To,

**The Member Secretary** 

**State Environment Impact Assessment Authority (SEIAA).** 

Qr. No. 5RF-2/1, Unit-IX

Bhubaneswar-751022, Odisha.

Sub: Submission of Half Yearly Compliance Report from October-2017 to March-2018.

Ref: EC Order No. 623/SEIAA, Dtd.19.04.2015.

Sir,

With reference to above subject, we are submitting herewith the half yearly compliance report in respect of stipulated prior Environmental Clearance terms and conditions in respect of our Residential Project at Sukinda; Jajpur, Odisha of M/s. Sureka Merlin Promoters Pvt. Ltd.

Thanking You
Yours faithfully

For **Sureka Merlin Promoters Pvt. Ltd.** 

CC to:

Regional Office (EZ),. MoEF A/3, Chandrasekharpur, Bhubaneswar - 751023

# SIX MONTHLY COMPLIANCES TO ENVIRONMENTAL CLEARANCE

# FOR THE MONTH FROM OCTOBER-2017 to MARCH-2018

# For

# RESIDENTIAL HOUSING PROJECT OF SUREKA MERLIN PROMOTERS PVT.LTD,

AT

MOUZA-TRIJANGA, MANPUR, TAHASIL-SUKINDA, DIST-JAJPUR.

Six Monthly Environmental Clearance Compliance Report for (S+10) Residential Building of M/s Sureka Merlin Promoters Pvt. Ltd., at Mouza- Trijanga, Manapur, Tahasil- Sukinda,

District-Jajpur.

Sl.No.	Conditions	Compliance
	eral Condition	
i	The project proponent shall approve the building plan from concerned authority and comply all the conditions stipulated in the building approval letter. This environmental clearance is subject to approval of building plan by KNDA, Jajpur.	The unit has already been approved of building plan from KNDA, Jajpur vide Order no.BP-348/13 ( Part II) 23/KNDA, Dtd.09.01.2018
ii	The applicant (project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by them in Form-1, Form-1A, and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.	Agreed, measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management are being followed.
iii	The applicant will take statutory clearance / approval/permissions from the concerned authorities in respect of the project as and when required.	Agreed, will take statutory clearance /approval/permissions from the concerned authorities as and when required.
iv	The applicant will submit half yearly compliance report on post environmental monitoring in respect of the stipulate terms and conditions in the Environmental clearance to the State Environmental Impact Assessment Authority (Odisha (SEIAA) on 1st June and 1st December of each calendar year.	Half yearly compliance report on post environmental monitoring will be submitted to SEIAA, Odisha as per Schedule.
v	The project proponent shall obtain periodic Occupancy Renewal Certificate from the competent authority at an interval of 3 to 5 years as per the provisions of National Building Code (NBC) 2005.	Agreed
vi	The Project proponent shall comply to all the conditions stipulated by the fire Prevention Officer, Odisha.	We will comply with all the conditions stipulated by the fire Prevention Officer, Odisha.
Vii	The applicant will adopt the prescribed norms, and standards provided in the National Building Code of India, 2005.	The prescribed norms, and standards provided in the National Building Code of India, 2005, relating to fire protection, safety of personnel, lighting, water supply, drainage, noise etc has been adopted during construction phase.
viii	Considering the peak water consumption the design of the water supply system and the sewage disposal system of the project should be based on the provisions of water consumption.	The water supply system and the sewage disposal system will be designed considering peak water consumption of the occupants of the building.
ix	The project proponent should ensure advertising in at	We had intimated the fact of

