

**COMPANY PROFILE
OF
ECO ENGINEER'S & CO.
176/3, St. Joseph Street, Negombo.
Tel:031-2225515/0714778868
Web sites: www.athulajayamanne.com
www.ecoengs.com**



SPECIAL FEATURES

AWARDS & ACCREDITATION

Awards

Eco Engineer's & Co. has won Green World Award 2018 as a Global Gold Winner from Green World Organization England. About 500 Applicant from all over the world applied for this Award and only few Applicant were selected as Global World Winners.



“International Green Apple Award for Best Environmental Practices -2015” - UK

Eco Engineer's & Co. has won Prestigious Environmental Award “International Green Apple Award for Best Environmental Practices, UK-2015”. We have won the award after competing over 5000 Environmental Companies around the world and first time for south Asian region. Award Ceremony will be held on 16th of November 2015 at House of Parliament - London.





National Award for Green Jobs-2009

Honored with the “National Award for Green Jobs” in the category “Water resource management through wastewater treatment via Biogas Technology” in a competition held by the Ministry of Environment and Natural Resources in International Environmental day, 2009.



National Award for Green Jobs-2010

Honored with the “National Award for Green Jobs” in the category “Water resource management through wastewater treatment via Biogas Technology” in a competition held by the Ministry of Environment and Natural Resources in International Environmental day, 2010.



Presidential Award – 2009

Honored with the “Presidential Award – 2009” for the invention of UAFF, in the field of Environmental, conducted by Sri Lanka Inventors Commission- 2012.



Commercially Successful Sri Lankan Inventors-2012

Honored with an award of “Commercially Successful Sri Lankan Inventors” for the invention of UAFF, from Ministry of Technology and Research, conducted by Sri Lanka Inventors Commission – 2012.



Sahasak Nimavum-2012

Honored with an Award of “The Most Innovative Product” in category “Environmental Section” in the “Sahasak Nimavum 2012” Competition, conducted by Ministry of Education-2012

Technology Appreciation Award-2011(INDIA)

In February 2011 with the invitation of “Pollution Control Board of Bangalore – India” We have presented two presentations on “Acidic wastewater treatment” for Industrialists and Key staff of “Pollution Control Board of Bangalore – India” and received an award from the Chairman of Pollution Control Board of Bangalore, India. We already have implemented plants in India and more Indian Industrialists are now planning to practice our technology in India.



Technology Appreciation Award-2009 (NEPAL)

Honored with the Award for the Presentation on “Advanced Technology on Biogas in Sri Lanka” at the International conference on “Knowledge Management” in Kathmandu, Nepal – 2009.

Best Research Award-1998

Best Research Award for “Innovative Fuel Saving Unit on Dual Fuel (Biogas + Diesel) Engine Operation” from NERDC in 1998.

Best Research Award-2004

Award for success on research of “Application on Biogas Technology to Treated Wastewater from Desiccated coconut mills” from NERDC in 2004.

CEA Accredited Environmental Consultancy Company

Eco Engineer's & Co. has been a registered Environmental Consultant for **last 10 years** continuously

Content

1. Introduction
2. SL Patent
3. Advantages of the BioUAFF Technology
4. Technology Information-BioUAFF
5. Underground installation of wastewater treatment plant using Biouaff Technology
6. Staff
7. CEA Registration
8. Analytical Test Reports of Treated Wastewater
9. Reference Letters
10. Business Registration
11. Design & Construction Experience Of “Eco Engineer’s”

ECO ENGINEER'S & CO.
Pioneers in Greener Technologies through Research
176/3, St. Joseph Street, Negombo.
Tel:031-2225515/071477886
Web sites: www.athulajayamanne.com / www.ecoengs.com

1. INTRODUCTION

BioUAFF is an invention of "Eco Engineer's & Co." Which is a leading biotechnology company specialized in the engineering design, consultancy and construction of effluent treatment plants & sewage treatment plants to meet today's increasingly stringent CEA discharge requirements in Sri Lanka. Eco Engineer's & Co. is registered in Central Environmental Authority as Consultant/ Specialist for Technical Guidance for Wastewater Treatment Technologies & Solid Waste Management since 2004 successively.

Further to that, our company is the only wastewater treatment company that has won Presidential Award-2009, National Green Job Award from Ministry of Environment 2009, 2010 consecutively for our new inventions on wastewater treatment systems. Eco Engineer's & Co. were awarded as one of THE MOST COMMERCIALLY SUCCESSFUL INVENTORS by Ministry of Science and Technology, Sri Lanka. In addition to that, Eco Engineer's & Co. is only Sri Lankan wastewater treatment company that has won awards internationally such as technology appreciation award from the President of Karnataka State Pollution Control Board, India. Eco Engineer's & Co. has won Prestigious Environmental Award "**International Green Apple Award for Best Environmental Practices -2015**" from **UK**. We have won the award after competing over 500 Environmental Companies around the world and first time for south Asian region. **Award Ceremony was on 16th of November 2015 at House of Parliament – London**

2. SL PATENT



SRI LANKA

PATENT

To All to Whom These Presents Shall Come.

Whereas, there has been presented to the Director General of Intellectual Property an application for the grant of a patent for an invention as described, shown and claimed in the documents annexed and attached hereto, and made part hereof,

Whereas, the application is in compliance with all the requirements of the Intellectual Property Act No. 36 of 2003 and Regulations made thereunder,

The patent is hereby granted to the person whose name, address and other relevant information are given hereunder and the patentee shall have for a period of twenty years from the filing date of the application for the patent, subject to the provisions of the Intellectual Property Act No. 36 of 2003, the exclusive rights to exploit the said invention, to assign or transmit the patent and to conclude licence contracts relating to the patent.

The patentee who intends to keep the patent in force is required to renew the patent before the expiration of two years from the date of the grant of the patent and each subsequent year during the term of the patent.

In witness whereof I have hereunto caused the seal of the National Intellectual Property Office of Sri Lanka to be affixed in the city of Colombo on this

Twenty- second day of July of the year
Two Thousand and Fifteen

Arachchola
Director General of Intellectual Property

National Intellectual Property Office of Sri Lanka

Patent No : **17149**

Date of Filing : **29/04/2013**

Name (s) and Address (es) of the owner of patent:

JAYAMANNE MOHOTTIGE DON AUGUSTIN ATHULA
No: 176/3, St.Joseph Street, Negombo, Sri Lanka.

Name (s) and Address (es) of the Inventor (s) :

JAYAMANNE MOHOTTIGE DON AUGUSTIN ATHULA
No:176/3,St.Joseph Street, Negombo, Sri Lanka.

Title of the Invention: **NEW WASTE WATER TREATMENT SYSTEM WITH ZERO ENERGY (ELECTRICITY) CONSUMPTION,ZERO SLUDGE PRODUTION AND WITH BIOGAS PRODUCTION & UTILIZATION.**

Priority Date, if any: --

International Patent Classification (IPC): C 02F 3/00, 3/34

International Search Report: --

No: --

Date: --

Issued by: --

National Intellectual Property Office
Sri Lanka

System generated document
NILUSHIKA

3. ADVANTAGES OF THE BIOUAFF TECHNOLOGY

15 Reasons To Choose BIOUAFF Technology As Wastewater Treatment System

1. **No electrical power** is necessary for the operation of this New Up flow Anaerobic Floating Filter (UAFF) with Multistage Facultative Bacterial Tank (MFBT) wastewater treatment system.

Note: Calculated Power requirement for conventional type wastewater treatment system for a standard size garment factory (1000 employers) cost about Rs. 60,000 (Sri Lankan Rupees) per month. This figure was calculated according to the data collected from EAM Malibon Garments Factory, Ingiriya, Sri Lanka.

