

Waste generated from labour camps will mainly comprise of household domestic waste, which will be collected and composted on site. The non-compostable and non-recyclable portion of the waste will be collect & segregated. We have made arrangement for collection & disposal of Non-biodegradable waste.

##### **Topsoil management:**

To minimize disruption of soil and for conservation of topsoil, the contractor will take out the topsoil separately and stockpile it. After the construction activity is over, topsoil will be utilized for land levelling activity.

#### 1.3.2 Operation phase

Solid waste management will be to encourage the four ways of waste i.e. Waste Reduction, Reuse, Recycling, and Recovery (materials & energy). This will result lesser quantity will be land fill.

The Environmental Management Plan for solid waste focuses on three major components of the waste management system i.e. collection & transportation, treatment or disposal and closure & post closure care of treatment/disposal facility.

##### **Collection & transportation:**

During the collection stage, the biodegradable and non-recyclable/inert waste will be stored and collected separately.

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### **Treatment & disposal:**

The segregated biodegradable waste will be composted by using OWC machine, i.e. the compost will be used as manure for landscaping.

The non-compostable and non-recyclable portion of the waste will be collect & segregated & handed over to the authorised dealer

### **1.4 Air Environment**

#### **1.4.1 Construction phase**

Daily sprinkling of water on road will reduce the fugitive dust emission. PUC will be compulsory for all the vehicles being parked in the project site. The construction machinery will kept in secured place and use of low sulphur fuel will help in reducing the adverse impact.

#### **Following measures will be carried out for further environmental improvements.**

- Environment management cell will be developed for the regular check-up and efficient maintenance of all the pollution control arrangements.
- To prevent fugitive emissions at solid handling areas conveyors, elevators, silos etc. All other transfer points, proper care will be taken to minimise the exit of particulates. There will be no falling of raw materials from the conveyors.
- We will use covered vehicles used for the loading & unloading material which will reduced the fugitive dust emission.
- Cleaning and sweeping of floors will be a regular feature of normal plant operations.
- A green belt around the project site and plantation within the plant premises especially around the possible sources of fugitive emissions is recommended to further reduce the dust emissions to maintain a clean and healthy environment.
- Water sprinkling will be carried out to prevent dust pollution.
- Site will be provided with entry & exit points and driveways for easy movement of vehicles.
- Sign boards at driveways and at parking areas will be installed.

#### **1.4.2 Operation phase**

To mitigate the impact of pollutants from vehicular traffic during the operational phase of the site, the following measures are recommended for implementation.

- **Vehicle emission controls**

Adequate informatory signage's/Speed control devices will be put up within premises near entry/exit gates to regulate and control the speed of outgoing/incoming traffic. Regular maintenance of the vehicles will be mandatory. PUC will be compulsory for all the vehicles being parked in the building premises. Security persons at entry and exit point to insure the smooth traffic movement.

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- **Landscape development**

Increasing vegetation in the form of landscape is one of the preferred methods to mitigate air pollution. Plants generate oxygen, serve as a sink for pollutants, reduce the flow of dust and reduce noise pollution.

### 1.5 Noise Environment

#### 1.5.1 Construction phase

**To mitigate the impact of noise from construction equipment, the following measures will be proposed:**

- Noise prone activities will be restricted to the extent possible during night.
- Screening or fencing of the construction site will be done with proper height of fence to prevent nuisance to neighbouring habitation.
- Workers employed in high noise areas will be rotated. Earplugs/muffs, or other hearing protective wear will be provided to those working very close to the noise generating machinery.
- Tree plantation along the periphery of road will act as noise barrier.

#### 1.5.2 Operation phase

We will provide - no. of DG sets when power failure, Acoustic enclosures will be provided on DG sets which will reduce the noise during operation phase.

- **Landscaping:**

Noise attenuating species will be used in a landscape especially surrounding noise generating sources. Trees plantation area act as noise barriers in the premises.

### 1.6 Water Environment

#### 1.6.1 Construction phase

**Following measures will be carried out for further environmental improvements.**

- We will not doing excavation during monsoon.
- Necessary care will be taken to avoid soil erosion.
- We will be providing Mobile STP for sanitary facility. The treated sewage used for construction.
- To prevent surface and ground water contamination by oil/grease, leak proof containers will be used for storage and transportation of oil/grease. The floors of oil/grease handling area will be kept effectively impervious. Any wash off from the oil/grease handling area or workshop shall be drained through impervious drains.
- Construction activities generate disturbed soil, concrete fines, oils and other wastes. On-site collection and settling of storm water, prohibition of

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equipment wash downs, and prevention of soil loss and toxic releases from the construction site are necessary to minimize water pollution.

### 1.6.2 Operation phase

Water conservation measures have been taken including all possible potential for reuse and recycling of water. These could be in the form of the following:

- **Minimizing water Consumption**

Water consumption will be minimized by a combination of water saving devices and other domestic water conservation measures. Furthermore, to ensure ongoing water conservation, an awareness programme will be introduced.