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least two local newspapers widely circulated in the of environmental grant region, one of which shall be in vernacular language clearance of the project in two informing the public that, the project has been accorded local news papers in Oriva and environment clearance and copies of the clearance letters English. are available with SEIAA, Odisha and the Odisha State Pollution Control Board (OSPCB) and may also be seen on the website of the board. The advertisement shall be made within 7 (Seven) days from the date of issue of the environmental clearance & a copy of the same should be forwarded to the Regional Office of MoEF, Bhubaneswar. A copy of the clearance letter shall be sent by the X It is already been complied. proponent to concerned Panchavat, Zila Parisad/Muncipal Corporation, Urban local Body and the NGO. if anv. from 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. The proponent shall upload the status of compliance of хi The monitoring data shall be the stipulated environmental clearance condition, submited to OSPCB, MoEF including results of monitored data on their website and Regional office regularly. shall update the same periodically. It shall simultaneously be sent to the Regional Office, SEIAA, Odisha, the respective Zonal Office of CPCB and the SPCB. The environment statement for each financial year Will be submitted. xii ending 31st March in form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as per 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 environmental clearance conditions and shall also be send to the respective Regional Offices of the Ministry by e-mail. xiii Any appeal against this environmental clearance shall lie Noted. with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010. 2. Special conditions **Construction Phase** A. No ground water shall be extracted for the project work i Water is being supplying at any stage during the construction phase. If ground through tankers to meet the water will be used during construction phase, they shall requirement during obtained permission from the Water construction phase. Department. Provision shall be made for the housing of construction Temporary housing structure ii labourers within the site with all necessary infrastructure are being provided inside the and facilities such as fuel for cooking, mobile toilets, site the labours and workers. mobile STP, safe drinking water, medicinal health care, However most of labourers are crèche etc. The housing may be in the form of temporary coming from the nearby areas, stuctures to be removed after the completion of the thus they do not need accommodation facility expect project.

drinking water and toilet. A First-Aid room will be provided in the project site both A First-Aid room will provide iii during construction and operation of the project. in the project. iv All the top soil excavated during construction activities The excavated top soil should be stored separately for use in land filing, generated during construction horticulture/ landscape development within the project activities is stored in a safe place to avoid erosion. This site. will be used in plantation within the project site. Disposal of muck during construction phase should not Agreed, safe disposal of muck v adverse effect on the neighboring with necessary precautions communities and will be disposed off taking the has been taken to prevent any necessary precautions for general safety and health adverse effect. aspects of people only in approved sites with the approval of competent authority. Construction spoils, including bituminous material and vi All precautions adopted to other hazardous materials should not be allowed to avoid contaminated/leaching contaminate watercourses, ground water and dump sites of toxic materials into ground by following safe dumping / disposal practice as per water. statutory rules and norms with necessary approval of the Odisha State Pollution Control Board. The fuel for diesel generator sets to be used during vii Agreed, monitoring data of the construction phase shall use low sulfur diesel fuel and site shows that air and noise in should conform to Environment (Protection) Rules 1986 region within prescribed for air emission and noise standards. stipulated standards as per Environment (Protection) Rules 1986. The daily diesel consumption viii The diesel required for operating DG sets shall be stored is purchased from the nearby in underground tanks and, if required, clearance from the Chief Controller of Explosives shall be taken. fuel refilling station. Vehicles use for bringing construction materials to the Vehicles pollution ix having site should be in good condition and should have a checked certificates pollution check certificate, covered and conform to engaged for the construction statutory air and noise emission standards and should be work and are operated only operate only during non-peak hours of the day. during non-peak hours. Ambient noise levels should conform to residential The monitoring report X standard both during day and night. Incremental ambient air quality and noise pollution loads on the ambient air and noise quality level indicates the values to be should be closely monitored during construction phase. within the standards. Adequate measures should be taken to reduce ambient CPCB. The stipulated by air and noise level during construction phase, so as to report analysis is being conform to the stipulated standards by CPCB/OSPCB. attached / submitted. Fly ash bricks should be used as building material in the Fly ash bricks / blocks made хi construction as per the provisions of Fly Ash Notification up of fly ash are being used as of September, 1999 and as amended thereafter. per Fly Ash Notification of September, 1999. Ready mixed concrete will be xii Ready mixed concrete would be used in building used in building construction. construction. xiii Storm water control and its re-use should be as per The provisions for storm water control and its reuse are being CGWB and BIS standards for these applications. implemented during