2. **25 Years Genuine Warranty (Longest Warranty for WWTP)** for the Bacterial Growing Media of the System.
3. **Fastest Payback Period:** After calculations, payback period is around 4 YEARS (excluding 25 years of warranty).
4. **Potential for reusing and water saving:** Treated effluent from UAFF Technology can be **UTILIZED FOR TOILET FLUSHING OR COOLING TOWER REQUIREMENT; IT CAN BE DONE BY MICROFILTRATION WITH MINIMUM COST** as the Treated Effluent achieves very less values than the parameters stipulated by CEA (Central Environmental Authority) .
5. **As an alternative fuel:** Bio-gas generation from the operation of UAFF system can be utilized as a thermal or power requirement of the hotel or industry premises concerned. For example Bio-gas can be utilized as a cooking purpose of the hotel
[Ex. Rockland Distilleries at Marawila, save over Rs.15,000 (Sri Lankan) per day on boiler fuel (Diesel) due to the application of biogas from UAFF system]
6. **No Sludge production:** Most of the wastewater treatment technologies required to dispose sludge that generate after the aeration tanks. This innovative technology does not produce any sludge since it has a Multi stage Facultative Bacterial Tanks (MFBT).
7. **Negligible Maintenance cost:** This innovative technology does not require any maintenance cost or labors for regular maintenance, except the necessity of pouring a small amount of water to the water seal at the top of the anaerobic reactor only once a week.
8. **Least Construction Cost:** Compare to cost analysis of other advanced wastewater treatment technologies; this technology leads as one of the most cost effective treatment technology in the market. Because of the innovative low cost/high tech construction methods and no requirements of machinery.
9. **Space is not a problem:** As the whole system can be constructed totally underground in car parks, **ground space can be used as the car park** and hence no additional ground space is required.
10. **Ability to operate simultaneously:** UAFF Technology is the only wastewater treatment technology that can be operated **onsite** while The Industry is Functioning
11. **24 hour Start- up;** since the treatment plant does not have any moving parts.
12. **Long absence periods acceptable;** since the treatment system fully operates on bacterial reactions. When flow rate of effluent is low or zero, anaerobic and facultative bacteria have ability to hibernate for long period of time and when flow rate is gradually increased, bacteria will reactivated automatically.
13. **Low carbon footprint;** since it does not emit any greenhouse gases like carbon dioxide, methane, sulfur dioxide ,hydrogen sulfide to the atmosphere while treatment plant operate as a zero electricity wastewater treatment system. As the system does not require any electricity, there is no carbon footprint on the thermal electrical power **manufacturing of CEB**.

14. Free from nuisance resulting odor or noise: UAFF is capable to treating wastewater even in highly residential areas since it **does not produce any Odor and Noise** during the operation.

15. Ability to treat in combination: UAFF Technology is capable of treating **Kitchen Wastewater, Laundry Wastewater and Sewage all together.**

Due to high demand for this latest wastewater treatment technology, Eco Engineer's & Co. has become the first Sri Lankan Technology company that export this technology to India, Philippines and Indonesia (as they don't have such a technology). With the invitation from Karnataka State Pollution Board India, Eco Engineer's & Co. has successfully implemented this novel technology for the Desiccated Coconut Mills Sector in India. In addition to that,

We are able to work in close co-operation with our customers to seek the most cost effective economic solution for every treatment problem. "Eco Engineer's & Co." is the initial developer of the UAFF (Up-flow Anaerobic Floating Filter) reactor technology (Sri Lanka Patent No: 14932), the most successful anaerobic technology for treatment of commercial and industrial wastewater. We are following the "Code of Practice for Design and Construction of Biogas Systems" which is stipulated by the Sri Lanka Standards Institution (SLSI), Sri Lanka.

4. TECHNOLOGY INFORMATION-“BIOUAFF”

PROPOSED “UP-FLOW ANAEROIBC FLOATING FILTER TECHNOLOGY”

Up-Flow Anaerobic Floating Filter (UAFF) Technology was invented by Senior Research Engineer Athula Jayamanne after conducting 10 years research work. It is a combination of Anaerobic Floating Filter Technology and Advanced Facultative Bacterial Technology.

In addition to that we use hibernated cultured bacteria to increase the efficiency of bacteria. This technology is capable of treating any kind of biodegradable effluent (from Level of COD 600mg/L to 80,000mg/L). Further information of Anaerobic Filter Technology and Facultative Bacterial Technology is given below.

TREATMENT PROCESSS.

As per my international experience gain from USA, Europe, China, Thailand and India about the advance W/W treatment systems, it is very much suitable to have mainly, "**Up flow Anaerobic Floating Filter (UAFF) System with high efficiency**" with "**Facultative Bacteria Tanks (FBT)**" for wastewater of the housing complex. In this waste water treatment system constructing of An Anaerobic Filters (UAFF – partially over ground) with Facultative Bacterial Tanks (FBT), Slow Gravity Multimedia Filter, and Chlorination unit with dosing pumps (partially underground) and Treat Wastewater Storage Tanks are included.

UP FLOW ANAEROBIC FLOATING FILTER (UAFF) TECHNOLOGY (Advanced Anaerobic Filter Technology)

Anaerobic filter is a fully airtight reactor with certain bacteria growing media for anaerobic bacteria to create required anaerobic condition for the wastewater treatment. Usage of rocks, gravels, or different types of proprietary plastic material is common as the column of the bacteria growing media (BGM) of this system. Column with media having large specific surface area (surface area per unit volume of the medium) will have more fixed film bacteria attached to the media and some entrapped with the void space of the media. (Chongrac Polprasert1996.)

In general, the packing media to be installed in anaerobic filters should have a high specific surface area to provide a large surface to the growth of attached bio film, while maintaining sufficient void to prevent the reactor from clogging. This clogging would either form particulate solid entering with influent waste stream or bacterial flock growing within the reactor. As per the international experienced gained in China, Thailand and India about the wastewater treatment, it is suitable to have anaerobic filter treatment system for low concentration fermentation materials with high COD and BOD and biological nutrient removal of UAFF reactor is higher than conventional anaerobic filter technology (85% removal).

FACULTATIVE BACTERIAL TECHNOLOGY

Facultative bacteria can live in both anaerobic and aerobic environments. In other words, wastewater treatment experts mention it as a cocktail of aerobic and anaerobic bacteria. In addition to that it is capable of existing under varying environmental conditions or by assuming various behaviors. A facultative parasite can live independently of its usual host.

At the end of the Facultative Bacterial Tank, Slow Gravity Multimedia Filter shall implement.

CHLORINATION

Filtered water is chlorinated by a chlorine dosing system to further eliminate the presence of pathogenic and other bacteria and algae that commonly grow in water. This chlorination system is equipped with a chlorine dosing pump, dosing tank & online chlorine controller. As a wastewater treatment expert, we often recommended chlorination due to high efficiency of bacterial removal and there are enough local agents for supplying of this technology.

Technology Evaluation Table

Specification to be evaluated	Technologies		Technology 2
	BIOUAFF(Eco Engineer's & Co.)	Technology	
Electricity Consumption during the operation	No	No	
Sludge Production	Negligible		
Maintenance	No		
Chemicals	Yes		
Biogas Production	No		
Noise	No		
Odour			
Capabilities of Treating Kitchen, Sewage, Laundry Wastewater all together	Yes		
Footprint	Large. But it can be installed underground		
Underground	Yes		
Warranty on Equipments	Twenty Five Years		

5. UNDERGROUND INSTALLATION OF WASTEWATER TREATMENT PLANT USING BIOUAFF TECHNOLOGY.



Above picture clearly illustrate how fully underground system doesn't obstruct for the hotel's aesthetic view. And you can use it as car park area of your hotel.

