



**Progressive Education Society's
Modern College of Engineering,
Pune-5**

Summary sheet

Cr. No.	Key Indicator	Metric No. and Title	Details	Evidence
7	7.1 Institutional Values and Social Responsibilities	7.1.3 Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste	<ul style="list-style-type: none">•Solid waste management•E-waste management•Waste recycling system•Hazardous chemicals and radioactive waste management	<ul style="list-style-type: none">• Biogas, Vermiculture plant report• Design for Vermicomposting Pits• Proposal for Shifting & Reinstalling of Biogas Plant at Modern College of Engineering• Carbon Foot printing Certificate• E-Waste Disposal Certificate• Swachhta Action Plan Institution Certificate• Paper Pulping Certificate• Certificate of Recycling& Disposal

1. Solid Waste Management (Biogas and Vermiculture)

- **Biogas, Vermiculture plant report**

The biogas and Vermiculture plant is installed near the canteen, in the college campus. The purpose of the plant is to process the waste of the canteen and garden of the college.

The biogas plant has a capacity of 35kg. The gas generated from biogas can be utilized for the cooking purpose in the canteen. Slurry of biogas plant and the garden waste is used for Vermiculture plant. The compost generated can be utilized for various plants and garden in the college campus.



Progressive Education Society's
**Modern College of Engineering,
Pune-5**

Work Order Biogas Plant



Progressive Education Society's

MODERN COLLEGE OF ENGINEERING

1186 A, SHIVAJINAGAR, OFF. J. M. ROAD, PUNE - 411 005. INDIA

• AICTE APPROVAL NO. : 740-89-338(E)EST/99 • Savitribai Phule Pune University ID NO : PU/PN/Engg/135/1999
• NAAC Accredited & Awarded Best College by Savitribai Phule Pune University
• TEL : 020 - 2553 3638 / 2553 0968 / 2553 3648 • FAX : 2553 0937
• E-MAIL : pesmcoe@moderncoe.edu.in principal@moderncoe.edu.in • Website : www.moderncoe.edu.in

1

Prof. Dr. Gajanan R. Ekbote

M.S., M.N.A.M.S.

Chairman, Business Council,

P. E. Society, Pune-5

Work order no: MCOE/OFFICE/WO/15-16/59

Prof. Dr. (Mrs.) K. R. Joshi

M. E. Ph.D., (E & TC)

Principal

Date: 5/12/2015.

WORK ORDER

To
M/s. Know How Foundation
Dhumat House,
1 Alisha Homes,
Amchi Colony,
Bavdhan
Kothrud,
Pune - 411021.

Sub : Work Order for Installation and Commissioning of Biogas and Vermi composting Plant .

Ref 1 : Your quotation received dated 24/2/2015.

Ref2 : - Your acceptance letter received dated 3/12/2015.

We are pleased to inform you that the rates offered by you for Installation and Commissioning of Biogas and Vermi composting Plant are accepted. Please arrange for the work as per the terms and conditions mentioned below and as per the attached sheet at the earliest.

1. Bills :

- Bills should be submitted in Triplicate.
- Part installation and its bill will not be accepted.

2. Delivery :

- Work should be completed within 30 days from the date of issue of Wo from our College.
- If you fail to complete the work within the specified period, the order will be treated as cancelled without any intimation.
- The above work will be accepted subject to approval.

3. Order Details :

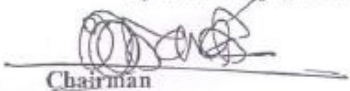
The attached sheet is explicitly clear on the order details. For any further clarifications contact the college immediately.


4. Value of Order:

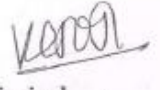
The total amount of work order is Rs 1,40,000/- (Rupees One lakhs Forty Thousand only).

5. Payment Terms:

- 95% Payment will be paid after delivery, installation and demonstration.
- Balance payment 5% will be paid after six months. (Liability Period)


Chairman
P.E. Society


Secretary
P.E. Society


Principal
P.E.S. MCOE

Received
401
14/12/15



Progressive Education Society's
Modern College of Engineering,
Pune-5



Progressive Education Society's
MODERN COLLEGE OF ENGINEERING
1186 A, Shivajinagar, Off J.M. Road, Pune - 411 005

5

ORDER DETAILS TO M/S. KNOW HOW FOUNDATION
AS PER WORK ORDER NO MCOE/ELECT/WO/2015-16/59 DATED 8/10/2015

Particulars					Amount (Rs)
A) Bio Gas Plant for Processing 60 Kg Kitchen waster per day.					
Commercial Details					
1	Cost of the Plant (Digester)				78,000.00
2	Burner with tube (Special for Canteen)				1,000.00
3	Installation and Commissioning Charges Approx (Transport, Raw material, Labour Etc.)				5,000.00
4	Crusher (Optional)				20,000.00
5	Visits - Three				750.00
Total					1,04,750.00
Vat @5%					5,237.00
Total (A)					1,09,987.00
B) Slurry of Biogas Plant and the Garden Waste.					
B-1) Project Set up material					
Sr No	Particulars	Quantity	Unit	Rate	Amount (Rs)
1	Fresh Cow Dung	250	Kg	5	1,250.00
2	Decomposition Culture Microbes	3	Kg	80	240.00
3	I V E M (Stabilization & odour management)	2	Liter	200	400.00
4	Trichoderma (PH balance for Odour)	2	Kg	300	600.00
5	Aerobic Treated Bedding	1500	Kg	8	12,000.00
6	Live Earthworms	6	Kg	600	3,600.00
7	Neem Oil	1	Liter	300	300.00
8	Sticky Trap	2	No	100	200.00
9	Organic Fly Control Liquid	1	Liter	200	200.00
Sub Total (B1)					18,790.00
B-2) INORA/KHF Services					
Sr No	Particulars				Amount (Rs)
1	Project Installation Labour and Commissioning Cost				5,000.00
2	Maintenance Training Charges				2,000.00
3	Transport				3,000.00
Total (B2)					10,000.00
Total B = (B1+B2)					28,790.00
C) Approximate Operative Cost (Monthly)					
Sr No	Particulars	Quantity	Unit	Rate	Amount (Rs)
1	Decomposition Culture Microbes	3	Kg	80	240.00
2	I.V.E.M. (Decomposition, Stabilization & Odour)	2	Lit	200	400.00
3	Trichoderma (PH Balancer for Odour)	2	Kg	300	600.00
4	Maintenance AMC Monitoring Visit	2			2000.00
Total (C)					3240.00
Total (A+ B+C)					1,42,017.00
Discount after negotiation					2,017.00
Grand Total					1,40,000.00



Progressive Education Society's
Modern College of Engineering,
Pune-5



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MODERN COLLEGE OF ENGINEERING
1186 A, Shivajinagar, Off J.M. Road, Pune - 411 006

6

Other requirements to be Supplied by Client	
1	Bottom layer of 3" brickbats .Covered with 3" layer of Coarse Gravel. Suggested Jute Cloth on top Gravel layer.
2	Waster should be segregated and delivered at the composting site.
3	Watering arrangement with hosepipe.
4	Hand Tools - Long & Short , Handle Rakes, Spray Pumps, Gloves ,Mask , bucket, and mug
5	Manpower 1 Person for daily loading, watering and maintenance of process.
5	Manpower during Initial Setup (2 persons for per day minimum)
Terms and Conditions	
1	Completion of Work Will be within 30 days after plant civil construction completed by college.
2	Order to be Released on the name " Know How Foundation"
3	Payment Terms 1) 95% Payment will be after successful Plant Installation and Commissioning. 2) 5% Payment will be released after six months liability period

Note :Following Advantages will be avail to college

Sr no	Particulars	Project Cost (Rs)	Saving per year	Period of Cost Cover (i.e. Payback)
1	Installation of Bio Gas Plant	1,09,987.00	Rs 43,200/-	2.5 years
2	Installation of Vermicomposting Plant	32030.00	Rs 22,500/-	1.5 years

Principal
P.E.S.MCOE

Purchase Co-ordinator
Mrs. S.D.Deshpande

Purchase Committee Member
Mrs. S.A. Itkar

HOD Electrical
Mrs. N.R. Kulkarni.

Staff Co-ordinator
Mrs. Mugdha Bhajekar



Progressive Education Society's Modern College of Engineering, Pune-5



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Details regarding implementation of Vermicomposting and Biogas plant for processing 30Kg kitchen and garden waste.

To process waste of canteen and garden of college, Vermicomposting and Biogas plant is suggested. The gas generated from Biogas can be utilised for cooking purpose of canteen. The compost generated can be utilised for various plants and garden. The details of this project are given below:

[A] Biogas plant - For 30Kg canteen/ kitchen waste.

- Area required – 5 ft by 6 ft
- Total cost of the plant – Rs. 1,09,987/-
- Saving in LPG for canteen use: 3 LPG cylinders per month (Rs. 3600/-)

[B] Vermicomposting – Slurry of Biogas plant and the garden waste.

- Area required – 3 pits of 50ft x 3ft x 2.5ft.
- Total cost of the plant – Rs. 32,030/-
- Enriched compost for plants and garden
- Reduction in property tax by 5%

TOTAL [A + B] : Rs.1,42,017/-

This will help the institute in decomposition of bio waste at the campus itself hence making the campus green and ecofriendly.


Mrs. Mugdha Bhajekar
Staff Coordinator



Progressive Education Society's Modern College of Engineering, Pune-5



Progressive Education Society's Modern College of Engineering, Pune-5

A report on Vermicomposting plant for management of bio waste installed at P.E.S's Modern College of Engineering

Introduction

- India generated 1,27,000 tons per day of solid waste in 2009-12 as per CPCB data.
- CPCB claims that 70% of this solid waste is collected.
- CPCB claims 12 % is processed and there is no trace of 18% of waste, which most likely ends up in illegal dump sites.
- Present waste quantity would be at least 160,000 TPD.
- There is excessive dependence on landfilling.
- Maharashtra produces largest quantity of waste in the country, about 26,820 TPD
- There is house hold kitchen waste and other biodegradable waste also.

As per Government norms if any institute incorporates waste disposal through vermiomposting, then they will get additional benefits for the same. We have vermi composting pits installed at our campus and are processing the slurry of Bio gas, kitchen waste and garden waste. This is further converted into manure after decomposition and is used for enriching the greenery.

Construction and step wise process:

1. Constuction of Pits



2. Installation of Standard Layer Setup





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Modern College of Engineering, Pune-5

3. Release of Worms



5. Conversion of waste into Vermicompost

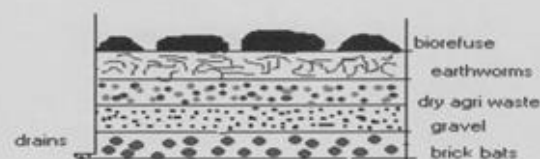


4. Addition of Waste with Composting Cultures

1. Construction of pits is done as per design requirement.
2. Installation of project with layered set up.
3. Earth worms are released in the layered pits.
4. There is addition of waste with composting cultures.
5. Finally there is conversion of waste into Vermicompost which can be removed as and when it is ready for use.
6. This is very enriched manure and hence is a good supplement for plant.

• Typical arrangement of the pits used for vermiculture

Transverse section of vermibed





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Modern College of Engineering,
Pune-5**



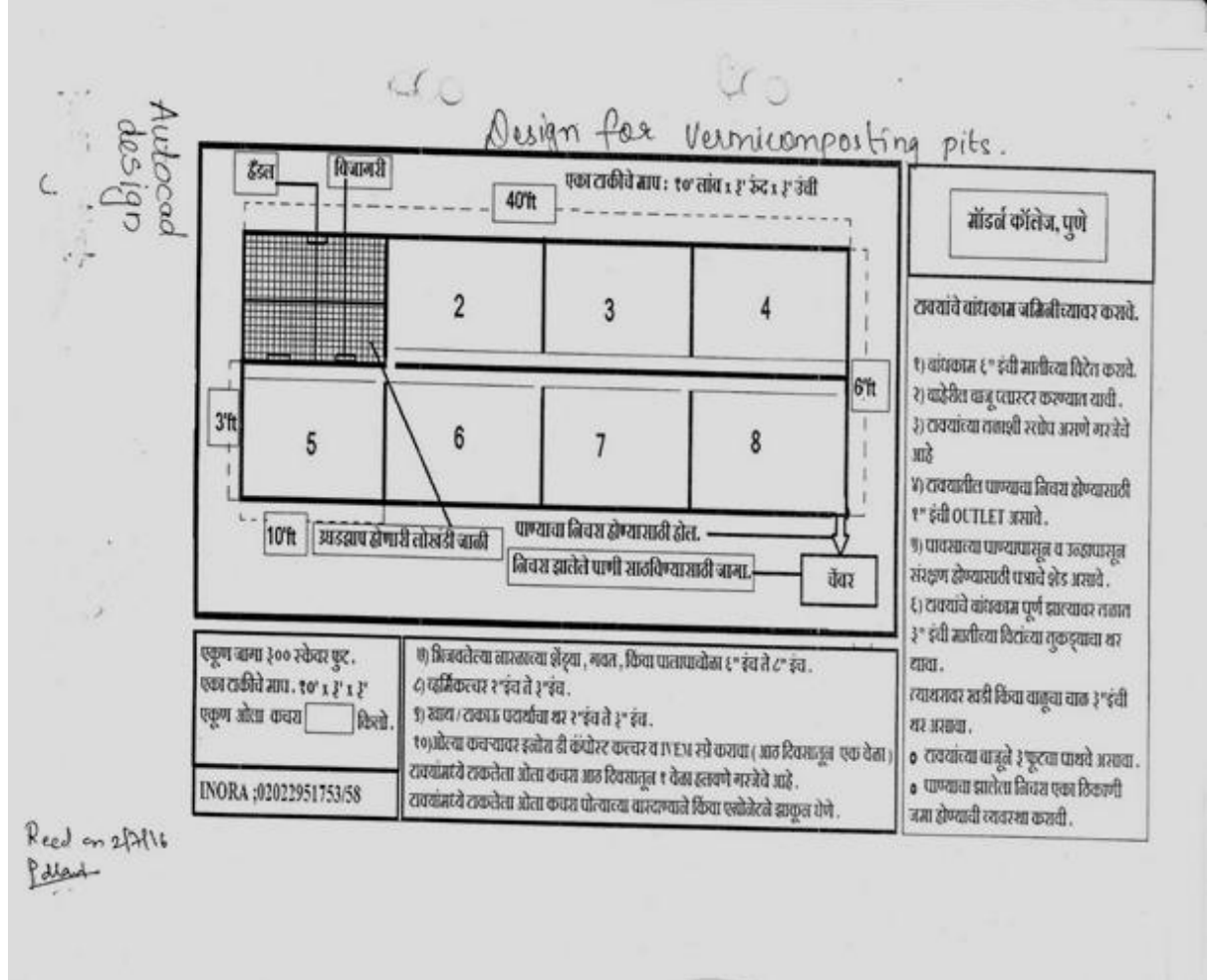
**Progressive Education Society's
Modern College of Engineering, Pune-5**

Outcomes:

- Composting process is free of energy and fossil fuel use
- Reduction in Green House Gas emissions
- Prevention of Air, Water pollution caused by landfills
- Soil enhancing resource available at end of process

Pallavi

• Design for Vermicomposting Pits :





Progressive Education Society's
Modern College of Engineering,
Pune-5

- **Proposal for Shifting & Reinstalling of Biogas Plant at Modern College of Engineering**

31-9

Regd. No: F/20501/Pune

KNOW HOW
FOUNDATION
NGOS
organizational INORA

Office: Golden Arch, Building No. D, Shop No. 1 to 5, Ground Floor, Bavdhan, Pune-411021
Ph.: 020-22951753 / 1758 E-mail: inora@inoraindia.com Website: www.inoraindia.com

Date: 20.12.2018

**PROPOSAL FOR SHIFTING & REINSTALLING OF BIOGAS PLANT AT MODERN COLLEGE OF ENGINEERING,
SHIVAJINAGAR, PUNE**

To,
The Principal,
Modern College of Engineering, Pune

Respected Sir/Madam,

As per earlier discussion we have been asked to make proposal of the arrangement for Shifting of this plant. We are ready to give such a service.
The details will be as follows –

- 1) Our technician along with two workers will make the arrangement for emptying the plant. College has to make the arrangements for destroy the slurry and semisolid sludge.
- 2) Our workers will clean the Biogas plant and shift to new place, for which college will provide water supply with force.
- 3) If you want to change the place of the plant the removal of slurry, shifting and reinstallation work will be possible with prior intimation of 8 days and advance full payment of Rs.25000.00/- taxes extra as per rule.
- 4) Please note that the work for reinstallation of Biogas plant will be possible in last week of April or May 2018 only.
- 5) It will be very much necessary that the O & M for Biogas plant starts immediately after shifting is done.
- 6) Separate quotation will be given for O & M.

Terms & Conditions:

1. Purchase Order & Cheque to be released in the name of Know How Foundation.
2. Full payment in advance along with Purchase Order.
3. All Taxes as Applicable.
4. The electricity bill & water arrangement should be done by Modern College.

Thank You,

Nutan Bhajekar
Director Know How Foundation
91 99229 70157

Quotations opened on 20/12/2018
Signs of Purchase Committee
Members.....

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Progressive Education Society's
Modern College of Engineering,
Pune-5

- Carbon Foot printing Certificate :



Shikshana Prasarak Mandali's
SIR PARASHURAMBHAU COLLEGE
Tilak Road, Pune – 411 030.


NAAC accredited 'A' Grade
Affiliated to Savitribai Phule Pune University
(ID No. PU/PN/ASC/003/1916)
☎ : Office : 020-24331978
☎ : Prin. Res. : 020-24332479
Fax No. : 020-24332479
<http://www.spcollegepune.ac.in>
E-mail principalspcollege@vsnl.net

Dr. Dilip Sheth
Principal


Ref No. :
Date : 10 JAN 2017

§ Certificate §

This is to certify that, Progressive Education Society's Modern College of Engineering has carried out Carbon Footprinting of their Campus for the Academic Year 2015-2016. It is observed that the college emits 553.87 tons of CO₂e per year with average per capita emission of 154.15 and 23.55 kg CO₂e per square feet of the built-up area for this year. The detailed analysis of the GHG emission is presented in the report.


Dr. Sunil D. Kulkarni
Department of Chemistry




Dr. D. N. Sheth
Principal

Date: January 15, 2016
Place: Parashurambhau College,
Tilak Road, Pune



Progressive Education Society's Modern College of Engineering, Pune-5

2. e-Waste Management

- The procedure has been set up for e-waste and used paper management.
- The obsolete computers or products are donated to the agencies, schools where those can be used.
- The non-working computer spare parts and other non-working equipment are safely disposed outside through the Pune e-waste Agency.
- The cartridge/tonners of printers are refilled outside the Institute campus through vendor instead of throwing the empty cartridge/tonners.

E-Waste Disposal Certificate

NATIONAL TRADERS
E-WASTE RECYCLE
Certificate of E-waste Disposal

No.: 206 Date: 20-3-2017

This is to certify that the e-waste received from MODERN College of Engineering, Pune-5
dated 20/03/2017 has been disposed off in scientific and eco-friendly manner.

We appreciate your efforts in green and healthy environment.

Your UER Membership No. _____ Valid up to 1 / 1 / _____

For NATIONAL TRADERS
[Signature]
Authorized Signatory

MPCB No.: BH/RO(HQ)/HW/E-WASTE COLLECTION CENTER/2014/M/B-3676 dated 10/9/2014

Off. - Shop No. C-48, Junabazar, Mangalwar Peth, Pune 411011 Cell : 9850757587 Tel. : 020 26129999
Factory - Sr. No. 103/2, Undri saiwad rd., Jadhav nagar, Handewadi, Pune 28
E mail : nationaltraders999@gmail.com, Web : www.ewastesolution.in

E-WASTE Disposal Certificate



Progressive Education Society's
Modern College of Engineering,
Pune-5

Swachhta Action Plan Institution Certificate



Certificate



This is to certify that **PROGRESSIVE EDUCATION SOCIETY MODERN ENGINEERING COLLEGE** *is* now Recognized as **Swachhta Action Plan Institution**. The Institution has successfully formed the Swachhta Action Plan Committee and constituted the working groups Post COVID-19 for **Sanitation & Hygiene, Waste Management, Water Management, Energy Management** and **Greenery** along with the observation of two environment related days to inculcate in faculty, students and community, the practices of Swachhta and Reduction, Reuse and Recycling of Resources.

Dr. W G Prasanna Kumar
Chairman

Mahatma Gandhi National Council of Rural Education
Department of Higher Education, Ministry of Education
Government of India

Activate Windows
Go to PC settings to activate


CertSAP/MGNCRE/MoE/0588/2908

Swachhta Action Plan Institution Certificate



Progressive Education Society's
Modern College of Engineering,
Pune-5

Paper Pulping Certificate

 **Ganga Papers India Ltd.**
CIN No: L21112MH1945PTC035575
(Formerly Known as Kasat Paper & Pulp Ltd)
Reg. Off: Gat No. 241, Babadghat, Tal. Maval, Dist. Pune - 410 506
City Off: D-8, Sanskrit Prangan Society, S. No. 131, Baner-Balewad Road, Baner, Pune - 411 546
Email: info@gangapapers.com

Date: - 22-07-2021

To,
The Principle,
P.E.S. Modern College of Engineering,
Shivaji Nagar, PUNE - 411005

Dear Sir,

Sub: - Pulping Certificate.

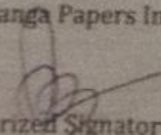
This is to be certified that, the office waste paper supplied through M/s. Trimurthy Raddi Depot, Shukrawar Peth, PUNE-2, weighing about 11800 kgs has been fully utilized for pulping to manufacture of Paper & Paper board.


This is also to be confirmed that no piece of paper is lying pending on pulping floor.

This is for your information & record please.

Thanking you.

For Ganga Papers India Ltd


Authorized Signatory



vivo X50
Nov 22, 2021, 14:50

Rs: Gat No. 241, Babadghat, Tal. Maval, Dist. Pune - 410 506. Mob: 9075662748



Progressive Education Society's
Modern College of Engineering,
Pune-5

Paper Pulping Certificate

Certificate of Recycling& