

# SIX MONTHLY ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT

*For*

“ INDUSTRIAL PARK ATTIVARAM”

**Attivaram, TalukaOzili,  
District Sri PottiSriramulu Nellore (Andhra Pradesh)**

*By*



**M/s Andhra Pradesh Industrial Infrastructure Corporation (APIIC)**

*Submitted to*

**Ministry of Environment and Forest,  
Regional Office,  
Handloom Export Promotion Council,  
34, Cathedral Garden Road,  
Nungambakkaam, Chennai – 600 034.**

**Prepared by**



**ENVIRONMENTAL CONSULTANT**

**HUBERT ENVIRO CARE SYSTEMS (P) LTD**

**CHENNAI**

**Dec 2017**

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## 1.0 PROJECT DETAILS

Name of the Project	Industrial Park at IP-Attivaram
Location	Attivaram, Taluka Ozili, District Sri Potti Sriramulu Nellore (Andhra Pradesh)
EC.No	F.No.21-93/20 14-IA-III Dated 9th March, 2017 Annexure 1
Total Plot Area	406.26 acres
Plotted area for proposed Industries	194.29 acre
Green Belt	15.38 acre
Open space Area to be used as green belt	30.99 acre
Road Area	36.61 acre.
CFC Area	12.21 acre.
Tank Area	12.55 acre.
Bulk allotment	104.33 acre.
Parking facility	8000 sqm.
Project Cost	Rs.1941.38 Lakhs.

## 2.0 SITE LOCATION & PHOTOGRAPHS



### 3.0 SIX MONTHLY ENVIRONMENTAL CLEARANCE COMPLIANCE STATEMENT

S. No	Conditions	Compliance
<b>Part – A: Special Conditions</b>		
I. Construction Phase		
1.	'Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	CFE is obtained. The copy of the same is enclosed as <b>Annexure-6</b> .  Vide order No. 236 /AP PCB/CFE/RO-NLR/HO/2017. Dt : 03.11.2017.
2.	There shall be a continuous green belt along the plant premises, except at the designated entry and exit points.	Accepted and noted, 15mt. green belt area will be developed all along the boundary of IP.
3.	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six Monthly Monitoring reports.	Noted .
4.	Special purpose vehicle shall be established for implementation, monitoring and compliance of the environmental safeguards.	Accepted and will be followed
5.	All the recommendations of the EMP shall be complied with letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to RO, MoEF&CC along with half yearly compliance report.	Condition agreed upon.

S. No	Conditions	Compliance
6.	The member units shall provide the primary treatment to the effluent generated, as applicable, before taking to the CETP for further treatment to meet the inlet norms.	Accepted and informed to the individual industries to strictly treat the effluents upto CETP inlet standards.
7.	The CETP shall be based on SCADA (Supervisory Control And Data Automation) system and interlocking arrangements to meet the prescribed standards, ensuring Zero Liquid Discharge.	Accepted and noted
8.	The project proponent shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest for improvements.	Accepted and will be followed.
9.	Internal Road widths within the industrial estate shall be minimum 24 m ROW.	Accepted and master plan is prepared and Minimum ROWs are prepared and followed.
10.	Common facilities such as repair shops, rest rooms for drivers and attendants shall be provided.	Accepted and noted
11.	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.	Accepted and noted
12.	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.	Monitoring was carried out and test results attached as <b>Annexure-4</b> . The results shows that there is no change in ground water quality and soil health.

S. No	Conditions	Compliance
13.	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.	Construction spoils, including bituminous material and other hazardous materials are being sent to authorized vendor or near by TSDF.
14.	Parking space to accommodate trucks, cars, two wheelers and bicycles shall be provided as per the norms.	Parking facility proposed for 200 trucks and Bus/Van parking area for 56nos. The total parking area proposed is 8000 sqm.
15.	Any hazardous waste generated during development/ construction phase, should be disposed off as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, with necessary approvals of the State Pollution Control Board.	Accepted and is being followed.
16.	The solid wastes shall be properly collected and segregated in accordance with the Solid Waste Management Rules, 2016. Wet garbage shall be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.	Accepted and is being followed.
17.	The diesel generator sets to be used during development/ construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.	Noted and will be informed to individual industries to use low sulphur diesel type and should confirm to EP Act.

S. No	Conditions	Compliance
18.	The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.	Noted and will be informed to Individual Industries to follow the condition.
19.	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.	Good condition vehicles are being used to bring construction materials to the site and are conformed to the emission standards. The vehicles are operating during non-peak hours only.
20.	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 development/ 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/SPCB.	Noise monitoring was carried and results attached as <b>Annexure-4.B</b> All the values are within the stipulated norms.
21.	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 and 25th January, 2016.	Noted and followed.
22.	Ready mixed concrete must be used in site development and building construction.	Ready mixed concrete will be used in building construction.
23.	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Noted and will be followed.

S. No	Conditions	Compliance
24.	Water demand during development/ construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Noted and followed.
25.	Permission to draw ground water shall be obtained from the competent Authority prior to construction/ operation of the project.	Noted and followed
26.	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.	Noted and will be followed.
27.	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.	Condition agreed upon,Noted and will be informed to individual industries to strictly follow.
28.	Use of glass may be reduced by up to 40% to reduce the electricity consumption and load on airconditioning. If necessary, use high quality low Evalue glass.	Condition agreed upon,Noted and will be informed to individual industries to strictly follow.
29.	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.	Condition agreed upon,Noted and will be informed to individual industries to strictly follow.
30.	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all airconditioned spaces while it is aspirational for non-airconditioned spaces by use of appropriate thermal insulation material to fulfill requirement.	Condition agreed upon,Noted and will be informed to individual industries to strictly follow.

S. No	Conditions	Compliance
31.	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 lightening etc.	At the time of approval it is checked that buildings are designed as per NBC norms.
32.	Regular supervision of the above and other measures for monitoring should be in place all through the development/ construction phase, so as to avoid disturbance to the surroundings.	Noted & followed. Site incharge is in position at the location to monitor.
33.	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.
34.	The responses/commitments made to the issues raised during public hearing shall be complied with in letter and spirit. A hard copy of the action taken shall be submitted to the Ministry	Accepted & Noted.
35.	2% of the project cost shall be earmarked for Corporate Environment Responsibility activities.	Accepted &Noted. CSR activities will be informed to the authority.
36.	Necessary provision to develop facilities for disabled people shall be made under Corporate Environment Responsibility.	Accepted & Noted.

S. No	Conditions	Compliance
37.	<p>Corporate Environment Responsibility:</p> <p>a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.</p> <p>b) The Environment Policy shall prescribe or standard operating process/ procedures to bring into focus any infringements/ deviation/ violation of the environmental or forest norms/ conditions.</p> <p>c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.</p> <p>d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/ or shareholders or stakeholders at large.</p>	Noted.
<b>I I. Operation Phase</b>		
1.	All the topsoil excavated during development/ construction activities should be stored for use in horticulture/landscape development within the project site.	All the topsoil excavated during construction activities is being stored for use in horticulture/landscape development within the project site.

S. No	Conditions	Compliance
2.	Disposal of muck during development/ construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Muck generated during construction phase is being disposed in approved site.
3.	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.	Condition agreed upon and followed.
4.	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. The location of the DG sets may be decided with in consultation with State Pollution Control Board.	As per the requirement DG sets will be provided as back up power.
5.	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 prevalent regulations.	Noted. Noise levels is attached as <b>Annexure-4.B</b> . All Noise levels are with in limits in Industrial park of Attivaram.

S. No	Conditions	Compliance
6.	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.	15 Meters Green belt all along the periphery being provided.
7.	Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.	Accepted and Noted.
8.	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.  The borewell for rainwater recharging should be kept at least 4 mts. above the highest ground water table.	Noted and followed
9.	The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.	Monitoring was carried out for quality of ground water. Reports attached in <b>Annexure-4.C.</b>
10.	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking, loading and unloading should be fully internalized and no public space should be utilized.	Noted and followed

S. No	Conditions	Compliance
11.	A Report on the energy conservation measures confirming to energy conservation norms finalise by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc and submit to the Ministry in three months time.	Noted and will be followed
12.	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.	Accepted and Noted.
13.	The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.	Accepted and Noted.
<b>Part B : General Conditions</b>		
1.	The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.	Accepted and Noted.
2.	Provision should be made for supply of kerosene or cooking gas and pressure cooker to the labourers during construction phase.	Accepted and Noted.

S. No	Conditions	Compliance
3.	Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Chennai.	Accepted and being submitted.
4.	A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.	Condition complied.
5.	The project proponent shall set up a separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	Noted & is being followed. EMC Setting up of is under progress.
6.	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.	Noted & is being followed. Year wise expenditure will be reported to the SEIAA and Ministry's Regional office located at Chennai.
7.	All the compliance 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, 2006.	Accepted and Noted.

S. No	Conditions	Compliance
8.	Officials from the Regional Office of MoEF&CC at Chennai who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/ data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF&CC should be forwarded to the CCF, Regional Office of MoEF&CCat Chennai.	Accepted and Noted.
9.	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	Accepted and Noted.
10.	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Accepted and Noted.
11.	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.	Noted and will be followed as applicable.

S. No	Conditions	Compliance
12.	<p>The project proponent should 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 State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forests &amp; Climate Change at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a>. The advertisement should be made within Seven 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 Chennai.</p>	<p>Condition complied. Paper notification is attached as <b>Annexure-5</b></p>
13.	<p>This 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.</p>	<p>Accepted and Noted.</p>
14.	<p>Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.</p>	<p>Accepted and Noted.</p>

<b>S. No</b>	<b>Conditions</b>	<b>Compliance</b>
15.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParishad/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.	Condition complied.
16.	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 sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Accepted and Noted.

<b>S. No</b>	<b>Conditions</b>	<b>Compliance</b>
17.	The environmental statement for each financial year ending 31st March in Form-Vas 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&CCbye-mail.	Accepted and will be submitted Form-V for every financial end year 31 <sup>st</sup> March.

## **4.0 ENVIRONMENTAL CLEARANCE SIX MONTHLY REPORTS**

It is mandatory to submit six month compliance report to the MoEF Regional Office by the proponent. For the purpose of obtaining six month compliance certificate the environmental monitoring was carried out on site by M/s. Hubert Enviro Care Systems Pvt.Ltd .

### **4.1 Ambient air quality monitoring**

During construction phase particulate matter and gaseous emissions are likely to arise from the site due to soil excavation, movement of vehicles and the operation of DG sets, etc., the ambient air quality parameters such as suspended Particulate Matter (PM<sub>10</sub>), Respirable Particulate Matter (PM<sub>2.5</sub>), sulphur dioxide, Oxides of Nitrogen (NO<sub>x</sub>) and Carbon monoxide were monitored at 3 locations every month. The test report of ambient air quality for the period of Aug-2017 - Nov-2017(12 reports) is enclosed as **Annexure-4.A**. The Ambient air quality has been monitored and it is observed that all the AAQ parameters are within limits.

### **4.2 Ambient Noise level monitoring**

During the construction phase the ambient noise level likely to be generated due to excavation, construction and movement of vehicles 3 locations was selected for monitoring the noise level every month. The test report of ambient noise level for the period of Aug-2017 - Nov-2017(4 reports) is enclosed as **Annexure-4.B**. Noise levels are within limits.

### **4.3 Water quality monitoring**

During construction phase the ground water may get polluted due to infiltration of rainwater mixed with soil contaminants in the site. The water quality tested at 4(per session) locations for various water quality parameters including heavy metals. The test report of water quality for the period of Aug-2017 - Nov-2017(8 reports) is enclosed as **Annexure -4.C**. There is no change in water quality parameters.

#### **4.4 Soil quality monitoring**

During construction phase soil contamination may occur due to oil spills from machinery, during maintenance and operation of DG sets on site. 4(per session) locations was selected for monitoring the soil quality. The Soil samples were collected and analyzed for nutrients and heavy metals. The test report of soil quality monitoring for the period of Aug-2017 - Nov-2017(8 reports) is enclosed as **Annexure-4.D**. Soil quality remains good.

### **5.0 CONCLUSION**

1. The post environmental monitoring was carried out at site during the period of August 2017 - November 2017.
2. All the conditions stipulated in Environmental clearance will be implemented.
3. The monitored parameters of air, ground water and soil quality and noise levels are within the stipulated standards.