6. STAFF

Eng. Athula Jayamanne

M.Sc. Eng. (AIT, Bangkok), MIWA(UK), H.S.Mc. (Osaka), AMIE(SL)
MIEP(SL), Chartered Environmental Professional (C. Env. P.)

Founder Chairman/Chief Consultant Engineer

- Registered Environmental Consultant of Central Environmental Authority
- Former Senior Research Engineer at National Engineering Research & Development Center
(Work experience over 25 years)

Educational Qualifications :

I Degree of Master of Engineering **[M. Eng.]** (Waste & Wastewater Engineering)
-Asian Institute of Technology
(Bangkok)
Thesis – Application of Up-flow Anaerobic Floating Filter (UAFF-Advanced Biogas Technology) for high strength low degradable (coconut wastewater from D. C. mills and piggery sewage) wastewater treatment.

II Institute of Engineers Sri Lanka (IESL) Part I & Part II

III Highly Skilled Machinist **[H.S.Mc.]**
• Yodogawa Advance Vocational Training Centre, Osaka prefecture government
- Osaka, Japan - through JAICA

Professional Experience :

I Chartered environmental Professional **[C.Env.P.]**

II Member of Sri Lanka Institute of Environmental Professionals. **[MIEP]**

III Member of International Water Association **[MIWA,UK]**

III Associate member **[AMIE]** - Institute of Engineers SL

IV Technical committee consultant of the Solid Waste Management Project (Pilisaru) for Island wide local authorities conducted by Ministry of Environmental and Natural Recourses.

V Founder Vice president of Lanka Biogas Association.

VI Lifetime Member of JICA (Japan International Cooperation Agency) Allumini Association

VII General Manager / Chief Consultant Engineer of Eco Engineer's & Company (Registered Environmental Consultancy Company of Central Environmental Authority of Sri Lanka.) from 2008

- Further research on wastewater treatment and dissemination of this newly invented wastewater treatment system island wide.

VIII Senior research engineer of Renewable Energy Department at NERDC (National Engineering Research and Development Center) of Sri Lanka
 – Project Engineer- (Advanced Biogas Technology) (From 1997 to 2007)

- Research & Development of Advance wastewater treatment system according to biogas technology to keep the environment clean.
- Dissemination of Dry Bath & Conventional Biogas system island wide. Specially promote bio fertilizer.

IX As an In-charge Engineer of Biogas Section at NERDC (From 1989 to 1997)
 (Development of Dry Bath Unit & dissemination technology to protect environment)

X As a Mechanical Engineer at NERDC of Sri Lanka (After passing out from IESL part II examination I was appointed as a Mechanical Engineer at NERDC - from 1988 to 1989).

International Papers :

- I Published a paper on “Application of Upflow Anaerobic Bio filters for biogas production” for world renewable Energy Congress, held at Colorado U. S A. (September 2004).
- II Published and presented a paper on “ Pilot Market Garbage Disposal Project according to Biogas Technology” for “World Conference on Energy for Sustainable Development held at Cairo, Egypt (December 2004).
- III Published and presented a paper on “Biogas Technology for Wastewater Treatment” for “World Renewable Energy Regional Congress & Exhibition 2005”, held at Jakarta, Indonesia. (April 2005)
- IV Present a paper at, the SAARC Seminar Workshop on Waste Recycling Based on Biogas Technology - Dhaka, Bangladesh - (July 1995)
- V Published and presented a paper on “Anaerobic bio filter systems to have the best yield of biogas with the treatment of piggery wastewater” for World Renewable Energy Congress IX, Florence, Italy (August 2006)
- VI Selected for the oral presentation and publish the paper on “Market Garbage Disposal According to Biogas Technology” for the international conference on “Sustainable Urban Environmental Practices” at Chiang Mai, Thailand. (October 2008)

Eng. Christo Jayamanne

B.Sc. Eng. (UMN,USA), CMgt(Minor), MWEF(USA)

OSHA(USA), MASCE(USA), OWTS-MPCA,

Director/Junior Design Engineer

Head of Marketing & Business Development

- Bachelor of Civil Engineering (Water & Wastewater Engineering Emphasis), Department of Civil Engineering, University of Minnesota, Twin Cities.
- Minor Degree in Construction Management, University of Minnesota-Twin Cities
- Dean's List, Patten University, Oakland, California (GPA-3.88) *Summer 2007/Fall 2007/Spring 2008.*
- Licensed "OSHA Construction Safety Manager"(OSHA License # :30-600675412)
- Associate Degree (Engineering Emphasis) from Patten University, Oakland, California
- Licensed Onsite Wastewater Treatment Systems Designer-Minnesota Pollution Control Agency Minnesota
- Member of Water Environmental Federation, American Society of Civil Engineers and Engineers without Borders, USA
- Trainee Project Manager for Designing Denitrification Process of Empire Wastewater Treatment Plant's Extension, Minnesota, USA.
(wastewater treatment discharge: 24 millions gallons per day.)

Eng. Aruna Gunarathne,

Head of the Engineering - Mechanical

B.Sc Eng., C.Eng., MIE (SL), M.ASHRAE, M.LABSE, GREEN^{SL®} AP, JP All Island

MEP Consultant Engineer

CAREER HIGHLIGHTS

- Well developed skills in working with teams, managing teams, and customer/supplier interaction skills
- Demonstrate leadership aptitude; strong work ethics and extensive problem solving abilities
- Development & management of strategic plans that involves extensive research.
- Experience in developing & project management of innovative solutions in the Mechanical, Central air conditioning and construction industry
- Experience in managing technical and non technical professionals
- Effective communicator and self starter with proven capability of adapting to change and the ability to think beyond the dots

- Well experienced in hardware & Microsoft suite, Revit MEP 2012, AutoCAD, System program Software

EMPLOYMENT SUMMARY:

2012/03 to UP to date	Head of Engineering - Mechanical, EME Engineering Lanka (Pvt.) Ltd
2008/09 to 2012/03	Assistant Manager, Shin Nippon Lanka (Pvt.) Ltd
2002/07 to 2008/09	Mechanical Engineer, Shin Nippon Air Technologies Co.,. Ltd
2001/04 to 2002/05	Production Executive, Slimline (Pvt.) Ltd

EDUCATION

BSc Engineering in Mechanical Engineering – 2001

University of Peradeniya, Sri Lanka

COMPUTER SKILLS

Software Applications: **Revit MEP 2012, Carrier HAP 4.5, Load Soft 6 (Design of central air conditioning systems)**, Capability of handling **Auto CAD**, Internet Applications & Web page Designing. Hardware: PC assembly, Troubleshooting, Software & Peripheral installation

PROFESSIONAL AFFILIATIONS

Member - **ASHRAE** in USA

Institution of Engineers, Sri Lanka **C Eng MIE (SL)**

GBCSL GREEN^{SL®} AP

JP in All Island

PROFESSIONAL EXPERIENCE

Design, Estimate, supply installation and maintenance of Central Air conditioning system, Refrigerant system, Cold room, Plumbing and Fire fighting systems for Sri Lankan Airport Catering Facility project, Maldives Airport Catering Facility project, Jebel Ali Power Plant in Jebel Ali & Umm Al Nar Power Plant in Abu Dhabi, UAE, Palm Jumeirah Marina Project in Dubai, UAE, Triton hotel Sri Lanka and Ramada Hotel Project. Design and Consultancy work for Vallibel Lanka Project. Design, Estimate, supply and installation of Movenpick hotel and Sancity Hotel Project in Colombo Sri Lanka. Design Recheck, Estimate, supply and installation of **Shangri La hotel Maldives and Marina Bay Sand Singapore.**

Mr. Mario Jayamanne

Bsc. Civil & Environmental Engineering (OSU,USA)
Dip. General Business(OSU,USA)

Director/ Head of Projects

- Bachelor Science of Civil & Environmental Engineering (The Ohio State University,USA)
- Minor in Business Management (The Ohio State University, USA)

Miss. Malithi Thilanka

Chief Draughtsman

- National Certificate of Technology (Draughtsman)

Miss. Jayani Chamodya

Assistant Draughtsman

- National Certificate of Technology (Draughtsman)

Miss Nirosha Maduwanthi

Chief Accountant

- Chartered Accountants of Sri Lanka (CA)

Mr. Dominic Dilusha Annesly Silva

Marketing Executive

- 25 Years of Consumer & Industrial Sales Experiences

Field Supervisors

Mr. M.W. Sugath

Mr. A.S.R.