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construction and post construction phase which will meet the standards of CGWB and BIS. Water demand during construction should be optimized xiv The maximum possible preby adopting best practices without compromising quality. mixed concrete will be used in It should be brought to the site by the tanker. construction to reduce water demand. The dual plumbing line will be Separation of grey and black water supplies and ΧV adopted during the building collection should be done by the use of dual plumbing line. Grey and black water should be treated before construction for separation of recycling / reuse. grey and black water. Low flow type fixtures for Fixtures for showers, toilet flushing and drinking water xvi should be of low flow type and restricted to requirements showers, toilets flushing and by use of aerators, avoiding wastage pressure reducing drinking will be used to reduce devices or sensor based controls. wastage of water. The energy efficient glazed Use of glass may be maximum up to 40% of total outer xvii wall area to reduce the energy consumption and load on windows will be used to air conditioning. If necessary, high quality double glass reduce electricity with special reflective coating may be used in the consumption. windows. xviii Roof should meet the prescribed requirement as per Shall be adopted. Energy Conservation Building Code by using appropriate thermal insulation material. Opaque wall should meet prescriptive requirements as The opaque walls of maximum xix per Energy Conservation Building Code. U-factor (i.e. U-0.352 w/m<sup>2</sup> °C and minimum R-values of insulation (i.e. R-2.35  $m^2$ oC/W) being adopted for all air conditioned spaces. The approval of the competent authority shall be Agreed XX obtained for structural safety of the buildings due to earthquake, adequacy of firefighting equipments etc. as per National Building Code of India, 2006 including protection measures from lightening etc. Regular supervision of the above and other measures for all the Agreed, stipulated xxi monitoring should be in place all through the conditions have been strictly construction phase to avoid disturbances and pollution to followed to avoid disturbances the surroundings. and pollution to be surroundings. 'Consent to Establish' shall be obtained from Odisha State The unit has obtained Consent xxii Pollution Control Board before start of any construction to Establish from OSPCB vide work at the site. No.13548/Ind-II-NOC-5902, Dtd.06.08.2015. **OPERATION PHASE** B. No ground water shall be used during the operation Agreed. phase. If ground water will be used during operation phase, they shall obtain permission from the water Resources Department. The proponent has to install of STP of 475 KLD based on ii During operational phase (FAB technology). Treatment of 100% grey water by 232m<sup>3</sup>/day will be met from

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decentralized treatment should be done. Discharge of city Water Supply or ground unused treated effluent shall conform to the norms and water source. Total 220 KLD of standards of the Odisha State Pollution Control Board. treated water from STP will be Necessary measures should be taken to mitigate the reused for Flushing. odour problem from STP. Landscaping & cooling tower club.etc. During the operational stage of proposed project, waste water demand will be 276 KLD and treated effluent shall conform to the norms and standards of the Odisha State Pollution Control Board. Will be taken care of. iii In no case there should be any discharge of treated effluent to outside of the project premises. iv The STP sludge should not be dried nor incinerated Solid Waste Management to within the project site and should be disposed off as per ensure effective collection, the norms of SPCB, Odisha. transportation and disposal in accordance with the respective manuals and SPCB norms and regulations. The STP must treat all kinds of pollutants present in it Will be taken care of. v and its capacity should take into account the entire load of sewage / Waste generated by inhabitants. The project proponent will ensure that under no Will be taken care of. vi circumstances, the environment is polluted due to nonfunctioning / under performance of sewage disposal system of the project. The solid waste generated should be properly collected vii Will be taken care of. and segregated. Wet garbage along with STP sludge should be composted and dry / inert solid wasted should be disposed through a certified agency for safe disposal. For such disposal necessary approval / permission may be obtained from the concerned authorities. In no case waste should be left in the premises untreated. The certified agency shall also ensure disposal of solid waste in and approved disposal site. viii Diesel power generating sets propose as source of back-All DG sets will be enclosed up power for lifts elevators and common area tvpe conforming illumination during operation phase should be of environment Protection (EP) enclosed type and conform to Environment Protection rules 1986. Height of D.G stack will be following the CPCB (EP) rules 1986. The height of the stack of DG sets should be equal to the height needed for the combined capacity guidelines. of all proposed DG sets put together and should be more than the highest building height. Low sulfur diesel should be used. The location of the DG sets may be decided in consultation with Odisha State Pollution Control Board. Care may be taken to avoid disposal of smoke/pollutants from DG sets in the residential area. Low sulfur diesel of oil (LDO or HSD) is to be used in DG set.

ix Noise should be controlled to ensure that it does not The Noise Management Plan is exceed the prescribed standards. During night time, the designed to ensure the control noise levels measured at the boundary of the sites shall and limitation of potential be restricted to the permissible levels to comply with the sources of noise during the prevalent regulations. operation phases. Green belt & avenue Plantation of trees over the site area X Adequate green belt development will be done (minimum 20%) shall be done using native tree species/shrubs improving greenery & keeping in view within site. aesthetics considerations in the whole complex. Professional landscape architects should be engaged to design the green layout to provide for multi tier plantation and green fencing all around, mitigating various environmental pollutants like dust; noise, emissions etc. and pathway for joggers. Rain water harvesting for roof runoff and surface run-off Proper rain water harvesting хi should be implemented as per submitted plan. Before system, as recommend by recharging the runoff, pre-treatment must be done to SEAC, will be implemented at remove suspended matter, oil, grease and other soluble site. components as per norms. Rainwater recharge should be through specified recharge pits of required numbers. The surface runoff water should be stored suitably treated and reused for landscaping. The bore-well for rainwater recharging should be kept at least 5 mts, above the highest ground water table. The technology may preferably be adopted from a registered commercial firm with performance guarantee. Weep holes in compound walls shall be provided to xii. Will be taken care of. ensure natural drainage of excessive rain water in the project area during the monsoon period after the harvesting operations. Care must be taken so that there is no water logging in the territory and drainage is 100%. Traffic congestion near the entry and exit points from the xiii. Recommendations have been roads adjoining the proposed project site must be considered in the design avoided. Traffic congestion shall be avoided inside the proposal and will be project site. The area ear-marked for parking shall not be implemented site at used for any other purpose. Alternate entry and exit must accordingly. be provided to handle excess traffic and emergency situations. xiv A report on the energy conservation measures Will be submitted confirming to energy conservation norms finalized, by the Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc and submitted to the SEIAA, Odisha in three months time before operations/ habitation. Provisions of solar hot water storage/supplies at the roof Will be considered. ΧV top may be made as per statutory norms of CPCB/MoEF/SPCB, Odisha. Energy conservation measures like installation of Will be taken care of. xvi. CFLs/TFLs for lighting the areas outside the building should be integral part of the project design and should

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	be in place before project commissioning. Used CFLs and TFLs should be properly collected and disposed off/ sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid toxic contamination. Use of solar panels is adapted to the maximum extent possible, especially for street lights.	
xvii	The building blocks should have adequate distance between them to allow movement of fresh air and	Considered in the design proposal.
	passage of natural light, air and ventilation.	ргорозии
xviii	The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this fund shall be diverted for other purpose like Annual allocation and maintenance /monitoring etc. and expenditure for this fund should be reported to the SEIAA, Odisha on regular basis.	Will be taken care of.

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# LIST OF ANNEXURES

Annexure-I	Six monthly average monitoring data for Ambient Air Quality
Annexure-II	Six monthly average monitoring data for Water Quality
Annexure-III	Six monthly average monitoring data for Noise Level
Annexure-IV	Six monthly average monitoring data for Soil Quality

ANNEXURE-I

AMBIENT AIR QUALITY RESULTS, Six monthly Averages (Oct'17 to Mar'18)