# Annexure - 1

## EC-Copy

F.No.21-93/2014-IA-III  
Government of India  
Ministry of Environment, Forest and Climate Change  
(IA.III Section)

Indira Paryavaran Bhawan,  
Jor Bagh Road, New Delhi - 3

Dated: 9<sup>th</sup> March, 2017

To

M/s Andhra Pradesh Industrial Infrastructure Corp. Ltd. (APIIC),  
"Parisrama Bhavanam", 4<sup>th</sup> Floor, 5-9-58/B,  
Basheer Bagh, Fatheh Maidan Road,  
**Hyderabad** - 500 004 (Andhra Pradesh)

**Sub: 'Industrial Park' at Village Attivaram, Taluka Ozili, District SPS Nellore (Andhra Pradesh) by Andhra Pradesh Industrial Infrastructure Corporation Ltd - Environmental Clearance - reg.**

Sir,

This has reference to your application No.164/GM(EMP)/APIIC/EIA-IP Attivaram/2012-13 dated 11.01.2016 and subsequent letters dated 19.04.2016 and 14.12.2016, submitting the above proposal to this Ministry for grant of Environmental Clearance (EC) in term of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986.

2. The proposal for **'Industrial Park' at Village Attivaram, Taluka Ozili, District Sri Potti Sriramulu Nellore (Andhra Pradesh)** by Andhra Pradesh Industrial Infrastructure Corporation (APIIC) Ltd, was considered by the Expert Appraisal Committee (EAC) in the Ministry for Infrastructure Development, Coastal Regulation Zone, Building/ Construction and Miscellaneous projects, in its meetings held on 28-29 March, 2016 and 30-31 May, 2016.

3. The details of the project, as per the documents submitted by the project proponent, and also as informed during the above said EAC meetings, are reported to be as under:-

(i) The project involves construction of an industrial park at village Attivaram, Taluka Ozili, District Sri Potti Sriramulu Nellore (Andhra Pradesh) by Andhra Pradesh Industrial Infrastructure Corporation Ltd.

(ii) The proposed Industrial Park for 406.26 acres by APIIC at Attivaram village, Ozili mandal, Nellore District in Andhra Pradesh, falling within Survey Nos. 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 97, 98, 99, 101, 102, 103, 104, 105, 106. The project is located at Latitude 13°55'33.53"N and Longitude 79°47'32.73"E.

(iii) Presently the current site is vacant.

(iv) Plotted area for proposed Industries - 194.29 acre, Road area - 36.61 acre, Open space area to be used as green belt -30.99 acre, Green belt area -15.38 acre, common facilities area -12.55 acre Bulk allotment -104.33 acre.

(v) During construction phase, the total water demand for the project is expected to be 150 KLD; water will be sourced from Telugu Ganga Channel. During the construction phase, soak pits and septic tanks will be provided for

  
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disposal of waste water. Temporary sanitary toilets will be provided during peak labour force.

(vi) During operation phase, total water demand for the project is expected to be 3986 KLD and the same will be met by Telugu Ganga Channel. The water requirement for domestic use is 330 KLD. Wastewater generated from domestic use will be treated in 500 KLD STP and the treated sewage water of 308 KLD will be utilised for gardening. The water requirement for process, boiler and cooling tower is 2156 KLD and 1500 KLD respectively. The waste water generated will be treated in CETP of 2 MLD capacity with ZLD system. The treated effluent of 1636 KLD will be utilised in boiler/cooling tower, process.

(vii) **Solid and hazardous waste:** Construction phase – 50 kg/day, operational phase – 1150 kg/day. This will be composed in waste processing area of 500 sqm and used for green belt development.

(viii) **Power requirement:** The power requirement is 35.5 MVA which will be sourced from APEPDCL.

(ix) Rain water harvesting system with recharge pits is proposed.

(x) **Parking facility** proposed for 200 trucks and Bus/Van parking area for 56 nos. The total parking area proposed is 8000 sqm.

(xi) **Wildlife issues:** The site is not located within 10 km radius of eco sensitive areas.

(xii) There is **no court case** pending against the project.

(xiii) **Investment/Cost** for the project is Rs.1941.38 Lakhs.

(xiv) **Employment potential:** The employment potential will generate in the nearby locality. During construction phase 75 persons and approx. 1464 persons during operation phase will be employed.

(xv) **Benefits of the project:** The proposal is an Industrial Park to be developed by APIIC at Attivaram village, Ozili Mandal, Nellore District in Andhra Pradesh. The proposal will generate employment in the nearby areas.

(xvi) Terms of Reference was issued to the project vide letter No.21-93/2014-IA-III dated 12<sup>th</sup> January, 2015.

(xvii) **Public Hearing:** The public hearing was conducted on 20<sup>th</sup> November, 2015 at site. The major issues discussed were:

- a) Industries already established in the project area, pose pollution problem to the people as well as grazing animals.
- b) Employment were not provided to local people
- c) Industries are obstructing the natural regime of water flow in the area

4. The EAC, in its 159<sup>th</sup> meeting held on 30-31 May, 2016, has recommended the project for grant of Environmental Clearance. As per recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance to the project for construction of '**Industrial Park**' at **Village Attivaram, Taluka Ozili, District Sri Potti Sriramulu Nellore (Andhra Pradesh)** by Andhra Pradesh Industrial Infrastructure Corporation (APIIC) Ltd, under the provisions of the EIA Notification, 2006 and amendments/circulars issued thereon, and subject to the specific and general conditions as under:-

## **PART A - SPECIFIC CONDITIONS**

### **I. Construction Phase**

- (i) 'Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.

- (ii) There shall be a continuous green belt along the plant premises, except at the designated entry and exit points.
- (iii) The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC along with six Monthly Monitoring reports.
- (iv) Special purpose vehicle shall be established for implementation, monitoring and compliance of the environmental safeguards.
- (v) All the recommendations of the EMP shall be complied with letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to RO, MoEF&CC along with half yearly compliance report.
- (vi) The member units shall provide the primary treatment to the effluent generated, as applicable, before taking to the CETP for further treatment to meet the inlet norms.
- (vii) The CETP shall be based on SCADA (Supervisory Control And Data Automation) system and interlocking arrangements to meet the prescribed standards, ensuring Zero Liquid Discharge.
- (viii) The project proponent shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest for improvements.
- (ix) Internal Road widths within the industrial estate shall be minimum 24 m ROW.
- (x) Common facilities such as repair shops, rest rooms for drivers and attendants shall be provided.
- (xi) All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.
- (xii) 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.
- (xiii) 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.
- (xiv) Parking space to accommodate trucks, cars, two wheelers and bicycles shall be provided as per the norms.
- (xv) Any hazardous waste generated during development/ construction phase, should be disposed off as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, with necessary approvals of the State Pollution Control Board.
- (xvi) The solid wastes shall be properly collected and segregated in accordance with the Solid Waste Management Rules, 2016. Wet garbage shall be

composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.

- (xvii) The diesel generator sets to be used during development/ construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.
- (xviii) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.
- (xix) 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.
- (xx) 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 development/ 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/SPCB.
- (xxi) 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 and 25<sup>th</sup> January, 2016.
- (xxii) Ready mixed concrete must be used in site development and building construction.
- (xxiii) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xxiv) Water demand during development/construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xxv) Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- (xxvi) Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.
- (xxvii) 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.
- (xxviii) Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on airconditioning. If necessary, use high quality low E value glass.
- (xxix) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.
- (xxx) Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all airconditioned spaces while it is aspirational for non-airconditioned spaces by use of appropriate thermal insulation material to fulfill requirement.

- (xxxix) 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.
- (xxxixii) Regular supervision of the above and other measures for monitoring should be in place all through the development/ construction phase, so as to avoid disturbance to the surroundings.
- (xxxixiii) 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.
- (xxxixiv) The responses/commitments made to the issues raised during public hearing shall be complied with in letter and spirit. A hard copy of the action taken shall be submitted to the Ministry.
- (xxxixv) 2% of the project cost shall be earmarked for Corporate Environment Responsibility activities.
- (xxxixvi) Necessary provision to develop facilities for disabled people shall be made under Corporate Environment Responsibility.
- (xxxixvii) Corporate Environment Responsibility:
- a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
  - b) The Environment Policy shall prescribe for standard operating process/ procedures to bring into focus any infringements/deviation/ violation of the environmental or forest norms/ conditions.
  - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
  - d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

## **II. Operation Phase**

- (i) All the topsoil excavated during development/construction activities should be stored for use in horticulture/landscape development within the project site.
- (ii) Disposal of muck during development/construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- (iii) 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.
- (iv) 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. The location of the DG sets may be decided with in consultation with State Pollution Control Board.

- (v) 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 prevalent regulations.
- (vi) 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.
- (vii) Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.
- (viii) 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. The borewell for rainwater recharging should be kept at least 4 mts. above the highest ground water table.
- (ix) The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.
- (x) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking, loading and unloading should be fully internalized and no public space should be utilized.
- (xi) A Report on the energy conservation measures confirming to energy conservation norms finalise by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc and submit to the Ministry in three months time.
- (xii) 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.
- (xiii) The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.

#### **PART – B: GENERAL CONDITIONS**

- i) The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.
- ii) Provision should be made for supply of kerosene or cooking gas and pressure cooker to the labourers during construction phase.
- iii) Six monthly monitoring reports should be submitted to the Ministry and it's Regional Office, Chennai.

*SH*

- iv) A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
- v) The project proponent shall set up a separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- vi) The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.

5. The above 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, 2006.

6. Officials from the Regional Office of MoEF&CC at Chennai who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF&CC should be forwarded to the CCF, Regional Office of MoEF&CC at Chennai.

7. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

8. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

9. 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.

10. The project proponent should 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 State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forests & Climate Change at <http://www.envfor.nic.in>. The advertisement should be made within Seven 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 Chennai.


11. This 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.

12. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

13. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila 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.


14. 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 sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

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&CC by e-mail.