Karunapala

Mr. Ruwan Kumara

Working over 80 workers including drivers, clerks, masons.

Contact Details

Chairman/Chief Consultant Engineer

0714778868/ 0761118006

Tel:0312225514/ Fax0312225514

Email:eco.engineer@yahoo.com / athulajayamanne@gmail.com

Company Website -

www.athulajayamanne.com

www.ecoengs.com

Facebook Fan Page

<https://www.facebook.com/athulaengineering.12>

Youtube Channel

<http://www.youtube.com/user/christo10ful?feature=watch>

Patents that are owned by Eco Engineer's & Co.

<u>Name of the Inventions</u>	<u>Sri Lankan Patent No.</u>	<u>States</u>
(i). Improved diesel saving Inventor device for dual fuel (Diesel + Biogas) Engine	11562	
(ii). Anaerobic- Granular Bacterial Treatment System (Advanced Biogas Technology for wastewater Treatment)	11632	Inventor
(iii). Lankan mobile bio-fertilizer / Biogas generator (Anaerobic system) - for solid waste treatment	10892	Co-Inventor
(iv). Anaerobic filter technology for the treatment of distillery wastewater with acidic condition	14932	Inventor

Milestone Projects were completed internationally

Client	Flow Rate	COD of Raw Effluent
1. Mahavir Coconut Industries, (Thumkur Factory , Karnataka, India	60 Cu.m/day	40,000mg/L
2. Mahavir Coconut Industries,(Tiptur Factory), Karnataka, India	60 Cu.m/day	40,000mg/L

With our technology, we can proceed the wastewater treatment systems for, COD 400mg/L to 80,000mg/L without any problem. During last five years period we have successfully implemented difficult wastewater treatment systems for Distilleries, Palm Oil Mills, Desiccated Coconut Mills, etc. and as none of the wastewater treatment companies in Sri Lanka and India could implement successful wastewater treatment systems that were stipulated by CEA(SL), CPCB(India) Standards. Since that, our service for lower level COD wastewaters from Hotels, Hospitals, Garments, etc. are in less market share.

In present, lot of Government Intuitions and International Clients has recommended this latest technology and implemented it for their projects.

Please refer attached testimonials Page

7.CEA REGISTRATION

http://www.cea.lk/web/images/pdf/epc/re_Corrected_consultant.2018_latest_Update_2018.pdf

8. ANALYTICAL TEST REPORTS OF TREATED WASTEWATER

Continuation Sheet...		Report number: NBRO/DISD/WQ/2015/075															
<p>TEST REPORT</p> <p>Client's Reference : Treated wastewater sample from USDA Housing Project at Agulana</p> <p>Test Item : pH, COD, BOD₅, and TSS as per client's requisition letter dated 19/03/2015</p> <p>Number of Sample : 01</p> <p>Samples Collected by : Mr. Athulà Jayamanna (Environmental Engineer)</p> <p>Quantity of sample collected : Approximately 500mL</p> <p>Date of receipt to the Laboratory : 19th March 2015</p> <p>Analysis Performed from : 19th March 2015 to 27th March 2015</p> <p>Sample Particulars : Sample Description</p> <p>Table (1)</p>																	
<table border="1"> <thead> <tr> <th>Client's Sample Reference</th> <th>Sample Description</th> <th>Lab Code</th> </tr> </thead> <tbody> <tr> <td>Treated wastewater sample from USDA Housing Project at Agulana</td> <td>Clear water</td> <td>MS-2015/075</td> </tr> </tbody> </table>			Client's Sample Reference	Sample Description	Lab Code	Treated wastewater sample from USDA Housing Project at Agulana	Clear water	MS-2015/075									
Client's Sample Reference	Sample Description	Lab Code															
Treated wastewater sample from USDA Housing Project at Agulana	Clear water	MS-2015/075															
<p>Table (2) : Test Results</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Method</th> <th>MS-2015/075</th> </tr> </thead> <tbody> <tr> <td>pH at 25 °C</td> <td>APHA-4500-H⁺-B</td> <td>7.3</td> </tr> <tr> <td>Biochemical Oxygen Demand at 20°C, BOD₅, mg/L</td> <td>APHA -5210- B</td> <td>24</td> </tr> <tr> <td>Chemical Oxygen Demand, mg O₂/L</td> <td>APHA -5220- B</td> <td>54</td> </tr> <tr> <td>Total Suspended Solids, mg/L</td> <td>APHA -2540-D</td> <td>5</td> </tr> </tbody> </table> <p>APHA - Standard methods for the examination of water and wastewater, APHA AWWA WEF 1998, 20th edition</p> <p>The results are valid only for the samples submitted for analysis</p>			Parameter	Method	MS-2015/075	pH at 25 °C	APHA-4500-H ⁺ -B	7.3	Biochemical Oxygen Demand at 20°C, BOD ₅ , mg/L	APHA -5210- B	24	Chemical Oxygen Demand, mg O ₂ /L	APHA -5220- B	54	Total Suspended Solids, mg/L	APHA -2540-D	5
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Chemical Oxygen Demand, mg O ₂ /L	APHA -5220- B	54															
Total Suspended Solids, mg/L	APHA -2540-D	5															
Analysed..... P D C Pathiraja Technical Assistant	Checked..... S A M S Dissanayake Co-ordinator/WQ	Certified..... S. V. Dian Head/Environmental Studies & Services Division Director, Environmental Studies and Services Division National Building Research Organisation, Colombo.															



NATIONAL WATER SUPPLY AND DRAINAGE BOARD
Regional Laboratory. 09, Rukmanidevi Mw, Negombo
T.P.-0312225000

WASTE WATER ANALYSIS REPORT

REPORT REQUIRED BY

: Eco Engineer's (pvt) Ltd.
 176/3, St. Joseph Street, Negombo.

**LABORATORY NO OF SAMPLE &
 SOURCE OF SAMPLE**

: 39221
 Treated water Sample of The Stateman Hats (pvt)Ltd.
 Wattala.

DATE & TIME OF COLLECTED

: 2014.09.10

SAMPLING DONE BY

: Client.

OTHER DETAILS

: Details regarding the samples were provided by the client.

ANALYSIS RESULTS

Parameters	On SLS 652:1984		Sample No.	Comments
	Units	Tolerance Limit		
TSS	mg /L, max	50	14	Satisfactory
BOD	mg /L, max	30	7.5	Satisfactory
COD	mg /L, max	250	16	Satisfactory
pH		6.0 - 8.5	7.2	Satisfactory

[Signature]
 Analysis Done By

[Signature]
 Date

[Signature]
 CHEMIST
 Regional Laboratory
 No. 9, Rukmani Devi Mawatha, Negombo

This report is issued for the information of the client. It shall not be published in total or in part without the written Authority of the General Manager, National Water Supply & Drainage Board. This report is limited specifically to this specimen.