Pollutant		Locations of Sampling			Standards	Method of
(unit)	Near Main Gate	Near Block No-6	Near Block No-9	Sulai Village	(unit)	Measurement
PM <sub>10</sub> (μg/m <sup>3</sup> )	71.4	63.8	57.3	45.3	100 (μg/m³)	Gravimetric method
PM <sub>2.5</sub> (μg/m <sup>3</sup> )	42.0	36.2	31.8	23.8	60 (μg/m³)	Gravimetric method
SO <sub>2</sub> (μg/m <sup>3</sup> )	7.8	6.1	5.2	4.4	80 (μg/m³)	Improved West Gaeke method.
NOx (μg/m³)	35.6	29.6	25.8	21.6	80 (μg/m³)	Jacob &Hochhelser modified (Na- Arsenite) method
CO (mg/m³)	0.51	0.39	0.32	0.28	4(mg/m³)	NDIR Spectroscopy method

#### **ANNEXURE-II**

#### WATER QUALITY RESULTS, Six monthly Averages (Oct'17 to Mar'18)

#### WATER QUALITY OF BORE WELL NEAR MAIN GATE

Sl.No.	Parameter	Unit	Testing Methods	Standard as per IS -10500:1991	Oct'17 to Mar'18
1	Colour	Hazen	APHA 2120 B, C	5	CL
2	Odour		APHA 2150 B	U/O	U/O
3	Taste	-	APHA 2160 C	Agreeable	ÁL
4	Turbidity	NTU	APHA 2130 B	5	2.7
5	pH Value		APHA 4500H+B	6.5-8.5	6.7
6	Total Hardness (as CaCO <sub>3</sub> )	mg/l	APHA 2340 C	300	78.0
7	Iron (as Fe)	mg/l	APHA 3500Fe, B	0.3	0.21
8	Chloride (as Cl )	mg/l	APHA 4500Cl-B	250	22.0
9	Residual, free Chlorine	mg/l	APHA 4500Cl, B	0.2	ND
10	Dissolved Solids	mg/l	APHA 2540 C	500	235.0
11	Calcium (as Ca )	mg/l	APHA 3500Ca B	75	29.18
12	Magnesium (as Mg)	mg/l	APHA 3500Mg B	30	2.0
13	Copper (as Cu)	mg/l	APHA 3111 B,C	0.05	< 0.05
14	Manganese (as Mn)	mg/l	APHA 3500Mn B	0.1	< 0.005
15	Sulphate (as SO <sub>4</sub> )	mg/l	APHA 4500 SO <sub>4</sub> <sup>2</sup> - E	200	3.2
16	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 4500 NO <sub>3</sub> - E	45	1.78
17	Fluoride (as F)	mg/l	APHA 4500F-C	1.0	0.015
18	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	APHA 5530 B,D	0.001	<0.001
19	Mercury (as Hg)	mg/l	APHA 3500 Hg	0.001	< 0.001
20	Cadmium (as Cd)	mg/l	APHA 3111 B,C	0.01	< 0.001
21	Selenium (as Se)	mg/l	APHA 3114 B	0.01	< 0.001
22	Arsenic (as As)	mg/l	APHA 3114 B	0.05	< 0.001
23	Cyanide (as CN)	mg/l	APHA 4500 CN- C,D	0.05	ND
24	Lead (as Pb)	mg/l	APHA 3111 B,C	0.05	< 0.01
25	Zinc (as Zn)	mg/l	APHA 3111 B,C	5	< 0.05
26	Anionic Detergents (as MBAS)	mg/l	APHA 5540 C	0.2	<0.2
27	Chromium (as Cr+6)	mg/l	APHA 3500Cr B	0.05	< 0.05
28	Mineral Oil	mg/l	APHA 5220 B	0.01	< 0.01
29	Alkalinity	mg/l	APHA 2320 B	200	81.0
30	Aluminium as( Al)	mg/l	APHA 3500Al B	0.03	< 0.001
31	Boron (as B)	mg/l	APHA 4500B, B	1	< 0.01
32	Poly Aromatic Hydrocarbon as PAH	μg/l	APHA 6440 B		<0.0001
33	Pesticide	mg/l	APHA 6630 B,C	Absent	Absent

Note: CL: Colourless, AL: Agreeable ND: Not Detected

# WATER QUALITY RESULTS, Six monthly Averages (Oct'17 to Mar'18)

#### WATER QUALITY OF BORE WELL NEAR BLOCK NO-6

Sl.No.	Parameter	Unit	Testing Methods	Standard as per IS - 10500:1991	Jan'18 to June'18
1	Colour	Hazen	APHA 2120 B, C	5	CL
2	Odour		APHA 2150 B	U/O	U/O
3	Taste		APHA 2160 C	Agreeable	AL
4	Turbidity	NTU	APHA 2130 B	5	3.0
5	pH Value		APHA 4500H+B	6.5-8.5	6.9
6	Total Hardness (as CaCO <sub>3</sub> )	mg/l	APHA 2340 C	300	75.0
7	Iron (as Fe)	mg/l	APHA 3500Fe, B	0.3	0.18
8	Chloride (as Cl )	mg/l	APHA 4500Cl- B	250	26.0
9	Residual, free Chlorine	mg/l	APHA 4500Cl, B	0.2	ND
10	Dissolved Solids	mg/l	APHA 2540 C	500	229.0
11	Calcium (as Ca )	mg/l	APHA 3500Ca B	75	25.84
12	Magnesium (as Mg)	mg/l	APHA 3500Mg B	30	2.5
13	Copper (as Cu)	mg/l	APHA 3111 B,C	0.05	<0.05
14	Manganese (as Mn)	mg/l	APHA 3500Mn B	0.1	< 0.005
15	Sulphate (as SO <sub>4</sub> )	mg/l	APHA 4500 SO <sub>4</sub> <sup>2-</sup> E	200	4.4
16	Nitrate (as NO <sub>3</sub> )	mg/l	APHA 4500 NO <sub>3</sub> - E	45	1.92
17	Fluoride (as F)	mg/l	APHA 4500F-C	1.0	0.017
18	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l	APHA 5530 B,D	0.001	<0.001
19	Mercury (as Hg)	mg/l	APHA 3500 Hg	0.001	< 0.001
20	Cadmium (as Cd)	mg/l	APHA 3111 B,C	0.01	< 0.001
21	Selenium (as Se)	mg/l	APHA 3114 B	0.01	< 0.001
22	Arsenic (as As)	mg/l	APHA 3114 B	0.05	< 0.001
23	Cyanide (as CN)	mg/l	APHA 4500 CN- C,D	0.05	ND
24	Lead (as Pb)	mg/l	APHA 3111 B,C	0.05	< 0.01
25	Zinc (as Zn)	mg/l	APHA 3111 B,C	5	< 0.05
26	Anionic Detergents (as MBAS)	mg/l	АРНА 5540 С	0.2	<0.2
27	Chromium (as Cr+6)	mg/l	APHA 3500Cr B	0.05	< 0.05
28	Mineral Oil	mg/l	APHA 5220 B	0.01	<0.01
29	Alkalinity	mg/l	APHA 2320 B	200	79.0
30	Aluminium as( Al)	mg/l	APHA 3500Al B	0.03	< 0.001
31	Boron (as B)	mg/l	APHA 4500B, B	1	<0.01
32	Poly Aromatic Hydrocarbon as PAH	μg/l	АРНА 6440 В		<0.0001
33	Pesticide	mg/l	APHA 6630 B,C	Absent	Absent

Note: CL: Colourless, AL: Agreeable ND: Not Detected

ANNEXURE-III

NOISE MONITORING REPORT, Six monthly Averages (Oct'17 to Mar'18)

	Time of	Noise Value in dB(A)		Permissible	
Date of Survey	Survey	Residential Area		Limit in Remarks dB(A)	
		N-1:Near Main Gate	74.8		
Oct'17 to	Day Time	N-2:Near Block No-6	71.0		Within the
Mar'18	6:00AM-10:00 PM	N-3:Near Block No-9	68.6	- 75 -	standard
		N-4:Sulei Village	63.2		

Date of Survey	Time of Survey	Noise Value in dB(A)  Residential  Area		Residential		Permissible Limit in dB(A)	Remarks
	Night Time 10:00 PM to 6:00AM	N-1:Near Main Gate	65.0				
Oct'17 to		N-2:Near Block No-6	43.6	70	Within the standard		
Mar'18		N-3:Near Block No-9	41.8				
		N-4:Sulei Village	39.7				

For Visiontek Consultancy Services Pvt. Ltd.

#### **ANNEXURE-IV**

#### SOIL QUALITY REPORT (Oct'17 to Mar'18)

#### **SOIL QUALITY NEAR MAIN GATE**

Sl. No.	Parameters	Unit	Oct'17 to Mar'18
1	рН		6.8
2	Colour		Light brown
3	Soil Texture		Sandy Clayey
4	Moisture content	%	9.4
5	Bulk Density	gm/cc	1.33
6	Potassium as K <sub>2</sub> O	%	0.18
7	Phosphorus as P <sub>2</sub> O <sub>5</sub>	%	0.22
8	Available Nitrogen	%	0.028
9	Organic Matter	%	2.6
10	Chloride as Cl	%	0.019
11	Sulphate as SO <sub>4</sub>	%	0.03
12	Iron as Fe	%	1.7
13	Calcium as Ca	%	0.52
14	Magnesium as Mg	%	0.29

# SOIL QUALITY REPORT (Oct'17 to Mar'18)

# **SOIL QUALITY NEAR BLOCK NO-6**

Sl. No.	Parameters	Unit	Oct'17 to Mar'18
1	рН		6.8
2	Colour		Grey
3	Soil Texture		Sandy Clayey
4	Moisture content	%	9.2
5	Bulk Density	gm/cc	1.36
6	Potassium as K <sub>2</sub> O	%	0.16
7	Phosphorus as P <sub>2</sub> O <sub>5</sub>	%	0.22
8	Available Nitrogen	%	0.032
9	Organic Matter	%	2.9
10	Chloride as Cl	%	0.016
11	Sulphate as SO <sub>4</sub>	%	0.032
12	Iron as Fe	%	1.5
13	Calcium as Ca	%	0.63
14	Magnesium as Mg	%	0.34

# SOIL QUALITY REPORT (Oct'17 to Mar'18)

#### **SOIL QUALITY NEAR BLOCK NO-9**

Sl. No.	Parameters	Unit	Oct'17 to Mar'18
1	рН		6.6
2	Colour		Brown
3	Soil Texture		Sandy Clayey
4	Moisture content	%	9.8
5	Bulk Density	gm/cc	1.35
6	Potassium as K <sub>2</sub> O	%	0.23
7	Phosphorus as P <sub>2</sub> O <sub>5</sub>	%	0.24
8	Available Nitrogen	%	0.026
9	Organic Matter	%	3.3
10	Chloride as Cl	%	0.021
11	Sulphate as SO <sub>4</sub>	%	0.03
12	Iron as Fe	%	1.75
13	Calcium as Ca	%	0.56
14	Magnesium as Mg	%	0.32

# SOIL QUALITY REPORT (Oct'17 to Mar'18)

# **SOIL QUALITY SULAI VILLAGE**

Sl.No.	Parameters	Unit	Oct'17 to Mar'18
1	рН		6.9
2	Colour		Grey
3	Soil Texture		Sandy Clayey
4	Moisture content	%	9.4
5	Bulk Density	gm/cc	1.34
6	Potassium as K <sub>2</sub> O	%	0.17
7	Phosphorus as P <sub>2</sub> O <sub>5</sub>	%	0.23
8	Available Nitrogen	%	0.024
9	Organic Matter	%	3.4
10	Chloride as Cl	%	0.02
11	Sulphate as SO <sub>4</sub>	%	0.032
12	Iron as Fe	%	1.4
13	Calcium as Ca	%	0.48
14	Magnesium as Mg	%	0.29