  
9/3/2017  
**(S.K. Srivastava)**  
**Scientist E**

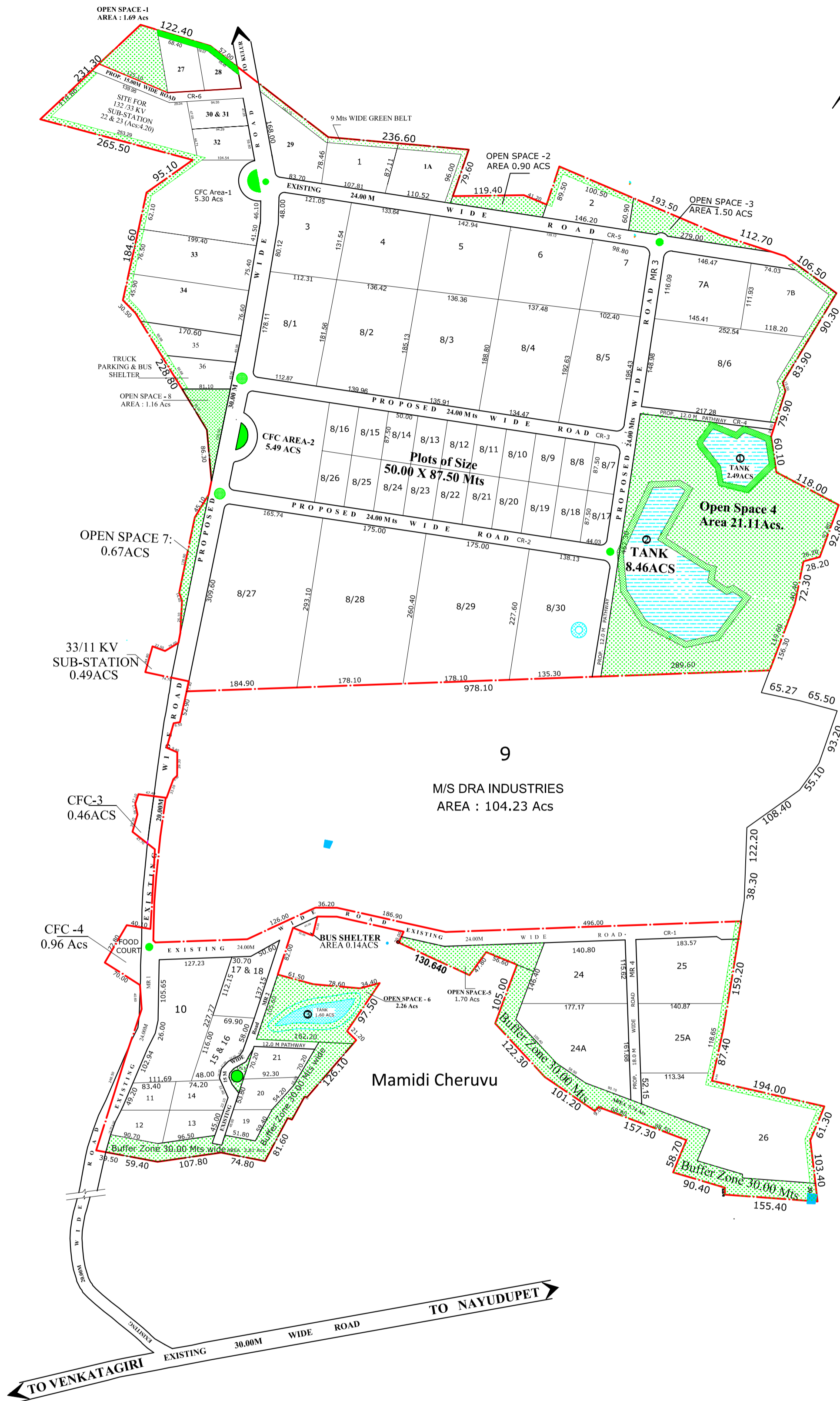
Copy to: -

1. The Chairman, Andhra Pradesh Coastal Zone Management Authority and Special Chief Secretary to Govt., E.F.S & T. Department, Govt. of Andhra, Pradesh Secretariat, Hyderabad- 2
2. The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32.
3. The Member Secretary, Andhra Pradesh Pollution Control Board, Paryarana Bhawan, A-III, Industrial Area, Sanathnagar, Hyderabad - 18.
4. The APCCF (C), Ministry of Environment, Forest and Climate Change, Regional Office, 1st Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai - 34.
5. Guard File.
6. Monitoring Cell

  
9/3/2017  
**(S.K. Srivastava)**  
**Scientist E**

# Annexure 2

## Site Layout



## A. P. I. I. C LIMITED HYDERABAD

COMPREHENSIVE LAYOUT PLAN FOR INDUSTRIAL PARK AT  
ATTIVARAM IN Sy.No.s 55 TO 95, 97 TO 99, AND 101 TO 106  
OF OZILI MANDAL, SPSR NELLORE DISTRICT

- BOUNDARY OF THE TOTAL AREA
- EXISTING ROADS
- PROPOSED ROADS

### LAND USE ANALYSIS

TOTAL AREA	Ac.	406.26	
LESS AREA OF BULK ALLOTMENTS	Ac.	104.23	
PROPOSED LAYOUT AREA	Ac.	302.03	100.00 %
PLOTTED AREA	Ac.	194.29	64.33 %
ROADS AREA	Ac.	36.61	12.12 %
OPEN SPACE	Ac.	30.99	10.26 %
GREEN BELT	Ac.	15.38	5.09 %
CFC AREA	Ac.	12.21	4.04 %
TANK	Ac.	12.55	4.16 %

**Annexure 3**  
**Site Photographs**

## Site photographs



# Annexure 4

## Monitoring Reports

# Hubert Enviro Care Systems (P) Ltd.

# 18, 92nd Street, Ashok Nagar,  
Chennai - 600 083.  
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E-mail : labsales@hecs.in

## Laboratory Services Division

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ISO 9001, 14001 & OHSAS 18001 Certified.

### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC -Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/001/220817  
Report Date : 22/08/2017

Sample Description : Ambient Air Quality  
Sampling Location : Attivaram,Panchayat Buiding  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 -19/08/2017  
Analysis Commenced On : 20/08/2017

Completed On : 22/08/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	$\mu\text{g}/\text{m}^3$	18.44	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	$\mu\text{g}/\text{m}^3$	29.12	IS : 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 $\mu\text{m}$	$\mu\text{g}/\text{m}^3$	50.43	IS : 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 $\mu\text{m}$	$\mu\text{g}/\text{m}^3$	32.16	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	$\text{mg}/\text{m}^3$	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	$\mu\text{g}/\text{m}^3$	BDL(DL 0.05)	IS : 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	$\mu\text{g}/\text{m}^3$	10.12	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	$\mu\text{g}/\text{m}^3$	8.64	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	$\mu\text{g}/\text{m}^3$	BDL(DL 1)	IS : 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	$\text{ng}/\text{m}^3$	BDL(DL 1)	IS : 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	$\text{ng}/\text{m}^3$	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	$\text{ng}/\text{m}^3$	18.44	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit,  $\mu\text{g}/\text{m}^3$ - Micrograms per cubic meter,  
 $\text{mg}/\text{m}^3$ - Milligrams per cubic meter,  $\text{ng}/\text{m}^3$ - Nanograms per cubic meter.

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



*C.P. Sivaraman*  
Authorized Signatory

**C.P. SIVARAMAN**  
Laboratory Manager

**Hubert Enviro Care Systems (P) Ltd.**

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**TEST REPORT**

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/002/220817  
Report Date : 22/08/2017

Sample Description : Ambient Air Quality  
Sampling Location : Karur, GOVT MPP School  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 - 19/08/2017  
Analysis Commenced On : 20/08/2017

Completed On : 22/08/2017

S.No.	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	18.59	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	31.23	IS: 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	49.26	IS: 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	28.16	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS: 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	10.42	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	7.13	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



*C.P. Sivaraman*  
Authorized Signatory

**C.P. SIVARAMAN**  
Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram  
Sample Description : Ambient Air Quality  
Sampling Location : Attivaram Industrial park,SS Bio  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 -19/08/2017  
Analysis Commenced On : 20/08/2017

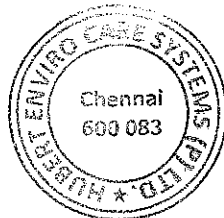
Report No. : HECSL/A/003/220817  
Report Date : 22/08/2017

Completed On : 22/08/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	18.64	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	30.13	IS: 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	53.16	IS: 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	37.16	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS: 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	11.16	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	7.19	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram,  
Address of the Client : Athivaram  
Sample Description : Water  
Sample Mark : Attivaram Village (GW)  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 - 19/08/2017  
Analysis Commenced On : 19/08/2017

Report No. : HECSL/W/001/180817  
Report Date : 23/08/2017

Completed On : 22/08/2017

S.No.	Parameters	Units	Results	Test Method
1	Colour	Hazen Unit	BDL(DL 1)	IS 3025(Part 4):1983(Reaff:2006)
2	Turbidity	NTU	BDL(DL 0.1)	IS:3025:(Pt-10):1984(Reaff:2006)
3	pH (at 25 °C)	-	7.48	IS 3025 (Part11)-1983(Reaff:2006)
4	Total Hardness as CaCO <sub>3</sub>	mg/l	120	IS 3025 (Part14) 1983(Reaff:2006)
5	Calcium as Ca	mg/l	24.05	IS 3025:1(Pt 16)-1984(Reaff 2006)
6	Magnesium as Mg	mg/l	14.6	IS 3025 (Part 17)-1984
7	Chloride as Cl	mg/l	42.06	IS 3025,1 (Pt 23)-1986(Reaff 2009)
8	Sulphate as SO <sub>4</sub>	mg/l	64.73	IS 3025 (Part21)-1983(Reaff 2006)
9	Nitrate as NO <sub>3</sub>	mg/l	2.01	IS 3025 (Pt40)-1991(Reaff 2009)
10	Fluoride	mg/l	0.22	IS 3025 (Pt 46)-1994(Reaff 2009)
11	Cyanide as CN	mg/l	BDL(DL0.01)	IS3025 ,5(Pt 45):1993 (Reaff 2006)
12	Total Chromium	mg/l	BDL(DL 0.01)	IS3025 ,5(Part45):1993(Reaff 2006)
13	Iron as Fe	mg/l	BDL(DL0.02)	IS 3025 (Pt 32):1988(Reaff 2009)
14	Manganese	mg/l	BDL(DL0.01)	IS 3025(Pt 24):1986(Reaff:2009)
15	Odour	-	Agreeable	--
16	Taste	-	Agreeable	IS 3025 Part (23):1986 Reaff:2006
17	Phenolic Compounds	mg/l	BDL(DL0.001)	ASTM(part 31)1978
18	Residual Free Chloride	mg/l	BDL(DL0.1)	IS 3025 (Part31)-1988
19	Total Dissolved Solids	mg/l	196	IS:3025:1(Pt 16) :1984 (Reaff 2006)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, NTU-Nephelometric Turbidity Unit, mg/l - Milligrams per liter.

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

  
Authorized Signatory

C.P. SIVARAMAN  
Laboratory Manager



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram,  
Address of the Client : Athivaram  
Sample Description : Water  
Sample Mark : Attivaram ZP High school (GW)  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 - 19/08/2017  
Analysis Commenced On : 19/08/2017

Report No. : HECSL/W/002/180817  
Report Date : 23/08/2017

Completed On : 22/08/2017

S.No.	Parameters	Units	Results	Test Method
1	Colour	Hazen Unit	BDL(DL 1)	IS 3025(Part 4):1983(Reaff:2006)
2	Odour	-	Agreeable	---
3	Taste	-	Agreeable	IS 3025 Part (23):1986 Reaff:2006
4	Turbidity	NTU	BDL(DL 0.1)	IS:3025:(Pt-10):1984(Reaff:2006)
5	pH (at 25 °C)	-	7.7	IS 3025 (Part11)-1983(Reaff:2006)
6	Total Hardness as CaCO <sub>3</sub>	mg/l	376	IS 3025 (Part14) 1983(Reaff:2006)
7	Calcium as Ca	mg/l	68.13	IS 3025:1(Pt 16)-1984(Reaff 2006)
8	Magnesium as Mg	mg/l	60.85	IS 3025 (Part 17)-1984
9	Chloride as Cl	mg/l	222.69	IS 3025,1 (Pt 23)-1986(Reaff 2009)
10	Sulphate as SO <sub>4</sub>	mg/l	120.13	IS 3025 (Part21)-1983(Reaff 2006)
11	Nitrate as NO <sub>3</sub>	mg/l	2.13	IS 3025 (Pt40)-1991(Reaff 2009)
12	Fluoride	mg/l	0.37	IS 3025 (Pt 46)-1994(Reaff 2009)
13	Cyanide as CN	mg/l	BDL(DL0.01)	IS3025 ,5(Pt 45):1993 (Reaff 2006)
14	Total Chromium	mg/l	BDL(DL 0.01)	IS3025 ,5(Part45):1993(Reaff 2006)
15	Iron as Fe	mg/l	BDL(DL0.02)	IS 3025 (Pt 32):1988(Reaff 2009)
16	Manganese	mg/l	BDL(DL0.01)	IS 3025(Pt 24):1986(Reaff:2009)
17	Phenolic Compounds	mg/l	BDL(DL0.001)	ASTM(part 31)1978
18	Residual Free Chloride	mg/l	BDL(DL0.1)	IS 3025 (Part31)-1988
19	Total Dissolved Solids	mg/l	472	IS:3025:1(Pt 16) :1984 (Reaff 2006)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, NTU-Nephelometric Turbidity Unit, mg/l - Milligrams per liter.