Environmental Laboratory & Consultancy Services (ELCS)

889 1/3, Maradana Road, Colombo 10, Sri Lanka. Tel. 0094112684242

CEA REGISTERED No-07/LM/LAB/29/2010

Date of Issue: 02 July 2013

TEST REPORT

Sample No	:	20130600295
Location	:	Madina Food (PVT) Ltd., Caravan Bakery, 8,Bund Road, Hendala,Wattala.
Status	:	Industrial Wastewater – Waste from Bakery
Sample Point	:	Wastewater Treatment Plant- Final Effluent Outlet
Date & Time	:	26 - 06 - 2013 at 0955 hrs
Collected By	:	ELCS- Staff
Date in Lab	:	26 -06 -2013 at 11306hrs
Date Analysis Started	:	26 - 06 - 2013
Date Analysis Completed	:	01- 07 – 2013

PARAMETERS	UNIT	TEST METHOD	TEST RESULTS	LIMITS CEA
Turbidity	NTU	APHA 2130 B	-	
Temperature	°C	APHA, 2550 B	-	<40
pH		APHA, 4500 H,B	7.35	6.0-8.5
Electrical Conductivity	µS/cm	APHA, 2510 B	-	
Total Suspended Solids	mg/l	APHA, 2540 D	12	<50
Chemical Oxygen Demand	mg/l	APHA, 5220 B	60	<250
Biochemical Oxygen Demand- 5	mg/l	APHA, 5210 B	5.4	<30
Oil & Grease	mg/l	APHA 5520 B	-	<10

CONCLUSION

Above mentioned tested parameters of the sample, Lab Reference No 20130600295, do comply with the tolerance limits of General Standards for the discharge of industrial effluents into inland surface waters in the schedule of the National Environmental (Protection & Quality) regulation No 1 of the 2008 Gazette No 1534/18 of 1st February.

Analyst

Chief Chemist

Lab Manager
Environmental Laboratory
& Consultancy Services (ELCS)
289 1/3, Room No. 3, 1st Floor, Maradana Road.

Contact us on: 0712733779, 0778351657, 0716400366, 07261174778
manager@labenvi.com, www.labenvi.com, labenvironmental@gmail.com



REGIONAL LABORATORY
NATIONAL WATER SUPPLY & DRAINAGE BOARD
No 09, Rukmani Devi Mw, Negombo

Tel. : 031 - 2225000

Date : 2016.09.09

WASTE WATER ANALYSIS REPORT

REPORT REQUIRED BY

: Eng. Athula Jayamanna.

Eco Engineering (pvt) Ltd.

176/3,st Josep Street, Negombo

LABORATORY NO OF SAMPLE &
SOURCE OF SAMPLE

: PC/2016/801

: Treated water sample from Ave Maria (pvt) Ltd,
No.305/C, Mahahunupitiya, Negombo.

DATE & TIME OF COLLECTED

: 2016.08.31

SAMPLING DONE BY

: Eng. Athula Jayamanna.

OTHER DETAILS

: Details regarding the samples were provided by the client.

ANALYSIS RESULTS

Parameters	On SLS 652: 1984		Sample No.	Comments
	Units	Tolerance Limit		
Temperature	°C		PC/2016/801	
pH Value		6.0-8.5	7.0	Satisfactory
COD	mg / L, max	250	11.7	Satisfactory
BOD	mg / L, max	30	20	Satisfactory
TSS	mg / L, max	50	8	Satisfactory

Chemist
Regional Laboratory
National Water Supply Board,
No.09, Rukmanidewi Mw,
Negombo.
031-2225000
Regional Chemist

BF
Analysis Done By

This report is issued for the information of the client. It shall not be published in total or in part without the written Authority of the General Manager, National Water Supply & Drainage Board. This report is limited specifically to this specimen.



SRI LAK LABORATORY SERVICES (PVT) LTD

Total solution providers for Water and Wastewater issues

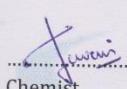
No. 265/6, St. Joseph Street, Negombo, Sri Lanka,
Telephone: +94 31 2220777 Mobile: +94 71 8064426, +94 77 2385282

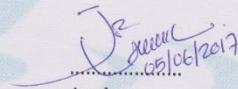
CLIENT ; Island Dairy (pvt) Ltd, Kegalle.
 LABORATORY NO OF SAMPLE ; SLLS 1501
 DATE AND TIME OF COLLECTED ; Not provided
 DATE & TIME OF RECEIVED TO LAB. ; 30/05/2017, 12:00 Hrs.
 SOURCE OF SAMPLE ; Treated waste water sample from Island Dairy (pvt) Ltd, Kegalle.
 SAMPLING DONE BY ; Mr. Athula Jayamanne (Environmental Engineer)
 REPORT REQUIRED BY ; Eng. Athula Jayamanne (Consultant Engineer),
 No:176/3, St. Joseph Street, Negombo.

Substance or Characteristic	Gazzette No:1534/18 issued on 2008.02.01		Test Results SLLS 1501	Remarks
	Units	Requirement (Maximum)		
Appearance			Clear	
1 pH Value		6.0 - 8.5	6.5	Satisfactory
2 Temperature	°C	40	28.7	Satisfactory
3 B.O.D. Value (in 5 days at 20°C)	mg/L	30	30	Satisfactory
4 C.O.D. Value	mg/L	250	161	Satisfactory
5 Total Suspended Solids	mg/L	50	29	Satisfactory

Recommendation:

It is confirmed that; tested parameters are comply with the tolerance limits for Industrial Waste Discharged to inland Surface water according to the Gazette No:1534/18.


M. A. B. D. Perera
 Chemist / Microbiologist
 Sri Lak Laboratory Services
 265/6, St. Joseph Street,
 Negombo.
 Chemist
 Sri Lak Laboratory Services (Pvt) Ltd.
 265/6, St. Joseph Street,
 Negombo.


Analyst
 05/06/2017

05.06.2017

Inv.- 1162

Information included in this report extracted from clients request form. The test report shall not be published in total or in part without approval of CEO of Sri Lak Laboratory Services (Pvt) Ltd. This report is limited to the specimen submitted.



SRI LAK LABORATORY SERVICES

(PVT) LTD

Total solution providers for Water and Wastewater issues

No. 265/6, St. Joseph Street, Negombo, Sri Lanka,
Telephone: +94 31 2220777 Mobile: +94 71 8064426, +94 77 2385282

CLIENT	; Healthy Body Coconuts (Pvt) Ltd., Hevana, Wathugamulla, Naththandiya.
LABORATORY NO OF SAMPLE	; SLLS 1213
DATE AND TIME OF COLLECTED	; 19/10/2016, 15:00 Hrs
DATE & TIME OF RECEIVED TO LAB.	; 19/10/2016, 16:40 Hrs.
SOURCE OF SAMPLE	; Treated waste water sample from Healthy Body Coconuts (Pvt) Ltd., Hevana, Wathugamulla, Naththandiya.
SAMPLING DONE BY	; Mr. Athula Jayamanne (Enviromental Engineer)
REPORT REQUIRED BY	; Eng. Athula Jayamanne(Consultant Engineer), No:176/3, St. Joseph Street, Negombo.

Substance or Characteristic	Gazzette No:1534/18 issued on 2008.02.01		Test Results SLLS 1213	Remarks
	Units	Requirement (Maximum)		
Appearance			Little turbid, Yellowish	
1 pH at ambient temperature (29.5°C)		5.5 - 9.0	7.4	Satisfactory
2 B.O.D. Value (in 5 days at 20°C)	mg/L	250	15	Satisfactory
3 C.O.D. Value	mg/L	400	108	Satisfactory
4 Total Suspended Solids	mg/L	50	15	Satisfactory

Req. - Requirement

Recommendation:

It is confirmed that, the tested parameters within the tolerance limits for Industrial Waste Discharged on Land for Irrigation purpose according to the Gazette No:1534/18 issued on 2008.02.01.


M. A. B. D. Perera
Chemist / Microbiologist
Sri Lak Laboratory Services
265/6, St. Joseph Street,
Negombo.

Chemist
Sri Lak Laboratory Services
265/6, St. Joseph Street,
Negombo.

24.10.2016

Inv.- 914

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Email : srilaklab@slt.net.lk / srilaklab@yahoo.com web : www.srilaklab.com

Page 3 of 3



SRI LAK LABORATORY SERVICES (PVT) LTD

Total solution providers for Water and Wastewater issues

No. 265/6, St. Joseph Street, Negombo, Sri Lanka,
Telephone: +94 31 2220777 Mobile: +94 71 8064426, +94 77 2385282

CLIENT	; Sri Lanka Distillery Ltd, Mastiya, Wadduwa.
LABORATORY NO OF SAMPLE	; SLLS 1349
DATE AND TIME OF COLLECTED	; Not provided
DATE & TIME OF RECEIVED TO LAB.	; 01/02/2017, 10:55 Hrs.
SOURCE OF SAMPLE	; Treated waste water sample inside the FBT tank of the Sri Lanka Distillery Ltd, Mastiya, Wadduwa.
SAMPLING DONE BY	; Mr. Athula Jayamanne (Enviromental Engineer)
REPORT REQUIRED BY	; Eng. Athula Jayamanne(Consultant Engineer), No:176/3, St. Joseph Street, Negombo.

Substance or Characteristic	Gazzette No:1534/18 issued on 2008.02.01		Test Results SLLS 1349	Remarks
	Units	Requirement (Maximum)		
Appearance			Little turbid	
1. pH Value		6.0 - 8.5	7.8	Satisfactory
2. Temperature	°C	40	28.5	Satisfactory
3. B.O.D. Value (in 5 days at 20°C)	mg/L	30	17	Satisfactory
4. C.O.D. Value	mg/L	250	B.D.L.	Satisfactory
5. Total Suspended Solids	mg/L	50	20	Satisfactory

B.D.L. - Below the Detectable Limit

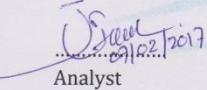
Recommendation:

It is confirmed that, tested parameters are comply with the tolerance limits for Industrial Waste Discharged on Land as Surface water according to the Gazzette No:1534/18 issued on 2008.02.01.


Chemist

M. A. B. D. Perera
Chemist / Microbiologist
Sri Lak Laboratory Services
265/6, St. Joseph Street,
Negombo.




Analyst

Sri Lak Laboratory Services (Pvt) Ltd.
265/6, St. Joseph Street,
Negombo.

06.02.2017

Inv.- 1024

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9. REFERENCE LETTERS

<u>No</u>	<u>Designation</u>	<u>Details and the Description of the Organization</u>	<u>Contact detail</u>
1.	Mr. Ranjith Cooray, Managing Director, Sri Lanka Distilleries Ltd., Mastiya, Wadduwa, Sri Lanka	Distillery for Alcohol spirit Production. Flow rate=37 m3/day Cost US \$45600	Tele +94382232523 Email:
2.	Mr. Arun Kumar M, Director, Mahaveer coconut & agro products (Pvt) Ltd Tumkur, India	desiccated coconut mills in India flow rate=20 m3/day Cost US \$35000 (1st mill)	Tele +919844079662 +918162278660, E mail : mcimangal@hotmail.com
3.	Mr Milton Wijepala, General Manager, Watawala Dairy (Pvt) Ltd, Sri Lanka	Diary far with 1000 cows and the flow rate was 100 m3/day, Cost US \$ 58753	Tele +94773047299 E mail: dairyfarm@sunshineholdings.lk
4.	Mr. K.H. Muthukudarachchi, Deputy Director General, Environmental Pollution Control Division, Central Environmental Authority Sri Lanka	Executing body for enforcement of environmental standards and regulations in Sri Lanka.	Tele Mobile : +94718163365, +9411-2873453, E mail: muthukuda@cea.lk
5.	Mr. P.G.P. Indisiri, Plant Engineer, Lak Vijaya Power Plant, Ceylon Electricity Board. State Sri Lanka	National level power supplier for the grid. Project, Staff Housing in Norochchhole flow rate = 90 m3/day Cost US \$80100.	Tele +94323368964 E mail: dgmlvps@ceb.lk
6.	Mr.Piyadasa, Additional General Manager State Engineering Cooperation, Sri Lank	State level building and construction authority Lunawa Housing Scheme-380 housing units flow rate = 120 m3/day Cost US \$ 300000	Tele +947147219699 E mail: gm_secretary@secsl.lk
7.	Mr. Bob Kundanmal, Chairman of Sino Lanka, SINO Lanka Hotels Galle	188 room hotel with flow rate of 132 m3/day, Cost US \$ 48013	Tele +94777356535

Mestiya



Sri Lanka Distilleries Ltd.

Distillers of Arrack & Ethyl & Manufacturers of "Mestiya" Liquor Products

MESTIYA - WADDUWA - SRI LANKA. - Tel: 038-2232523

Fax: 038-2232630 E.mail : sldltd@slt.net.lk.

20th November 2019

TO WHOM IT MAY CONCERN.

As it is requirement under the National Environmental Act No.47 of 1980.that all industries should have a Wastre Water Disposable Facility to release it to the environment.

The significant feature of this system is that it does not use any electricity.In that event, we have chosen BioUAFF Technology of Eco Engineers, at 176/3,St Joseph Street,Negombo,to design and construct a Water Treatment System for our Distillery.

This Waste Water Treatment System was constructed in 2007 and since then it is in operation satisfactory while emitting **considerable amount of Bio Gas enabling us to use for our Boilers.**

We have tested Parameters of treated waste water to satisfying the standards of the Central Environmental Authority (CEA) which is required for obtaining Environmental Protection License (EPL).This License has been renewed annually since the operation of the Treatment Plant.

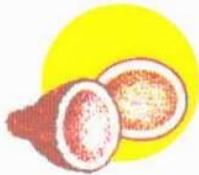
Thanking You

Yours Faithfully,

SRI LANKA DISTILLERIES (PVT) LIMITED

Chairman/ Managing Director

MD/wh



Mahavir Coconut & Agro Products Pvt. Ltd.,

(LAL & MALL GROUP)

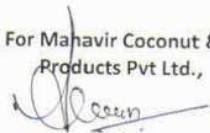
Office : 1st Floor, "Chandan Chetan", Sadhana Road,
K.R. Extension, TUMAKURU-572 101 (Karnataka)
Phones : Off. : 0816-2278660, Fac. : 2246050
Factory : "MAHAVIR NAGAR", 8th Km, Kunigal Road, Hosur Village, Gulur, Tumakuru - 572 118.
E-mail : mcimangal@hotmail.com CIN : U05150KA1996PTC019911

TO WHOM SO EVER IT MAY CONCERN

In 2010, we have serious issue of our wastewater pollution, as we are a leading D/C manufacturers that owns two processing mills and both mills process about 170,000 nuts/day. We have tried number of technologies in India but all of those technologies were failed and we came to know about Bio UAFF Technology from Eco Engineer's & Co. Sri Lanka. And we invited them to design & construct wastewater treatment plant for our first mill and it was a huge success. And also fully acceptance from Karnataka Pollution Control Board of Bangalore. We invited them to do another wastewater treatment system for our second mill. The time being Karnataka Pollution Control Board of Bangalore conducted a seminar for all D/C millers in Karnataka while using myself and Eng. Athula Jayamanne as a resource people. In this seminar During the Main Speech that was addressed by the Chairman of K.P.C.B, Karnataka asked all D/C Millers to follow Eco Engineer's Bio UAFF system such as it is a very successful invention since it has low maintenance and zero sludge

Later on in 2016, we have constructed & completed our 3rd D/C Mill and decided to apply his newly invented Bio UAFF technology as a wastewater treatment system for this new mill. Wastewater Treatment Plant for our 1st mill was started 2014 and that is functioning well without any problem while achieving the standards of Karnataka Pollution Control Board, Karnataka. Biogas Production is a significant feature of this new wastewater treatment system and in our all three mills, we are utilizing biogas burners in successful manner as a heat source for the production of non-edible third grade coconut oil.

For Mahavir Coconut & Agro
Products Pvt Ltd.,



Arun Kumar M
(Director)

Watawala Dairy Ltd

T: +94 11 4702400 E: dairyproject@sunshineholdings.lk

Head Office: No. 60, Dharmapala Mawatha, Colombo 03, Sri Lanka. **W:** watawalaplantations.lk
Company Reg. No: PB 5303

Watawala Dairy Farm, Watawala

T: 051-4923374 E: dairyfarm@sunshineholdings.lk

TO WHOM IT MAY CONCERN

We had a huge problem with our palm oil mill that generates 100 m3. of waste water per day which has COD 80,000mg/l and BOD, 50,000mg/l approximately. Since this problem leads up to court case we tried with number of experts to solve those problems; but all failed. Ultimately ECO Engineer's & Co design & completed a newly waste water treatment system called Bio UAFF and the system is working well since 2013 with satisfactory results.

Now I am working at Watawala Diary Pvt Ltd, Lonach Estate – Hatton and due to high level of performance of the waste water system with Bio UAFF technology at farm oil mill. Eco Engineer's designed & completed another Bio UAFF system for our dairy farm.

Eco Engineer's & Co Biogas plant services reduces the environmental cost in our operations. Significant production of Bio gas from the system is now using as a fuel for the hot water plant of the farm especially for the baby cows.

Eco Engineer's & Co Biogas plant services reduces the environmental cost in our operations and has been an invaluable tool for our WWTP, establishing a biogas production onsite and decreasing our energy demand on utilities. I'd highly recommend Eco Engineer's & Co to fellow wastewater treatment professionals.

Since implementing the use of Eco Engineer's & Co digester, Watawala Dairy has vastly improved not only digester performance, but also increased the efficiency of the waste water management system. The CEA the Sri Lankan authority over pollution control recognized the results and now we are in the process of obtaining the EPI, and removed all legal action against our company.

Eco Engineer's & Co has provided us with quality and superior technology, and we have enjoyed a good working relationship with them.


Eng. Milton Wijepala

General Manager,

Watawala Dairy Pvt Ltd,

M: 0773047299 E: Milton.wijepala@sunshineholdings.lk



බඳව කෙටිවී
පාඨම තොට්ටුපු

Your Ref.

අයිතිවී
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Our Ref.

දිනය
තික්ති
Date

2018-06-26

මධ්‍යම පරිකර අධිකාරිය
මත්තිය කුරුඛාතල් අතිකාර්යපෙ
Central Environmental Authority



“පරිකර පියා”, 104, ඩේන්සිල කොළඹකුද්ධි මාවත, බෙන්තරමුලු, ශ්‍රී ලංකා.
“පරිසර පියා”, 104, Denzil Kobbekaduwa Mawatha, Battaramulla, Sri Lanka.
Web : www.cea.lk

TO WHOM IT MAY CONCERN

Eco Engineer's & Company bio gas energy systems is a source of knowledge and innovation for pollution abatement in Sri Lanka. This company's vision and expertise are truly driving bio gas as a renewable energy solution. We are particularly proud of how collaborative the company's representatives have been with the industrial, commercial sector to manage waste water and reduce pollution loads. Eco Engineer's & Company has helped put these businesses to meet the environmental compliance requirements of Government of Sri Lanka. They have given them the opportunity to operate bio digesters as bio energy generator, bringing down the waste water management cost considerably and as a whole reducing the ecological foot print. Their technology provides low cost solutions for waste water management and have demonstrated a kind of on-the-ground support and investment that is mutually-beneficial to all partners involved. Eco Engineer's & Company was already registered with our organization (as Environmental Experts,) which is the national regulatory body on Environmental Pollution abatement.

Eco Engineer's & Company specialized in the engineering design, consultancy and construction of effluent treatment plants & sewage treatment plants and have been able to deliver outputs to meet the customer satisfaction; with this newly invented Bio UAFF Technology.

K H MuthukudaArachchi
Deputy Director General
Environmental pollution control Division
Central Environmental Authority

Chairman	Tel : 2872361, 2872348 Fax : 2872347	Director General	Tel : 2872359 Fax : 2872608	Gen. Office	Tel : 2872278, 2873447 (011) 7877277-280 Hot Line : 2888999	Media Unit : 2873449
Deputy Director General	HRD, Admin & Finance Division Tel : 2865296 Fax : 2872301	Env. Pollution Control Division Tel : 2873453 Fax : 2872605	Env. Mgt & Asses. Division Tel : 2872388 Fax : 2872296	Env. Edu. & Awareness Division Tel : 2872297 Fax : 2872609		
Directors	2872607 (Admin) 2872301 (HRD), 7877290 (Finance) 2872601 (Admin), 2872603 (Finance)	2873452 (EPC), 2872606 (Lab) 2872402 (WM)	2872346 (NRM), 2876643 (EIA) 2867263 (GIU)	2867266 (EEA) Fax : 2872609	2872604 (Legal) Dir. (Western Province) Tel : 2862831 Fax : 2865293	

ලංකා විදුලිබල මණ්ඩලය

இலங்கை மின்சார சபை

CEYLON ELECTRICITY BOARD



Your Ref:

My Ref: LVPP/PPM/GEN/-1

Date: June 26, 2018

TO WHOM IT MAY CONCERN

Since from the beginning housing scheme of Lakvijaya Coal Power Plant Norachcholai, we had conventional wastewater treatment systems which consumed high energy consumption and with lots of operational issues. After operations of few years, it was failed. Later on, we have decided to convert our wastewater treatment system using BioUAFF technology. Eco Engineers, 176/3, St Joseph Street, Negombo, designed and constructed a wastewater treatment plant using BioUAFF Technology for the Housing scheme of Lakvijaya Coal Power Plant and the system is now working since 2017 January with full satisfaction.

We are fully satisfied with the current wastewater treatment system with BioUAFF technology since it reduced our maintenance cost drastically. We highly recommended this newly invented wastewater treatment technology using BioUAFF technology for any investor who are looking to invest on wastewater treatment plants of their industry.

Eng. P.G.P. Indrasiri
Power Plant Manager
Lakvijaya power Plant

Eng. P.G.P. Indrasiri
Power Plant Manager
Lakvijaya Power Plant
Ceylon Electricity Board

OFFICE OF THE POWER PLANT MANAGER – LAKVIJAYA POWER PLANT

Ceylon Electricity Board, Narakkallai, Norochcholai 61342, Sri Lanka.