#### Usage:

- We will use of water efficient plumbing fixtures (ultra flow toilets and urinals, low flow sinks). The water efficient plumbing fixtures use less water with no marked reduction in quality and service.
- Leak detection and repair techniques.
- Sweep with a broom and pan where possible, rather than hose down for external areas.
- Promoting reuse of water after treatment & development of closed loop systems
- To promote reuse and development of closed loop system for water, segregation of two schemes namely;
  - Wastewater treatment scheme
  - Storm water management schemes have been suggested.

### Storm water management

The storm water generates from the proposed project will be 13,467 m<sup>3</sup>/hr (for entire plot). We have provided 0.45x 0.45 m, 0.45x0.35m, 0.6x0.55m, 0.5 x0.5m size of storm water drain channel.

We have constructed storm water drainage line upto the final disposal point at our own cost. We have added this cost in the environment management plan.

### Rain Water Harvesting

We will be proposing the RWH tank having capacity of 904 m<sup>3</sup> for two days storage will be provided..

For rainwater collected from ground surface following actions are usually taken:

- Cleaning of surface of vegetation, organic and loose materials.
- Smoothing the surface by mechanical compaction or surface binding treatment.

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- Checking that the surface is free from all such chemical and organic material, which may cause chemical/bacterial contamination of harvested water.

### 1.7 Biological Environment

#### 1.7.1 Construction phase

The construction activities will be carried out only in day time by minimizing the magnitude of the impact. Also water sprinkling will be carried out on the construction site.

After completion of major construction work, the landscape will be developed as there will be no or less disturbance in these areas.

#### 1.7.2 Operation phase

The project is mainly residential in nature and will not have any emissions. Hence the impact envisaged is negligible. Extensive plantation and landscaping is proposed to mitigate any impact during this phase.

- **Plantation & Landscaping**

Selection of the plant species has been done on the basis of their adaptability to the existing geographical conditions and the vegetation composition of the region. During the development of the green belt within the project area, emphasis has been given to selection of plant species like nitrogen fixing species, species of ornamental values, species of very fast growth with good canopy cover etc.

- **Landscape development plan**

In the proposed project, the area allotted for landscaping is 46,379.63 m<sup>2</sup> (prop+comp) (39,631.89 m<sup>2</sup>proposed) (6,747.74 m<sup>2</sup>completed). Various types of trees are proposed for plantation. Total **301 no.** of trees will be planted in the proposed project. The trees will be planted along the compound wall and along the road with adequate space between them so that their growth is not hampered. Plantation has to be taken up randomly and landscaping aspects could be taken into consideration.

### 1.8 Environment Monitoring Cell

Environmental management cell will be formed headed by an Environment Manager supported by adequate number of personnel having sufficient educational and professional qualification and experience to discharge number of personnel having sufficient educational and professional qualification and experience to discharge responsibilities related to environmental management including statutory compliance, pollution prevention, environmental monitoring, preventive maintenance of pollution control equipment and green belt development & maintenance of pollution control equipment and green belt development & maintenance. The head of the cell will directly report to the top

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management. This cell will be the nodal agency to co-ordinate and provide necessary services on environmental issues during construction and operation of the project. This department will interact with MPCB, MoEF, CPCB and Other environment regulatory agencies. The cell will be effective till handing over of the project to society.

Environmental Management cell will implement and review the compliance of the stipulated conditions specified in Environmental Clearance and Consent for Establish. Environmental cell will submit six monthly compliance report regarding status of implementation of each stipulated conditions to MoEF. The cell will be responsible to obtain consent of operate under water Act and Air from MPCB. On getting Consent to operate, the project will be handed over to society. The project proponent will provide technical knowhow, legal and technical training to society personnel for continuing the EMP.

### Environmental Management Audits:

The management audits are to determine whether the activities are conforming to the environmental management systems and effective in implanting the environmental policy. They may be internal or external, but carried out impartially and effectively by a person properly trained for it. Broad knowledge of the environmental process and expertise in relevant disciplines is also required. Appropriate audit programs and protocols will be established.

**Table 1: Organization & Environment Management Cell**

Sr.	Level	Designation	Purpose
1	Honorary	Director / Managing Committee	Policy
2	Manager	Environmental Scientist /Chemist	Job (*)
3	Executive	Supervisor, contractor, Engineers	Implement
4	Third Party	Environmental sampling, analysis will be done through external agency <b>approved by</b> MoEFCC / MPCB	monitoring, testing,

**Table 2: Responsibilities of Environment monitoring cell**

Attribute	Construction Phase	Operation Phase
<b>Water Regime</b>	<ul style="list-style-type: none"> <li>• Install water meters, take readings routinely, and record in the register.</li> <li>• Install necessary modular STP for construction workers and staff etc. to look after its operational &amp; maintenance, take periodical sample to assess the quality.</li> <li>• Keep a daily watch on sanitation/</li> </ul>	<ul style="list-style-type: none"> <li>• Install water meters and take readings routinely,</li> <li>• Monitoring of pH, COD, BOD and TSS of the units to ensure good treatment of waste water into Sewage Treatment</li> <li>• Ensure the network of connection to rain water harvesting units; maintain its sanitation and documentation.</li> </ul>

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Attribute	Construction Phase	Operation Phase
	<p>drains, &amp; good housekeeping.</p> <ul style="list-style-type: none"> <li>Examine proper management of channelization of water to avoid water logging at site</li> <li>Oil spill prevention measures to be taken to avoid pollution of water body.</li> <li>Material storage areas to be kept far away from water body</li> </ul>	<ul style="list-style-type: none"> <li>Storm water drainage system for any abnormality as to its siltation, dropping leaves, hampering of carrying capacities: and if found quickly arrange the rectification.</li> <li>Monitoring of water from recharge pits for specified parameters</li> </ul>
<b>Air</b>	<ul style="list-style-type: none"> <li>Monitoring of Air quality through MoEF approved Laboratory.</li> <li>Ensure water sprinkling for dust suppression.</li> <li>Ensure the use of covering sheets, on the material being transported incoming or outgoing or stored.</li> <li>Use as backup power DG sets to be procured from renowned suppliers with acoustic enclosures.</li> <li>Examine proper traffic arrangement for the construction vehicles including instance of their PUC.</li> <li>Prohibition of open burning of solid waste.</li> <li>Provision of mask and other personnel gazettes to workers with regular health check-up programme.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a schedule and implement proper maintenance of DG sets for use as backup power DG sets to be procured from renowned suppliers with acoustic enclosures and specification as per CPCB norms for its stack height</li> <li>Trees will be planted with special care for controlling dust and noise and placing them very near to the sources of nuisance from air &amp; noise point of view.</li> <li>Monitoring of Air quality through MoEF approved Laboratory.</li> <li>DG set stack monitoring through MoEF approved Laboratory.</li> </ul>
<b>Solid waste</b>	<ul style="list-style-type: none"> <li>Provide training to subcontractor &amp; workers for good sanitation &amp; collecting their individual waste separate it as dry &amp; wet in respective colour coded dust bins provided.</li> <li>Isolated storage of construction raw material such as paint varnishes etc.</li> <li>Segregated garbage will be handed over to authorized agency.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure collection of solid waste every day &amp; keeping the record of this qty., &amp; documents.</li> <li>Segregation of garbage into degradable &amp; non biodegradable waste in a shed earmarked inside the premises.</li> <li>For treatment of biodegradable garbage sent it to the dedicated OWC, carefully without spillage.</li> <li>The separated non biodegradable &amp; inert waste will be sent to authorized agency.</li> <li>The empty drums of paints, pesticides &amp; tubes, E-waste, biomedical waste , spent</li> </ul>

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Attribute	Construction Phase	Operation Phase
		batteries, rubber tires so be collect, end sent to respected site.
<b>Soil &amp; Greening</b>	<ul style="list-style-type: none"> <li>• Provision of separate place for storage of top soil to be used in due course for plantation.</li> <li>• Avoiding excavation during high windy day &amp; heavy monsoon day.</li> <li>• Excess excavation will be used within the premises.</li> <li>• Ensuring that no trees cutting</li> <li>• Plant trees along the boundary of project area.</li> </ul>	<ul style="list-style-type: none"> <li>• Proper landscaping is designed by the landscape architect that are of native species, having good canopy capable of barricading noise, wind borne dust.</li> <li>• Ensure maintenance of lawn &amp; Tree plantation</li> <li>• Provision of work force, tools &amp; watering arrangement.</li> <li>• The trimming to be conducted routinely &amp; especially at the advent of monsoon</li> <li>• Dropping leaves to be collected &amp; used for mulching &amp; not to burn openly.</li> <li>• To keep a watch on storm water drainage especially on adequacy of capacity.</li> </ul>
<b>Noise</b>	<ul style="list-style-type: none"> <li>• To prepare &amp; get approved a regular Noise monitoring schedule &amp; stations</li> <li>• Provision of ear plugs for construction labour and staff &amp; insist its use.</li> <li>• There will be no noisy work in night shifts.</li> <li>• Ensure the provision of barricades along periphery of the site</li> <li>• To obtain guidance from the suppliers &amp; maintain acoustic enclosure for DG sets</li> </ul>	<ul style="list-style-type: none"> <li>• To prepare &amp; get approved a regular Noise monitoring schedule</li> <li>• To obtain guidance from the suppliers &amp; maintain acoustic enclosure for DG sets</li> <li>• To ensure smooth flow make provision of proper parking arrangement, traffic management.</li> </ul>
<b>Socio economic</b>	<ul style="list-style-type: none"> <li>• Providing labour camps with drinking water and sanitation facility.</li> <li>• pre and post employment opportunities for local people</li> <li>• First aid and medical facilities</li> <li>• Proper safety precaution to prevent any accident.</li> </ul>	<ul style="list-style-type: none"> <li>• Job opportunities will be generated for skilled and unskilled such as cleaners, drivers and security guard, etc.</li> <li>• Increased business opportunities viz. market, trade and commerce</li> <li>• Adhere to the high standard of maintenance and services for consistency of the economic development</li> </ul>