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

  
Authorized Signatory

**C.P. SIVARAMAN**  
Laboratory Manager



# Hubert Enviro Care Systems (P) Ltd.

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## Laboratory Services Division

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram  
Sample Description : Water  
Sample Mark : SS Bio Care( GW)  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 - 19/08/2017  
Analysis Commenced On : 19/08/2017

Report No. : HECSL/W/003/180817  
Report Date : 23/08/2017

Completed On : 22/08/2017

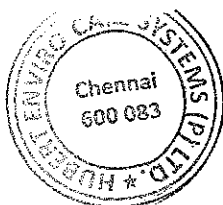
S.No.	Parameters	Units	Results	Test Method
1	Colour	Hazen Unit	BDL(DL 1)	IS 3025(Part 4):1983(Reaff:2006)
2	Odour	-	Agreeable	--
3	Taste	-	Agreeable	IS 3025 Part (23):1986 Reaff:2006
4	Turbidity	NTU	BDL(DL 0.1)	IS:3025:(Pt-10):1984(Reaff:2006)
5	pH (at 25 °C)	-	7.41	IS 3025 (Part11)-1983(Reaff:2006)
6	Total Hardness as CaCO <sub>3</sub>	mg/l	410	IS 3025 (Part14) 1983(Reaff:2006)
7	Calcium as Ca	mg/l	82.21	IS 3025:1(Pt 16)-1984(Reaff 2006)
8	Magnesium as Mg	mg/l	36.51	IS 3025-(Part 17)-1984
9	Chloride as Cl	mg/l	128.67	IS 3025,1 (Pt 23)-1986(Reaff 2009)
10	Sulphate as SO <sub>4</sub>	mg/l	218.6	IS 3025 (Part21)-1983(Reaff 2006)
11	Nitrate as NO <sub>3</sub>	mg/l	1.1	IS 3025 (Pt40)-1991(Reaff 2009)
12	Fluoride	mg/l	0.31	IS 3025 (Pt 46)-1994(Reaff 2009)
13	Cyanide as CN	mg/l	BDL(DL0.01)	IS3025 ,5(Pt 45):1993 (Reaff 2006)
14	Total Chromium	mg/l	BDL(DL 0.01)	IS3025 ,5(Part45):1993(Reaff 2006)
15	Iron as Fe	mg/l	BDL(DL0.02)	IS 3025 (Pt 32):1988(Reaff 2009)
16	Manganese	mg/l	BDL(DL0.01)	IS 3025(Pt 24):1986(Reaff:2009)
17	Phenolic Compounds	mg/l	BDL(DL0.001)	ASTM(part 31)1978
18	Residual Free Chloride	mg/l	BDL(DL0.1)	IS 3025 (Part31)-1988
19	Total Dissolved Solids	mg/l	759	IS:3025:1(Pt 16) :1984 (Reaff 2006)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, NTU-Nephelometric Turbidity Unit, mg/l - Milligrams per liter.

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

  
Authorized Signatory

**C.P. SIVARAMAN**  
Laboratory Manager



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram,  
Address of the Client : Athivaram

Report No. : HECSL/W/004/180817  
Report Date : 23/08/2017


Sample Description : Water  
Sample Mark : Karur Village (GW)  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 - 19/08/2017  
Analysis Commenced On : 19/08/2017

Completed On : 22/08/2017

S.No.	Parameters	Units	Results	Test Method
1	Colour	Hazen Unit	BDL(DL 1)	IS 3025(Part 4):1983(Reaff:2006)
2	Odour	-	Agreeable	--
3	Taste	-	Agreeable	IS 3025 Part (23):1986 Reaff:2006
4	Turbidity	NTU	BDL(DL 0.1)	IS:3025:(Pt-10):1984(Reaff:2006)
5	pH (at 25 °C)	-	7.62	IS 3025 (Part11)-1983(Reaff:2006)
6	Total Hardness as CaCO <sub>3</sub>	mg/l	380.31	IS 3025 (Part14) 1983(Reaff:2006)
7	Calcium as Ca	mg/l	88.21	IS 3025:1(Pt 16)-1984(Reaff 2006)
8	Magnesium as Mg	mg/l	41.38	IS 3025 (Part 17)-1984
9	Chloride as Cl	mg/l	207.85	IS 3025,1 (Pt 23)-1986(Reaff 2009)
10	Sulphate as SO <sub>4</sub>	mg/l	116.77	IS 3025 (Part21)-1983(Reaff 2006)
11	Nitrate as NO <sub>3</sub>	mg/l	1.3	IS 3025 (Pt40)-1991(Reaff 2009)
12	Fluoride	mg/l	0.34	IS 3025 (Pt 46)-1994(Reaff 2009)
13	Cyanide as CN	mg/l	BDL(DL0.01)	IS3025 ,5(Pt 45):1993 (Reaff 2006)
14	Total Chromium	mg/l	BDL(DL 0.01)	IS3025 ,5(Part45):1993(Reaff 2006)
15	Iron as Fe	mg/l	BDL(DL0.02)	IS 3025 (Pt 32):1988(Reaff 2009)
16	Manganese	mg/l	BDL(DL0.01)	IS 3025(Pt 24):1986(Reaff:2009)
17	Phenolic Compounds	mg/l	BDL(DL0.001)	ASTM(part 31)1978
18	Residual Free Chloride	mg/l	BDL(DL0.1)	IS 3025 (Part31)-1988
19	Total Dissolved Solids	mg/l	629	IS:3025:1(Pt 16) :1984 (Reaff 2006)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, NTU-Nephelometric Turbidity Unit, mg/l - Milligrams per liter.

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

  
Authorized Signatory

C. P. SIVARAMAN  
Laboratory Manager



# Hubert Enviro Care Systems (P) Ltd.

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram  
Sample Description : SOIL  
Sample Mark : SS Bio Care  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 - 19/08/2017  
Analysis Commenced On : 20/08/2017

Report No. : HECSL/SD/001/220817  
Report Date : 23/08/2017

Completed On : 22/08/2017

S.No.	Parameters	Units	Results	Test Method
1	Soil Texture i)Sand	%	20.21	HECS/SO/SOP/031
2	Soil Texture ii)Silt	%	14.58	HECS/SO/SOP/031
3	Soil Texture iii)Clay	%	65.21	HECS/SO/SOP/031
4	pH	-	7.82	IS:2720(P-26,1987)
5	Electrical Conductivity	µS/cm	310	IS:14767,2000
6	Infiltration Rate	cm/hr	38	-
7	Bulk density	gm/cc	1.12	HECS/SO/SOP/025
8	Moisture Content	%	2.84	IS 2720 part 2 Reaff:2000
9	Organic Matter	%	0.41	IS:2720 (P-22, 1972)
10	Nitrogen	mg/kg	425.96	IS 14684:1999 RA 2008
11	Phosphorus	mg/kg	22.1	USDA, APHA-4500PC
12	Potassium	mg/kg	22	EPA 3050 B/EPA 7770
13	Calcium as Ca	mg/kg	240	EPA 3050 B/EPA 7140
14	Magnesium as Mg	mg/kg	56	EPA 3050 B/EPA 7450
15	Boron	mg/kg	BDL(DL0.1)	HECS/SO/SOP/028
16	Chromium	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7090
17	Iron	mg/kg	32658.35	USEPA Method 3050B&EPA 2008
18	Manganese	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7000 B
19	Sodium	mg/kg	30	HECS/SO/SOP/003
20	Chloride	mg/kg	147	SW 846 9253 9077
21	Sulphate	mg/kg	154	IS 14685 (1999) Reaffirmed 2014
22	Sodium Absorption Ratio	%	37	HECS/SO/SOP/048
23	Residual Sodium Carbonate	%	1.2	HECS/SO/SOP/049

Note:- % - Percentage, mg/kg - Milligrams per kilogram, cm/hr - Centimeters per hour, gm/cc - Grams per Cubic Centimete.  
\*\*\*End of Report\*\*



*C.P. Sivaraman*  
Authorized Signatory  
C. P. SIVARAMAN  
Laboratory Manager

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**TEST REPORT**

Page : 1 of 1

Name of the Client : M/s. APIIC – IT Athivaram.,

Address of the Client : Athivaram

Report No. : HECSL/SD/002/180817

Report Date : 23/08/2017

Sample Description : SOIL

Sample Mark : Attivaram Village Beside Roa

Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd

Sampling/received Date : 18/08/2017 - 19/08/2017

Analysis Commenced On : 20/08/2017

Completed On : 22/08/2017

S.No.	Parameters	Units	Results	Test Method
1	Soil Texture i)Sand	%	32.54	HECS/SO/SOP/031
2	Soil Texture ii)Silt	%	11.45	HECS/SO/SOP/031
3	Soil Texture iii)Clay	%	56.01	HECS/SO/SOP/031
4	pH	-	7.62	IS:2720(P-26,1987)
5	Electrical Conductivity	µS/cm	345	IS:14767,2000
6	Infiltration Rate	cm/hr	47	-
7	Bulk density	gm/cc	1.23	HECS/SO/SOP/025
8	Moisture Content	%	4.64	IS 2720 part 2 Reaff:2000.
9	Organic Matter	%	0.52	IS:2720 (P-22, 1972)
10	Nitrogen	mg/kg	346.88	IS 14684:1999 RA 2008
11	Phosphorus	mg/kg	14.86	USDA, APHA-4500PC
12	Potassium	mg/kg	19	EPA 3050 B/EPA 7770
13	Calcium as Ca	mg/kg	280	EPA 3050 B/EPA 7140
14	Magnesium as Mg	mg/kg	42	EPA 3050 B/EPA 7450
15	Boron	mg/kg	BDL(DL0.1)	HECS/SO/SOP/028
16	Chromium	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7090
17	Iron	mg/kg	35521.24	USEPA Method 3050B&EPA 2008
18	Manganese	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7000 B
19	Sodium	mg/kg	28	HECS/SO/SOP/003
20	Chloride	mg/kg	135	SW 846 9253 9077
21	Sulphate	mg/kg	155	IS 14685 (1999) Reaffirmed 2014
22	Sodium Absorption Ratio	%	31	HECS/SO/SOP/048
23	Residual Sodium Carbonate	%	0.9	HECS/SO/SOP/049

Note:- % - Percentage, mg/kg - Milligrams per kilogram, cm/hr - Centimeters per hour, gm/cc - Grams per Cubic Centimeter.  
\*\*\*End of Report\*\*



*C.P. Sivaraman*  
Authorized Signatory

**C.P. SIVARAMAN**  
Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram,  
Address of the Client : Athivaram

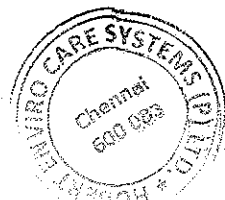
Report No. : HECSL/SD/003/180817  
Report Date : 23/08/2017

Sample Description : SOIL  
Sample Mark : Karur Village Near MPP School  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 - 19/08/2017  
Analysis Commenced On : 20/08/2017

Completed On : 22/08/2017

S.No.	Parameters	Units	Results	Test Method
1	Soil Texture i)Sand	%	62.38	HECS/SO/SOP/031
2	Soil Texture ii)Silt	%	12.54	HECS/SO/SOP/031
3	Soil Texture iii)Clay	%	25.08	HECS/SO/SOP/031
4	pH	-	7.74	IS:2720(P-26,1987)
5	Electrical Conductivity	µS/cm	316	IS:14767,2000
6	Infiltration Rate	cm/hr	32	-
7	Bulk density	gm/cc	1.15	HECS/SO/SOP/025
8	Moisture Content	%	2.79	IS 2720 part 2 Reaff:2000
9	Organic Matter	%	0.38	IS:2720 (P-22, 1972)
10	Nitrogen	mg/kg	220.12	IS 14684:1999 RA 2008
11	Phosphorus	mg/kg	38.11	USDA, APHA-4500PC
12	Potassium	mg/kg	18	EPA 3050 B/EPA 7770
13	Calcium as Ca	mg/kg	320	EPA 3050 B/EPA 7140
14	Magnesium as Mg	mg/kg	56	EPA 3050 B/EPA 7450
15	Boron	mg/kg	BDL(DL0.1)	HECS/SO/SOP/028
16	Chromium	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7090
17	Iron	mg/kg	28546.17	USEPA Method 3050B&EPA 2008
18	Manganese	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7000 B
19	Sodium	mg/kg	22	HECS/SO/SOP/003
20	Chloride	mg/kg	96	SW 846 9253 9077
21	Sulphate	mg/kg	156	IS 14685 (1999) Reaffirmed 2014
22	Sodium Absorption Ratio	%	49	HECS/SO/SOP/048
23	Residual Sodium Carbonate	%	1.2	HECS/SO/SOP/049

Note:- % - Percentage, mg/kg - Milligrams per kilogram, cm/hr - Centimeters per hour, gm/cc - Grams per Cubic Centimete.  
\*\*\*End of Report\*\*



*C.P. Sivaraman*  
Authorized Signatory

**C. P. SIVARAMAN**  
Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – IT Athivaram,  
Address of the Client : Athivaram

Report No. : HECSL/SD/004/180817  
Report Date : 23/08/2017

Sample Description : SOIL  
Sample Mark : Attivaram Village ZP High School  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 18/08/2017 - 19/08/2017  
Analysis Commenced On : 20/08/2017

Completed On : 22/08/2017

S.No.	Parameters	Units	Results	Test Method
1	Soil Texture i)Sand	%	68.54	HECS/SO/SOP/031
2	Soil Texture ii)Silt	%	8.52	HECS/SO/SOP/031
3	Soil Texture iii)Clay	%	22.94	HECS/SO/SOP/031
4	pH	-	7.69	IS:2720(P-26,1987)
5	Electrical Conductivity	µS/cm	354	IS:14767,2000
6	Infiltration Rate	cm/hr	42	-
7	Bulk density	gm/cc	1.26	HECS/SO/SOP/025
8	Moisture Content	%	5.02	IS 2720 part 2 Reaff:2000 -
9	Organic Matter	%	0.47	IS:2720 (P-22, 1972)
10	Nitrogen	mg/kg	244.65	IS 14684:1999 RA 2008
11	Phosphorus	mg/kg	33.54	USDA, APHA-4500PC
12	Potassium	mg/kg	12	EPA 3050 B/EPA 7770
13	Calcium as Ca	mg/kg	356	EPA 3050 B/EPA 7140
14	Magnesium as Mg	mg/kg	98	EPA 3050 B/EPA 7450
15	Boron	mg/kg	BDL(DL0.1)	HECS/SO/SOP/028
16	Chromium	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7090
17	Iron	mg/kg	32154.22	USEPA Method 3050B&EPA 2008
18	Manganese	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7000 B
19	Sodium	mg/kg	14	HECS/SO/SOP/003
20	Chloride	mg/kg	85	SW 846 9253 9077
21	Sulphate	mg/kg	158	IS 14685 (1999) Reaffirmed 2014
22	Sodium Absorption Ratio	%	65	HECS/SO/SOP/048
23	Residual Sodium Carbonate	%	1.1	HECS/SO/SOP/049

Note:- % - Percentage, mg/kg - Milligrams per kilogram, cm/hr - Centimeters per hour, gm/cc - Grams per Cubic Centimete.  
\*\*\*End of Report\*\*



*C.P. Sivaraman*  
Authorized Signatory

**C. P. SIVARAMAN**  
Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC - Athivaram.,  
Address of the Client : Athivaram  
Sample Description : Noise Monitoring  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling Date : 18/08/2017

Report No. : HECSL/N/001-002/180817  
Report Date : 22/08/2017

S.No.	Location	Noise Level in dB (A)
1	Athivaram,Panchayat Building	62.7
2	Karur,GOVT MPP School	65.2
3	Athivaram Industrial park,SS Bio	64.2

#### Limits set by CPCB:

- |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|
| i. Industrial Area    | : Day Time-75 dB (A); | Night Time-70 dB (A). |
| ii. Commercial Area   | : Day Time-65 dB (A); | Night Time-55 dB (A). |
| iii. Residential Area | : Day Time-55 dB (A); | Night Time-45 dB (A). |
| iv. Silence Zone      | : Day Time-50 dB (A); | Night Time-40 dB (A). |
| v. Working Area       | : Day Time-90 dB (A); | Night Time-90 dB (A). |

Authorized Signatory

**C . P. SIVARAMAN**  
Laboratory Manager



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC -Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/001/250917  
Report Date : 30/09/2017

Sample Description : Ambient Air Quality  
Sampling Location : Attivaram, Panchayat Buiding  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 25/09/2017 - 25/09/2017  
Analysis Commenced On : 25/09/2017

Completed On : 30/09/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	18.71	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	32.24	IS: 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	50.16	IS: 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	36.18	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS: 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	11.41	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	6.45	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



*C.P. Sivaraman*  
Authorized Signatory

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Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/002/250917  
Report Date : 30/09/2017

Sample Description : Ambient Air Quality  
Sampling Location : Karur, GOVT MPP School  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 25/09/2017 - 25/09/2017  
Analysis Commenced On : 25/09/2017

Completed On : 30/09/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	19.56	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	31.16	IS : 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	49.26	IS : 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	32.24	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	12.16	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	6.83	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS : 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS : 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



*C.P. Sivaraman*  
Authorized Signatory

**C. P. SIVARAMAN**  
Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC -Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/003/250917  
Report Date : 30/09/2017

Sample Description : Ambient Air Quality  
Sampling Location : Attivaram Industrial park, SS Bio  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 25/09/2017 -25/09/2017  
Analysis Commenced On : 25/09/2017

Completed On : 30/09/2017

S.No.	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	$\mu\text{g}/\text{m}^3$	19.42	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	$\mu\text{g}/\text{m}^3$	30.24	IS: 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10	$\mu\text{g}/\text{m}^3$	53.68	IS: 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5	$\mu\text{g}/\text{m}^3$	32.18	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	$\text{mg}/\text{m}^3$	BDL(DL 0.05)	IS : 5182 (P-10)	4 (1 hours)	2 (8 hours)
6	Lead	$\mu\text{g}/\text{m}^3$	BDL(DL 0.05)	IS: 5182 (P-22):	1 (24 hours)	0.5 (Annual)
7	Ozone	$\mu\text{g}/\text{m}^3$	11.98	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	$\mu\text{g}/\text{m}^3$	6.73	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	$\mu\text{g}/\text{m}^3$	BDL(DL 1)	IS: 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	$\text{ng}/\text{m}^3$	BDL(DL 1)	IS: 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	$\text{ng}/\text{m}^3$	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	$\text{ng}/\text{m}^3$	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit,  $\mu\text{g}/\text{m}^3$ - Micrograms per cubic meter,  
 $\text{mg}/\text{m}^3$ - Milligrams per cubic meter,  $\text{ng}/\text{m}^3$ - Nanograms per cubic meter.

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



*C.P. Sivaraman*  
Authorized Signatory

C.P. SIVARAMAN  
Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC - Athivaram.,  
Address of the Client : Athivaram  
Sample Description : Noise Monitoring  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling Date : 25/09/2017

Report No. : HECSL/N/001-002/250917  
Report Date : 30/09/2017

S.No.	Location	Noise Level in dB (A)
1	Athivaram, Panchayat Building	64.2
2	Karur, GOVT MPP School	64.8
3	Athivaram Industrial park, SS Bio	63.7

#### Limits set by CPCB:

- |      |                  |                       |                       |
|------|------------------|-----------------------|-----------------------|
| i.   | Industrial Area  | : Day Time-75 dB (A); | Night Time-70 dB (A). |
| ii.  | Commercial Area  | : Day Time-65 dB (A); | Night Time-55 dB (A). |
| iii. | Residential Area | : Day Time-55 dB (A); | Night Time-45 dB (A). |
| iv.  | Silence Zone     | : Day Time-50 dB (A); | Night Time-40 dB (A). |
| v.   | Working Area     | : Day Time-90 dB (A); | Night Time-90 dB (A). |

  
Authorized Signatory

**C . P. SIVARAMAN**  
Laboratory Manager



**TEST REPORT**

Page : 1 of 1

Name of the Client : M/s. APHC -Athivaram.,  
 Address of the Client : Athivaram

Report No. : HECSL/A/001/211017  
 Report Date : 26/10/2017

Sample Description : Ambient Air Quality  
 Sampling Location : Attivaram,Panchayat Buiding  
 Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
 Sampling/received Date : 21/10/2017 -21/10/2017  
 Analysis Commenced On : 21/10/2017

Completed On : 26/10/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	21.23	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	30.67	IS: 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	50.12	IS: 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	32.64	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS: 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	10.59	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	6.12	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
 mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



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 Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/002/211017  
Report Date : 26/10/2017

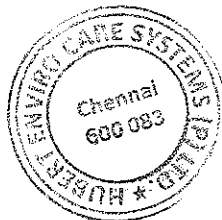
Sample Description : Ambient Air Quality  
Sampling Location : Karur, GOVT MPP School  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 21/10/2017 - 21/10/2017  
Analysis Commenced On : 21/10/2017

Completed On : 26/10/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	22.37	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	31.48	IS: 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	48.16	IS: 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	32.14	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS: 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	10.56	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	6.74	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC - Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/003/211017  
Report Date : 26/10/2017

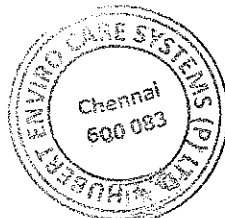
Sample Description : Ambient Air Quality  
Sampling Location : Attivaram Industrial park, DRA Industry  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 21/10/2017 - 21/10/2017  
Analysis Commenced On : 21/10/2017

Completed On : 26/10/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	20.16	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	30.52	IS : 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	48.16	IS : 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	32.18	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	11.36	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	6.71	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS : 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS : 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC - Athivaram.,  
Address of the Client : Athivaram  
Sample Description : Noise Monitoring  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling Date : 21/10/2017

Report No. : HECSL/N/001-002/211017  
Report Date : 26/10/2017

S.No.	Location	Noise Level in dB (A)
1	Athivaram, Panchayat Building	62.9
2	Karur, GOVT MPP School	61.0
3	Athivaram Industrial park, DRA Industry	62.8

#### Limits set by CPCB:

- |      |                  |                       |                       |
|------|------------------|-----------------------|-----------------------|
| i.   | Industrial Area  | : Day Time-75 dB (A); | Night Time-70 dB (A). |
| ii.  | Commercial Area  | : Day Time-65 dB (A); | Night Time-55 dB (A). |
| iii. | Residential Area | : Day Time-55 dB (A); | Night Time-45 dB (A). |
| iv.  | Silence Zone     | : Day Time-50 dB (A); | Night Time-40 dB (A). |
| v.   | Working Area     | : Day Time-90 dB (A); | Night Time-90 dB (A). |



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC -Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/001/201117  
Report Date : 25/11/2017

Sample Description : Ambient Air Quality  
Sampling Location : Attivaram, Panchayat Buiding  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 -20/11/2017  
Analysis Commenced On : 20/11/2017

Completed On : 25/11/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	17.53	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	23.56	IS: 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	48.26	IS: 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	29.18	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS: 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	11.16	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	6.53	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/002/201117  
Report Date : 25/11/2017

Sample Description : Ambient Air Quality  
Sampling Location : Karur, GOVT MPP School  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 - 20/11/2017  
Analysis Commenced On : 20/11/2017

Completed On : 25/11/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	18.43	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	22.32	IS: 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	48.19	IS: 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	27.42	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS: 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	10.98	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	7.01	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



*C.P. Sivaraman*  
Authorized Signatory

**C.P. SIVARAMAN**  
Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/A/003/201117  
Report Date : 25/11/2017

Sample Description : Ambient Air Quality  
Sampling Location : Attivaram Industrial park, DRA Industry  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 - 20/11/2017  
Analysis Commenced On : 20/11/2017

Completed On : 25/11/2017

S.No	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m <sup>3</sup>	18.36	IS : 5182 (P-2):2001(Reaff:2006)	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m <sup>3</sup>	23.19	IS: 5182 (P-6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m <sup>3</sup>	46.23	IS: 5182 (P-23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m <sup>3</sup>	24.26	HECS/AIR/Ambient/SOP011	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m <sup>3</sup>	BDL(DL 0.05)	IS : 5182 (P-10) 1999(Reaff:2003)	4 (1 hours)	2 (8 hours)
6	Lead	µg/m <sup>3</sup>	BDL(DL 0.05)	IS: 5182 (P-22): 2004(Reaff:2009)	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m <sup>3</sup>	10.89	HECS/AIR/Ambient/SOP013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m <sup>3</sup>	6.78	HECS/AIR/Ambient/SOP012	400 (24 hours)	100 (Annual)
9	Benzene	µg/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-11):2006(RA:2009)	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m <sup>3</sup>	BDL(DL 1)	IS: 5182 (P-12): 2004(RA:2009)	1 (Annual)	1 (Annual)
11	Arsenic	ng/m <sup>3</sup>	BDL(DL 2)	HECS/AIR/Ambient/SOP014	6 (Annual)	6 (Annual)
12	Nickel	ng/m <sup>3</sup>	BDL (DL 10)	HECS/AIR/Ambient/SOP007	20 (Annual)	20 (Annual)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, µg/m<sup>3</sup>- Micrograms per cubic meter,  
mg/m<sup>3</sup>- Milligrams per cubic meter, ng/m<sup>3</sup>- Nanograms per cubic meter.

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



*C. P. Sivaraman*  
Authorized Signatory

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram  
Sample Description : Water  
Sample Mark : BRA Industries(GW)  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 - 20/11/2017  
Analysis Commenced On : 20/11/2017

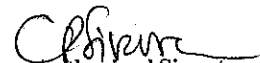
Report No. : HECSL/W/001/201117  
Report Date : 25/11/2017

Completed On : 25/11/2017

S.No.	Parameters	Units	Results	Test Method
1	Colour	Hazen Unit	BDL(DL 1)	IS 3025(Part 4):1983(Reaff:2006)
2	Odour	-	Agreeable	--
3	Taste	-	Agreeable	IS 3025 Part (23):1986 Reaff:2006
4	Turbidity	NTU	0.5	IS:3025:(Pt-10):1984(Reaff:2006)
5	pH (at 25 °C)	-	7.51	IS 3025 (Part11)-1983(Reaff:2006)
6	Total Hardness as CaCO <sub>3</sub>	mg/l	128	IS 3025 (Part14) 1983(Reaff:2006)
7	Calcium as Ca	mg/l	25.69	IS 3025:1(Pt 16)-1984(Reaff 2006)
8	Magnesium as Mg	mg/l	13.47	IS 3025,(Part 17)-1984
9	Chloride as Cl	mg/l	43.14	IS 3025,1 (Pt 23)-1986(Reaff 2009)
10	Sulphate as SO <sub>4</sub>	mg/l	71.64	IS 3025 (Part21)-1983(Reaff 2006)
11	Nitrate as NO <sub>3</sub>	mg/l	2.21	IS 3025 (Pt40)-1991(Reaff 2009)
12	Fluoride	mg/l	0.28	IS 3025 (Pt 46)-1994(Reaff 2009)
13	Cyanide as CN	mg/l	BDL(DL0.01)	IS3025 ,5(Pt 45):1993 (Reaff 2006)
14	Total Chromium	mg/l	BDL(DL 0.01)	IS3025 ,5(Part45):1993(Reaff 2006)
15	Iron as Fe	mg/l	BDL(DL0.02)	IS 3025 (Pt 32):1988(Reaff 2009)
16	Manganese	mg/l	BDL(DL0.01)	IS 3025(Pt 24):1986(Reaff:2009)
17	Phenolic Compounds	mg/l	BDL(DL0.001)	ASTM(part 31)1978
18	Residual Free Chlorine	mg/l	BDL(DL0.1)	IS 3025 (Part31)-1988
19	Total Dissolved Solids	mg/l	196	IS:3025:1(Pt 16) :1984 (Reaff 2006)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, NTU-Nephelometric Turbidity Unit, mg/l - Milligrams per liter.

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

  
Authorized Signatory

C.P. SIVARAMAN  
Laboratory Manager



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram

Report No. : HECSL/W/002/201117  
Report Date : 25/11/2017

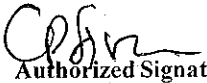
Sample Description : Water  
Sample Mark : Attivaram Village(GW)  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 - 20/11/2017  
Analysis Commenced On : 20/11/2017

Completed On : 25/11/2017

S.No.	Parameters	Units	Results	Test Method
1	Colour	Hazen Unit	BDL(DL 1)	IS 3025(Part 4):1983(Reaff:2006)
2	Odour	-	Agreeable	--
3	Taste	-	Agreeable	IS 3025 Part (23):1986 Reaff:2006
4	Turbidity	NTU	BDL(DL 0.1)	IS:3025:(Pt-10):1984(Reaff:2006)
5	pH (at 25 °C)	-	7.5	IS 3025 (Part11)-1983(Reaff:2006)
6	Total Hardness as CaCO <sub>3</sub>	mg/l	345	IS 3025 (Part14) 1983(Reaff:2006)
7	Calcium as Ca	mg/l	65.54	IS 3025:1(Pt 16)-1984(Reaff 2006)
8	Magnesium as Mg	mg/l	62.36	IS 3025 (Part 17)-1984
9	Chloride as Cl	mg/l	263.14	IS 3025,1 (Pt 23)-1986(Reaff 2009)
10	Sulphate as SO <sub>4</sub>	mg/l	122.61	IS 3025 (Part21)-1983(Reaff 2006)
11	Nitrate as NO <sub>3</sub>	mg/l	2.18	IS 3025 (Pt40)-1991(Reaff 2009)
12	Fluoride	mg/l	0.41	IS 3025 (Pt 46)-1994(Reaff 2009)
13	Cyanide as CN	mg/l	BDL(DL0.01)	IS3025 ,5(Pt 45):1993 (Reaff 2006)
14	Total Chromium	mg/l	BDL(DL 0.01)	IS3025 ,5(Part45):1993(Reaff 2006)
15	Iron as Fe	mg/l	BDL(DL0.02)	IS 3025 (Pt 32):1988(Reaff 2009)
16	Manganese	mg/l	BDL(DL0.01)	IS 3025(Pt 24):1986(Reaff:2009)
17	Phenolic Compounds	mg/l	BDL(DL0.001)	ASTM(part 31)1978
18	Residual Free Chlorine	mg/l	BDL(DL0.1)	IS 3025 (Part31)-1988
19	Total Dissolved Solids	mg/l	541	IS:3025:1(Pt 16) :1984 (Reaff 2006)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, NTU-Nephelometric Turbidity Unit, mg/l - Milligrams per liter.

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

  
Authorized Signatory  
**C.P. SIVARAMAN**  
Laboratory Manager



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram  
Sample Description : Water  
Sample Mark : Karur Village(GW)  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 - 20/11/2017  
Analysis Commenced On : 20/11/2017

Report No. : HECSL/W/003/201117  
Report Date : 25/11/2017

Completed On : 25/11/2017

S.No.	Parameters	Units	Results	Test Method
1	Colour	Hazen Unit	BDL(DL 1)	IS 3025(Part 4):1983(Reaff:2006)
2	Odour	-	Agreeable	--
3	Taste	-	Agreeable	IS 3025 Part (23):1986 Reaff:2006
4	Turbidity	NTU	BDL(DL 0.1)	IS:3025:(Pt-10):1984(Reaff:2006)
5	pH (at 25 °C)	-	7.55	IS 3025 (Part11)-1983(Reaff:2006)
6	Total Hardness as CaCO <sub>3</sub>	mg/l	389	IS 3025 (Part14) 1983(Reaff:2006)
7	Calcium as Ca	mg/l	88.11	IS 3025:1(Pt 16)-1984(Reaff 2006)
8	Magnesium as Mg	mg/l	39.23	IS 3025 (Part 17)-1984
9	Chloride as Cl	mg/l	122.41	IS 3025,1 (Pt 23)-1986(Reaff 2009)
10	Sulphate as SO <sub>4</sub>	mg/l	221.41	IS 3025 (Part21)-1983(Reaff 2006)
11	Nitrate as NO <sub>3</sub>	mg/l	1.12	IS 3025 (Pt40)-1991(Reaff 2009)
12	Fluoride	mg/l	0.22	IS 3025 (Pt 46)-1994(Reaff 2009)
13	Cyanide as CN	mg/l	BDL(DL0.01)	IS3025 ,5(Pt 45):1993 (Reaff 2006)
14	Total Chromium	mg/l	BDL(DL 0.01)	IS3025 ,5(Part45):1993(Reaff 2006)
15	Iron as Fe	mg/l	BDL(DL0.02)	IS 3025 (Pt 32):1988(Reaff 2009)
16	Manganese	mg/l	BDL(DL0.01)	IS 3025(Pt 24):1986(Reaff:2009)
17	Phenolic Compounds	mg/l	BDL(DL0.001)	ASTM(part 31)1978
18	Residual Free Chlorine	mg/l	BDL(DL0.1)	IS 3025 (Part31)-1988
19	Total Dissolved Solids	mg/l	632	IS:3025:1(Pt 16) :1984 (Reaff 2006)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, NTU-Nephelometric Turbidity Unit, mg/l - Milligrams per liter.

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

  
Authorized Signatory

C.P. SIVARAMAN  
Laboratory Manager



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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram,  
Address of the Client : Athivaram  
Sample Description : Water  
Sample Mark : Karur Village, MPP school (GW)  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 - 20/11/2017  
Analysis Commenced On : 20/11/2017

Report No. : HECSL/W/004/201117  
Report Date : 25/11/2017

Completed On : 25/11/2017

S.No.	Parameters	Units	Results	Test Method
1	Colour	Hazen Unit	BDL(DL 1)	IS 3025(Part 4):1983(Reaff:2006)
2	Odour	-	Agreeable	--
3	Taste	-	Agreeable	IS 3025 Part (23):1986 Reaff:2006
4	Turbidity	NTU	BDL(DL 0.1)	IS:3025:(Pt-10):1984(Reaff:2006)
5	pH (at 25 °C)	-	7.77	IS 3025 (Part11)-1983(Reaff:2006)
6	Total Hardness as CaCO <sub>3</sub>	mg/l	414	IS 3025 (Part14) 1983(Reaff:2006)
7	Calcium as Ca	mg/l	82.12	IS 3025:1(Pt 16)-1984(Reaff 2006)
8	Magnesium as Mg	mg/l	39.45	IS 3025-(Part 17)-1984
9	Chloride as Cl	mg/l	210.21	IS 3025,1 (Pt 23)-1986(Reaff 2009)
10	Sulphate as SO <sub>4</sub>	mg/l	114.33	IS 3025 (Part21)-1983(Reaff 2006)
11	Nitrate as NO <sub>3</sub>	mg/l	1.2	IS 3025 (Pt40)-1991(Reaff 2009)
12	Fluoride	mg/l	0.39	IS 3025 (Pt 46)-1994(Reaff 2009)
13	Cyanide as CN	mg/l	BDL(DL0.01)	IS3025 ,5(Pt 45):1993 (Reaff 2006)
14	Total Chromium	mg/l	BDL(DL 0.01)	IS3025 ,5(Part45):1993(Reaff 2006)
15	Iron as Fe	mg/l	BDL(DL0.02)	IS 3025 (Pt 32):1988(Reaff 2009)
16	Manganese	mg/l	BDL(DL0.01)	IS 3025(Pt 24):1986(Reaff:2009)
17	Phenolic Compounds	mg/l	BDL(DL0.001)	ASTM(part 31)1978
18	Residual Free Chlorine	mg/l	BDL(DL0.1)	IS 3025 (Part31)-1988
19	Total Dissolved Solids	mg/l	749	IS:3025:1(Pt 16):1984 (Reaff 2006)

Note:-BDL - Below Detection Limit, D.L- Detection Limit, NTU-Nephelometric Turbidity Unit, mg/l - Milligrams per liter.