Tel: +94 32 2268964, 2268977 / Fax: +94 32 2268966 | e-mail: dgmlvps@ceb.lk | www.ceb.lk



ශ්‍රී ලංකා රාජ්‍ය ඉංජිනේරු සංජේරාව
இலங்கை அரசு பொறியியல் கூட்டுத்தாபனம்
STATE ENGINEERING CORPORATION OF SRI LANKA

LEADERS IN ENGINEERING SINCE 1962

திலக கூட்டுத்தாபனம்
வீடுமைப்பு மற்றும் நிர்மாணத்துறை அமைச்சர்
Ministry of Housing & Construction



26.06.2018

Our Ref :

Your Ref :

Date :

TO WHOM IT MAY CONCERN

Recognition of performance of Bio UAFF Waste Water Treatment system with Biogas production

We appreciate the high quality newly invented design of Bio UAFF system which applied to government housing projects undertaken by State Engineering Corporation of Sri Lanka in Angulana housing project which is having 288 houses (and emits approximately 120 Cu. m of Waste Water / day). This Bio UAFF system is running well with negligible maintenance and we are really happy with the system. Since that we awarded other housing projects of Lunawa (With 353 houses) to Eco Engineer's for the application of Bio UAFF system on waste water treatment. They are constructed to professional standards to ensure reliable long life operation and consistently exceed our expectations. Their technology has ensured that Angulana & Lunawa Government housing projects will be managed without any environmental issues for years and years.

Eco Engineer's & Co for the quality and superior technology of their plants, and have enjoyed a good working relationship with them.

Thank you for your Co-operation.

Yours sincerely,

Eng. A.A. Piyadasa
Additional General Manager
State Engineering Corporation of Sri Lanka

Eng. A.A. Piyadasa
Addl. General Manager
State Engineering Corporation
of Sri Lanka
Tel. 0714-219699

வ.எ.எ. 194	த.கு. 194	P.O. Box 194
130, சித்திரி, ரீ. ரீ. ராமநாயக மாவட்டம், கொழும்பு 02	130, பல்லியூர், ராமநாயக மாவட்டம், கொழும்பு 02	130, W.A.D. Ramanayake Mawatha, Colombo 02
Tele : 2434691 - 2 (Direct), 2430061- 5 (General)	Fax : 2421262	E-mail : gm_secretary@secsl.lk



SINO - LANKA HOTELS GALLE (PRIVATE) LIMITED

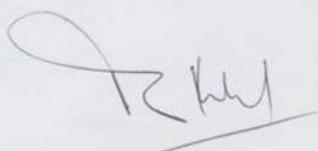
"SINO LANKA TOWERS"

No. 1090, SRI JAYAWARDENAPURA MAWATHA, RAJAGIRIYA, SRI LANKA.
Tel. : 94 11 471 5020 Fax: 94 11 471 5021 Reg. No. : PV 78834

TO WHOM IT MAY CONCERN

We chose Eco Engineers to do the waste water treatment system at our apartment building project in Nawala. They chose to go with Bio UAFF system which has numerous advantages over the conventional system of waste water treatment.

Based on this we chose the same system for our 172 rooms five star Hotel, Amari Galle and so far it is running without any issues



Bob Kundanmal
Chairman

10. BUSINESS REGISTRATION

Eco Engineers Co. wins Gold at Green World Awards

Pioneer and leading waste water management company, Eco Engineers & Company based in Sri Lanka, was recently awarded the Global Gold Winner status at the Green World Awards, organised by the Green World Organisation based in the United Kingdom, the organiser of the biggest environmental awards campaign on Earth.

Speaking on the company's achievement, Eco Engineers & Company founder, Sri Lankan environmental engineer and scientist-turned engineer Athula Jayamanne said, "The award was received in recognition of applying the system we researched and developed for carbon dioxide (CO₂) mitigation in industries upon evaluation of the efficiency."

The award recognized Eco Engineers & Company-founded bio up-flow anaerobic floating filter (UAFF) waste water treatment system to control CO₂ emissions and the technology is used to treat commercial and industrial wastewater at a lower cost.

Eco Engineer's & Company, the developer of the UAFF reactor technology, founded the initial technology after eight years of continues research and development and had secured a patent in Sri Lanka. The system operates without any electricity and sludge with low maintenance cost and zero emissions. The system generates biogas that can be utilized partially for fuel requirement of the industry.

Jayamanne said that the technology founded by him is an affordable waste water management option for industries that is a solution to treat even highly acidic waste water. The company had completed over 170



One of the foreign projects completed by Eco Engineers Co. - the waste water treatment system for Sofi Agro Industries, a desiccated coconut mill in Indonesia



Eco Engineers Co. Chairman and Managing Director Engineer Athula Jayamanne receives Green World Award as Global Gold Winner

projects across the country using the system in the last five years, along with eight projects for the desiccated coconut mills industry in India, one for a virgin coconut mill in the Philippines and another for a desiccated coconut mill in Indonesia.

"Our company competed against more than 500 other nominations to get the Global Gold Winner at Green World Award 2018 in the international campaign to find the greenest companies, councils and communities," Jayamanne added.

The award was presented with a trophy and a certificate at a glittering presentation ceremony held in Ankara, Turkey, the chosen host country for this year's event by the Green World Organisation of the United Kingdom.

Jayamanne also said that they won another award at the Green Apple Environment Awards in 2015 apart from this year's Global Gold Award, at the Green World Awards.

"Our work is a biologically sustainable treatment process," Jayamanne said, adding over the years, since the establishment of Eco Engineers & Co. in 2004, the company's contribution in the waste management sector has been social and environmentally friendly and economically beneficial to local and international community. The entire Eco Engineer's & Co team is committed to operating at the very highest levels of health and safety. The system is free from noise and odour.

"Our aim is to develop this technique and increase its bio energy production further," Jayamanne noted, adding that the company's

broader goal is to work towards improving the technology and further help the industries to contribute towards environmental and social responsibility.

Jayamanne's and his company's research and development efforts had been further recognized by several local and international awards in the past decade, including Presidential Awards for the inventions in the field of Environment in 2009, Commercially Successful Sri Lankan Inventors Awards in 2012, National Award for Green Jobs in 2009 and 2010, an award for 'Advanced Technology for Biogas in Sri Lanka' at the international conference on 'Knowledge Management in Kathmandu, Nepal in 2009 and an award from Chairman of Pollution Control Board of Bangalore, India for a 'Advanced Wastewater Technology' in 2014.

Launched in 1994 by the Green Organisation, the award has become well established as one of the most popular environmental campaigns in the world. Now extended to Green Worlds Awards – the biggest environmental awards campaign on Earth, the award receives entries from governments, ministries and regional authorities as well as companies, organisations and communities across the private and public sectors.

As the organisation's journey continues, every carbon footprint caused by winners and their guests is offset by the planting of trees in co-operation with Green Earth Appeal and the United Nations. The Green Organisation is an independent, non-political, non-activist, non-profit environment group dedicated to recognizing, rewarding and promoting environmental best practice around the world.



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Sri Lankan wins Green Apple award

Eco-engineer Athula Jayamanne has bagged the bronze award at the International Green Apple Awards for Environmental Best Practice for his invention on waste water treatment and its further development and application.

Mr. Jayamanne was presented the award at a ceremony held on November 16 at the Houses of Parliament, London, United Kingdom.

Although the Green Apple Awards have been promoted in the last few years, he believes he is the first to win an award from Sri Lanka for his waste water treatment invention, which is in use both locally and internationally.