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### 1.9 Environmental Monitoring

The objectives of carrying out Environmental monitoring for the project include the following:

- To provide a database against which any short or long term environmental impacts of the Project can be determined;
- To provide an early indication should any of the environmental control measures or practices fail to achieve the acceptable standards;
- To monitor the performance of the Project and the effectiveness of mitigation measures;
- To verify the environmental impacts due to proposed project activities
- To determine project compliance with regulatory requirements, standards and government policies;

**Table 3: Environment monitoring programme during construction phase**

Sr.	Item	Parameters	Frequency	Location
1	Ambient air quality	PM <sub>2.5</sub> & PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , O <sub>3</sub> , Pb, CO, NH <sub>3</sub> , C <sub>6</sub> H <sub>6</sub> , BaP, As, Ni	Monthly	At major construction area. (total 6 locations)
2	Noise level	Equivalent noise level dB(A)	Weekly	At major construction area & during major construction, excavation, slab filling
3	Water analysis	Colour and odour, Suspended solids, pH, turbidity, total dissolved solid, Calcium, Chloride, Fluoride, Residual free chlorine, Iron, magnesium, nitrate, sulphate, Phenolphthalein Alkalinity, Total hardness, total coliform, E-coli	Monthly	Tankers / Municipal supply and bore well
5	Waste water analysis	Color ,pH, BOD, COD, TSS, TDS, O &G , Iron, Silica, Total hardness, Nitrates, Fluoride, Manganese, Bio assay test, Arsenic, Mercury, Lead, Copper, zinc, Selenium, Nickel, Cadmium, hexavalent Chromium, Chromium, cyanide, Vanadium, Nitrate Nitrogen, Total Kjeldahl Nitrogen, Sulphide	Daily	Before & after treatment from STP.
3	Exhaust from DG set	PM <sub>2.5</sub> & PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub>	Six Monthly	Stack of DG sets.

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**Table 4: Environment monitoring programme during operational phase**

Sr.	Item	Parameters	Frequency	Location
1	Ambient air Quality	PM <sub>2.5</sub> & PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> , O <sub>3</sub> , Pb, CO, NH <sub>3</sub> , C6H6, BaP, As, Ni	Monthly	Periphery of the site.
2	Noise level	Equivalent noise Level	Monthly (Especially during festival period)	Near DG sets, Near STP, Near parking area.
3	Exhaust from DG set	PM <sub>2.5</sub> & PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub>	Monthly	Stack of DG sets.
4	Water analysis	Colour and odour, Suspended solids, pH, turbidity, total dissolved solid, Calcium, Chloride, Fluoride, Residual free chlorine, Iron, magnesium, nitrate, sulphate, Phenolphthalein Alkalinity, Total hardness, total coliform, E-coli	Monthly during rainy season	Harvested water stored in tank.
5	Waste water analysis	pH, BOD, COD, TSS, TDS, O & G, Iron, Silica, Total hardness, Nitrates, Fluoride, Manganese, Bio assay test, Arsenic, Mercury, Lead, Copper, zinc, Selenium, Nickel, Cadmium, hexavalent Chromium, Chromium, cyanide, Vanadium, Nitrate Nitrogen, Total Kjeldahl Nitrogen, Sulphide	Daily, Monthly and Six monthly	Before & after treatment from STP.

### 1.10 Budgetary provisions for Environmental Management Plan

Adequate budgetary provisions we have been made for construction & operational phase. For the initial five years, the management shall keep regular budget provision for in-plant measures to reduce pollution and construction of additional treatment units to facilitate wastewater recycling/reuse and reduction in air pollution. A budgetary provision will be made for up gradation of air pollution control equipments to control the gaseous pollutants and dust emission.

**Table 5: Budgetary provisions during operation phase**

Sr	Component	Total Set up cost (In Lakh)	O & M cost (In Lakh / year)
1	STP (Tertiary)	703	56
2	Solar System	486	19
3	Rainwater harvesting	100	11
4	Solid Waste Composting plant	161	13
5	Landscape	370	44
6	Environmental Monitoring	10	-

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7	Total Cost	1,830	144
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