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



*C.P. Sivaraman*  
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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,  
Address of the Client : Athivaram  
Sample Description : SOIL  
Sample Mark : BRA Industry  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 - 21/11/2017  
Analysis Commenced On : 21/11/2017

Report No. : HECSL/SD/001/201117  
Report Date : 25/11/2017

Completed On : 24/11/2017

S.No.	Parameters	Units	Results	Test Method
1	Soil Texture i)Sand	%	42.16	HECS/SO/SOP/031
2	Soil Texture ii)Silt	%	12.65	HECS/SO/SOP/031
3	Soil Texture iii)Clay	%	45.19	HECS/SO/SOP/031
4	pH	-	7.42	IS:2720(P-26,1987)
5	Electrical Conductivity	µS/cm	305	IS:14767,2000
6	Infiltration Rate	cm/hr	35	-
7	Bulk density	gm/cc	1.19	HECS/SO/SOP/025
8	Moisture Content	%	3.68	IS 2720 part 2 Reaff:2000.
9	Organic Matter	%	0.32	IS:2720 (P-22, 1972)
10	Nitrogen	mg/kg	368.33	IS 14684:1999 RA 2008
11	Phosphorus	mg/kg	30.28	USDA, APHA-4500PC
12	Potassium	mg/kg	18	EPA 3050 B/EPA 7770
13	Calcium as Ca	mg/kg	260	EPA 3050 B/EPA 7140
14	Magnesium as Mg	mg/kg	52	EPA 3050 B/EPA 7450
15	Boron	mg/kg	BDL(DL0.1)	HECS/SO/SOP/028
16	Chromium	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7090
17	Iron	mg/kg	20632.52	USEPA Method 3050B&EPA 2008
18	Manganese	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7000 B
19	Sodium	mg/kg	39	HECS/SO/SOP/003
20	Chloride	mg/kg	149	SW 846 9253 9077
21	Sulphate	mg/kg	159	IS 14685 (1999) Reaffirmed 2014
22	Sodium Absorption Ratio	%	39	HECS/SO/SOP/048
23	Residual Sodium Carbonate	%	1.3	HECS/SO/SOP/049

Note:- % - Percentage, mg/kg - Milligrams per kilogram, cm/hr - Centimeters per hour, gm/cc - Grams per Cubic Centimete.  
\*\*\*End of Report\*\*



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Authorized Signatory

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Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – IT Athivaram.,  
Address of the Client : Athivaram  
Sample Description : SOIL  
Sample Mark : SS Bio Care  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 - 21/11/2017  
Analysis Commenced On : 21/11/2017

Report No. : HECSL/SD/002/201117  
Report Date : 25/11/2017

Completed On : 24/11/2017

S.No.	Parameters	Units	Results	Test Method
1	Soil Texture i)Sand	%	52.63	HECS/SO/SOP/031
2	Soil Texture ii)Silt	%	10.62	HECS/SO/SOP/031
3	Soil Texture iii)Clay	%	36.75	HECS/SO/SOP/031
4	pH	-	7.89	IS:2720(P-26,1987)
5	Electrical Conductivity	µS/cm	367	IS:14767,2000
6	Infiltration Rate	cm/hr	49	-
7	Bulk density	gm/cc	1.29	HECS/SO/SOP/025
8	Moisture Content	%	5.41	IS 2720 part 2 Reaff:2000.
9	Organic Matter	%	0.42	IS:2720 (P-22, 1972)
10	Nitrogen	mg/kg	402.33	IS 14684:1999 RA 2008
11	Phosphorus	mg/kg	31.45	USDA, APHA-4500PC
12	Potassium	mg/kg	26	EPA 3050 B/EPA 7770
13	Calcium as Ca	mg/kg	290	EPA 3050 B/EPA 7140
14	Magnesium as Mg	mg/kg	32	EPA 3050 B/EPA 7450
15	Boron	mg/kg	BDL(DL0.1)	HECS/SO/SOP/028
16	Chromium	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7090
17	Iron	mg/kg	35521.24	USEPA Method 3050B&EPA 2008
18	Manganese	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7000 B
19	Sodium	mg/kg	42	HECS/SO/SOP/003
20	Chloride	mg/kg	152	SW 846 9253 9077
21	Sulphate	mg/kg	163	IS 14685 (1999) Reaffirmed 2014
22	Sodium Absorption Ratio	%	46	HECS/SO/SOP/048
23	Residual Sodium Carbonate	%	1.4	HECS/SO/SOP/049

Note:- % - Percentage, mg/kg - Milligrams per kilogram, cm/hr - Centimeters per hour, gm/cc - Grams per Cubic Centimeter.  
\*\*\*End of Report\*\*



*C.P. Sivaraman*  
Authorized Signatory

**C.P. SIVARAMAN**  
Laboratory Manager

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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – Athivaram.,

Address of the Client : Athivaram

Report No. : HECSL/SD/003/201117

Report Date : 25/11/2017

Sample Description : SOIL

Sample Mark : Karur Village Near MPP School

Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd

Sampling/received Date : 20/11/2017 - 21/11/2017

Analysis Commenced On : 21/11/2017

Completed On : 24/11/2017

S.No.	Parameters	Units	Results	Test Method
1	Soil Texture i)Sand	%	62.49	HECS/SO/SOP/031
2	Soil Texture ii)Silt	%	15.63	HECS/SO/SOP/031
3	Soil Texture iii)Clay	%	21.88	HECS/SO/SOP/031
4	pH	-	7.85	IS:2720(P-26,1987)
5	Electrical Conductivity	$\mu$ S/cm	325	IS:14767,2000
6	Infiltration Rate	cm/hr	33	-
7	Bulk density	gm/cc	1.22	HECS/SO/SOP/025
8	Moisture Content	%	3.16	IS 2720 part 2 Reaff:2000
9	Organic Matter	%	0.53	IS:2720 (P-22, 1972)
10	Nitrogen	mg/kg	286.99	IS 14684:1999 RA 2008
11	Phosphorus	mg/kg	36.18	USDA, APHA-4500PC
12	Potassium	mg/kg	32	EPA 3050 B/EPA 7770
13	Calcium as Ca	mg/kg	310	EPA 3050 B/EPA 7140
14	Magnesium as Mg	mg/kg	38	EPA 3050 B/EPA 7450
15	Boron	mg/kg	BDL(DL0.1)	HECS/SO/SOP/028
16	Chromium	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7090
17	Iron	mg/kg	28546.17	USEPA Method 3050B&EPA 2008
18	Manganese	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7000 B
19	Sodium	mg/kg	53	HECS/SO/SOP/003
20	Chloride	mg/kg	159	SW 846 9253 9077
21	Sulphate	mg/kg	172	IS 14685 (1999) Reaffirmed 2014
22	Sodium Absorption Ratio	%	48	HECS/SO/SOP/048
23	Residual Sodium Carbonate	%	1.5	HECS/SO/SOP/049

Note:- % - Percentage, mg/kg - Milligrams per kilogram, cm/hr - Centimeters per hour, gm/cc - Grams per Cubic Centimete.  
\*\*\*End of Report\*\*



*C. P. Sivaraman*  
Authorized Signatory

**C. P. SIVARAMAN**  
Laboratory Manager

# Hubert Enviro Care Systems (P) Ltd.

# 18, 92nd Street, Ashok Nagar,  
Chennai - 600 083.  
Ph: 42985555 Fax : 42985500  
E-mail : labsales@hecs.in

## Laboratory Services Division

Accredited by NABL in the fields  
of Chemical & Biological Testing  
Recognized by MoEF.  
FSSAI Notified Laboratory  
ISO 9001, 14001 & OHSAS 18001 Certified.

### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC – IT Athivaram.,  
Address of the Client : Athivaram  
Sample Description : SOIL  
Sample Mark : Attivaram Village Beside Roa  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling/received Date : 20/11/2017 - 21/11/2017  
Analysis Commenced On : 21/11/2017

Report No. : HECSL/SD/004/201117  
Report Date : 25/11/2017

Completed On : 24/11/2017

S.No.	Parameters	Units	Results	Test Method
1	Soil Texture i)Sand	%	62.79	HECS/SO/SOP/031
2	Soil Texture ii)Silt	%	11.59	HECS/SO/SOP/031
3	Soil Texture iii)Clay	%	25.62	HECS/SO/SOP/031
4	pH	-	7.56	IS:2720(P-26,1987)
5	Electrical Conductivity	µS/cm	360	IS:14767,2000
6	Infiltration Rate	cm/hr	52	-
7	Bulk density	gm/cc	1.37	HECS/SO/SOP/025
8	Moisture Content	%	5.24	IS 2720 part 2 Reaff:2000 .
9	Organic Matter	%	0.48	IS:2720 (P-22, 1972)
10	Nitrogen	mg/kg	267.45	IS 14684:1999 RA 2008
11	Phosphorus	mg/kg	32.56	USDA, APHA-4500PC
12	Potassium	mg/kg	20	EPA 3050 B/EPA 7770
13	Calcium as Ca	mg/kg	350	EPA 3050 B/EPA 7140
14	Magnesium as Mg	mg/kg	25	EPA 3050 B/EPA 7450
15	Boron	mg/kg	BDL(DL0.1)	HECS/SO/SOP/028
16	Chromium	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7090
17	Iron	mg/kg	28965.15	USEPA Method 3050B&EPA 2008
18	Manganese	mg/kg	BDL(DL0.1)	EPA 3050B/EPA 7000 B
19	Sodium	mg/kg	54	HECS/SO/SOP/003
20	Chloride	mg/kg	163	SW 846 9253 9077
21	Sulphate	mg/kg	174	IS 14685 (1999) Reaffirmed 2014
22	Sodium Absorption Ratio	%	49	HECS/SO/SOP/048
23	Residual Sodium Carbonate	%	1.6	HECS/SO/SOP/049

Note:- % - Percentage, mg/kg - Milligrams per kilogram, cm/hr - Centimeters per hour, gm/cc - Grams per Cubic Centimeter.  
\*\*\*End of Report\*\*



*C.P. Sivaraman*  
Authorized Signatory

**C.P. SIVARAMAN**  
Laboratory Manager

# Hubert Enviro Care Systems (P) Ltd.

# 18, 92nd Street, Ashok Nagar,  
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### TEST REPORT

Page : 1 of 1

Name of the Client : M/s. APIIC - Athivaram.,  
Address of the Client : Athivaram  
Sample Description : Noise Monitoring  
Sample Drawn By : Hubert Enviro Care Systems Pvt Ltd  
Sampling Date : 20/11/2017

Report No. : HECSL/N/001-002/201117  
Report Date : 25/11/2017

S.No.	Location	Noise Level in dB (A)
1	Attivaram,Panchayat Buiding	63.4
2	Karur,GOVT MPP School	62.3
3	Attivaram Idustrial park,DRA Industry	63.2

#### Limits set by CPCB:

- |      |                  |                       |                       |
|------|------------------|-----------------------|-----------------------|
| i.   | Industrial Area  | : Day Time-75 dB (A); | Night Time-70 dB (A). |
| ii.  | Commercial Area  | : Day Time-65 dB (A); | Night Time-55 dB (A). |
| iii. | Residential Area | : Day Time-55 dB (A); | Night Time-45 dB (A). |
| iv.  | Silence Zone     | : Day Time-50 dB (A); | Night Time-40 dB (A). |
| v.   | Working Area     | : Day Time-90 dB (A); | Night Time-90 dB (A). |



  
Authorized Signatory

**C .P. SIVARAMAN**  
Laboratory Manager

**Annexure 5**  
**Paper Advertisement Copy**

**ఆంధ్రప్రదేశ్ సాంకేతికాధునిక పరిశోధనా సంస్థానం**  
**సరువాయిల సంస్థానం**  
 (ఆంధ్రప్రదేశ్ ప్రభుత్వ రంగ సంస్థ)

కార్యాలయం: D.No.59A-20-3/2A, 1వ, 2వ మరియు 3వ అంతస్తులు  
 శ్రీ శివ కాంప్లెక్స్, ఫన్ టైమ్స్ క్లబ్ రోడ్, టీచర్స్ కాలనీ, విజయవాడ-520008.  
 టెలిఫోన్: 0866-2428300, 323 వెబ్: www.apic.in

**జాહેరంగ ప్రకటన**

APIIC లిమిటెడ్ అభివృద్ధి (గ్రామం), ఓజిలి (మండలం), SPSR నెల్లూరు జిల్లాలో ఇండస్ట్రియల్ పార్కును అభివృద్ధి చేస్తోంది మరియు పర్యావరణ మరియు అడవుల మంత్రిత్వ శాఖ (MoEF), న్యూఢిల్లీ వారు EIA ప్రకటన 2006 మరియు ఆంధ్రప్రదేశ్ దాని తదుపరి నవరణ ప్రకారం F.No. 21-93/2014-IA-III తేది: 9 మార్చి, 2017 ప్రకారం ఈ ఇండస్ట్రియల్ పార్కు కోసం పర్యావరణ క్లియరెన్స్ (EC) ఇచ్చారని అందుమూలంగా తెలియజేయడమైనది. పర్యావరణ క్లియరెన్స్ వివరాలు APIIC వెబ్సైట్ [www.apic.in](http://www.apic.in) లో లభిస్తాయి.

ప్రచురణ: విజయవాడ నం/-  
 తేది: 04.04.2017 చీఫ్ ఇంజనీర్-1

**ANDHRA PRADESH INDUSTRIAL INFRASTRUCTURE CORPORATION LIMITED**  
 (A Govt. of Andhra Pradesh Undertaking)  
 Corporate Office : D.No.59A-20-3/2A, 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Floors, Sri Siva Complex, Fun Times Club Road, Teachers Colony, Vijayawada-520 008. Tel : 0866-2428300, 323. Web : [www.apic.in](http://www.apic.in)

**PUBLIC NOTIFICATION**

It is hereby informed that APIIC Ltd., is being developed Industrial Park at Attivaram(V), Ozilil(M) of SPSR, Nellore District and Ministry of Environment and Forests, (MoEF), New Delhi has been accorded Environmental Clearance (EC) for this Industrial Park, vide F.No.21-93/2014-IA-III dated: 09th March 2017, in terms of EIA notification 2006 and its subsequent amendments thereof. The details of Environmental Clearance are available in APIIC website: [www.apic.in](http://www.apic.in).

Place : Vijayawada. sd/-  
 Date : 04.04.2017 Chief Engineer-I

**Annexure 6**  
**CFE Approval**



**CONSENT ORDER FOR ESTABLISHMENT**

**Order No. 236 /APPCB/CFE/RO-NLR/HO/2017**

**Dt: 03.11.2017**

**Sub:** APPCB – CFE – **M/s. Andhra Pradesh Industrial Infrastructure Corporation Limited (APIIC), Sy Nos. 55 to 95, 97, 98, 99, 101, 102, 103, 104, 105, 106, Attivaram Village, Ozili Mandal, SPSR Nellore District** - Consent for Establishment (CFE) of the Board under Sec.25 of Water (Prevention & Control of Pollution) Act, 1974 and Under Sec.21 of Air (Prevention & Control of Pollution) Act, 1981 - Issued - Reg.

**Ref:** 1. EC Order dt.09.03.2017 issued by MoEF&CC, GOI.  
2. CFE application received through A.P. OCMMS on 20.09.2017.  
3. R.O's inspection report dt. 23.09.2017.  
4. CFE Committee meeting held on 23.10.2017.  
5. Proponent's Ir.dt.23.10.2017.

\* \* \*

1. In the reference 2<sup>nd</sup> cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for **development of Industrial Park** with a project cost of Rs. 38.1238 Crores.
  - **Total area of Industrial Park is 406.26 Acres. The APIIC had already allocated 104.23 acres to some of the industries. The remaining area is 302.03 acres.**
  - **The Industrial Park is meant for Red, Orange & Green category industries. It is divided into 64 plots. The APIIC had already allotted 14 Plots to some of the industries. Remaining plots are 50 Nos.**
2. As per the application, the above project is to be located at Sy Nos. 55 to 95, 97, 98, 99, 101, 102, 103, 104, 105, 106, Attivaram Village, Ozili Mandal, SPSR Nellore District.
3. The above site was inspected by Environmental Engineer, Regional Office, Nellore, A.P Pollution Control Board on 21.09.2017 and observed that the site is surrounded by
  - North** : Dry lands & Reserve Forest lands
  - South** : Irrigation tank followed by agriculture lands
  - East** : Dry lands & Reserve Forest lands
  - West** : Attivaram-Karur Panchayat road and irrigation tank & agriculture lands
4. The Board, after careful scrutiny of the application, verification report of Regional Officer and recommendations of the CFE Committee, hereby issues **CONSENT FOR ESTABLISHMENT** to your project Under Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. **This order is issued to the activity as mentioned at Para (1) only.**
5. This Consent Order now issued is subject to the conditions mentioned in Schedule 'A' and Schedule 'B'.

6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.

7. **This order is valid for period of 7 years from the date of issue.**

Encl: Schedule 'A'  
Schedule 'B'

**MEMBER SECRETARY**

**To**

**M/s. APIIC Ltd.,  
(Industrial Park, Attivaram Nellore Dist),  
Door No. 59A-20/3/2A, 1<sup>st</sup> Floor,  
Funtimes Club Road, Vijayawada,  
Krishna District – 520008  
gm.emp.apiic@gov.in, ce1.apiic@nic.in,  
sivareddy03@gmail.com,**

**Copy to:** 1. The JCEE, Z.O., Vijayawada for information and necessary action.  
2. The E.E., R.O., Nellore for information and necessary action.

### **SCHEDULE – A**

1. Separate energy meters shall be provided for Effluent Treatment Plant (ETP) and Sewage Treatment Plant (STP) to record energy consumed.
2. The proponent shall obtain Consent for Operation (CFO) from APPCB, as required Under Sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the activity.

### **SCHEDULE – B**

#### **Water:**

1. The source of water is Telugu Ganga Canal (TGC). The maximum permitted water consumption is as following:

S. No	Purpose	Qty in KLD
1.	Process	1390.90
2.	Domestic	142.30
	<b>Total</b>	<b>1533.20</b>

2. The maximum waste water generation shall not exceed the following:

S. No	Source	Qty in KLD
1.	Industrial effluents	554.70
2.	Domestic	125.25
	<b>Total</b>	<b>679.95</b>

#### **Treatment & Disposal:**

Effluent Description	Treatment	Disposal
Process effluents	CETP of capacity 1.0 MLD consists of Collection Tank, Bar screen chamber, Oil skimmer Tank, Flash Mixer tank, Primary clarifier tank, Anaerobic Digester Tank, Aeration Tank, Secondary Clarifier Tank, Clarified Water Tank, Sludge Holding Tank, UF Feed Tank, RO permeate Tank, to treat the industrial effluents from the entire cluster and the CETP with Zero Liquid Discharge system viz., Stripper, RO Plant, MEE followed by ATFD.	<ul style="list-style-type: none"> <li>The RO permeate shall be used for maintaining the greenbelt within industrial park.</li> <li>Rest shall be reused in the units for various applications.</li> <li>RO rejects shall be sent to MEE.</li> <li>MEE condensate shall be treated in the ETP.</li> <li>Salts shall be sent to TSDf for secured landfill.</li> </ul>
Domestic effluents	Sewage Treatment Plant (STP) of capacity 500 KLD consists of Collection Tank / Equalization Tank, Bar screen, air blower, diffusers, MBBR Media, tank, clarifier tank, sludge drying bed, pressure sand filter, activated carbon filter etc.	Treated waste water shall be used for green belt development.

3. Dual plumbing system shall be adopted and separate tanks shall be provided to store fresh water and treated waste water.
4. **No waste water shall be discharged outside the industrial park. There shall be no discharge into the irrigation tank and agricultural lands nearby.**

5. During construction stage septic tank followed by soak pit shall be constructed to the temporary toilets / kitchen provided for the construction labour and shall be removed after completion of the project.
6. Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for Domestic and flushing purposes.

**Air:**

7. Air pollution Control equipment shall be installed along with the commissioning of the activity and shall comply with the following for controlling air pollution.

The boilers and DG sets are the main utilities required by different upcoming units. The individual units shall install them depending upon their requirement and should take consent of the Board.

8. Diesel generator sets shall be installed in a closed area with silencers and suitable noise absorption systems. The ambient noise level shall not exceed 75 dB (A) during day time and 70 dB (A) during night time.
9. Necessary provisions should be made by providing tarpaulin / GI Sheets around the construction site to reduce the fugitive emissions to the surrounding area.

**Solid Waste:**

10. The proponent shall comply with the following:

<b>S. No</b>	<b>Source of solid waste</b>	<b>Quantity</b>	<b>Method of disposal</b>
a)	Used Oil / Waste Lubrication Oil	Actuals	Used as lubricant within the premises / to authorized Re-processors / Recyclers / to the Cement industries to use as alternate fuel in the kiln.
b)	Containers & Container Liners	Actuals	To authorized agencies, after complete detoxification for re-use/ recycle.
c)	Glass Bottles / Scrap	Actuals	
d)	HDPE Bags and Polythene Bags	Actuals	
e)	MEE Salts / Mixed Salts	Actuals	To TSDF, Parawada for secured land filling.
	Inorganic Residue	Actuals	
g)	Boiler Ash	Actuals	To Brick Manufacturers.
h)	Municipal Solid Waste	50 kg/day	To Municipal dumping yard.
i)	Organic waste	520 kg/day	For composting
j)	Inorganic waste	630 kg/day	disposed to authorized vendors

11. The solid waste generated shall be properly collected and segregated before disposal to the city municipal facility. Waste paper, cartons, thermocol, plastic waste, glass etc., shall be disposed to recycling units. E-waste shall be disposed to authorized recycling units. The in-vessel bio-conversion technique shall be used for composting the organic waste.
12. All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
13. Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and shall be disposed taking the necessary precautions for general safety and health aspects of people, and it shall be disposed only in approved sites with the approval of competent authority.

14. The following rules and regulations notified by the MoE&F, Gol shall be implemented.
  - a) Solid Waste Management Rules, 2016.
  - b) Hazardous waste and other wastes (Management, and Transboundary Movement) Rules, 2016 and amendments thereof.
  - c) Batteries (Management & Handling) Amendment Rules, 2010.
  - d) E-Waste (Management) Rules, 2016.
  - e) Construction and Demolition waste Management Rules, 2016.

**Other Conditions:**

15. **The Industry shall comply with the following as committed vide Ir.dt.23.10.2017:**
  - The APIIC had already allocated 104.23 acres to some of the industries. The remaining area is 302.03 acres. Out of that, the area earmarked for development of greenbelt is 33% of the total area (99.6 acres).
  - 15% (45.3 acres) of the greenbelt shall be developed by M/s. APIIC and the remaining 18% (54.7 acres) shall be developed by the individual industries.
  - Fencing shall be provided all along the entire Industrial Park and to leave buffer zone towards Irrigation tanks to avoid discharges of waste water into Irrigation tanks. Plots shall be allocated to Non-water polluting industries towards Irrigation tanks.
16. The individual industries shall pre-treat the effluents and shall be transported from the individual industries to the CETP with proper manifest system.
17. **Industrial units shall obtain CFE / CFO of the Board as required under relevant provisions of Pollution Control Acts.**
18. The proponent shall create corpus fund and maintain separate account with adequate budget to meet operational cost of CETP & STP.
19. The proponent shall ensure that there should be proper legal frame work for meeting recurring expenses by occupants for implementation of conditions stipulated.
20. Solar energy and LED bulbs shall be used to reduce electricity requirements.
21. **The proponent shall obtain necessary permissions for the proposed activity, from the concerned Government Departments and other competent authorities.**
22. As per the provision of Fly ash Notification No.S.O.2804 (E), dt. 03.11.2009 and its amendments thereof, every construction agency engaged in the construction of building within a radius of 300 km from a coal or lignite based thermal power plant shall use only fly ash based products for construction, such as cement or concrete, fly ash bricks or tiles or clay fly ash bricks, blocks or tiles or cement fly ash bricks or bricks or blocks or similar products or a combination or aggregate of them in every construction project.
23. The proponent shall use Ready mix concrete for construction of the building.
24. The proponent shall provide proper centralized air exhaust system in all the cellar areas to avoid suffocation.
25. The proponent shall provide sufficient parking space for visitor vehicles.
26. The proponent shall comply with Energy efficient practices and energy audit practices. Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement. Wherever feasible, green building concepts shall be adopted.
27. Application of Solar energy should be incorporated for illumination of common areas,

lighting for gardens and street lighting in addition to provision of solar water heating.

28. Concealing the factual data or submission of fabricated data and failure to comply with any of the conditions mentioned in this order attracts action under the provisions of relevant pollution control Acts.
29. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec. 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to revoke the order, to review any or all the conditions imposed herein and to make such modifications as deemed fit and stipulate any additional conditions by the Board.
30. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules,1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of Water (Prevention and Control of Pollution)Act,1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.

**MEMBER SECRETARY**

To

**M/s. APIIC Ltd., (Industrial Park),  
Door No. 59A-20/3/2A, 1<sup>st</sup> Floor,  
Funtimes Club Road, Vijayawada,  
Krishna District – 520008**  
gm.emp.apiic@gov.in, ce1.apiic@nic.in,  
sivareddy03@gmail.com,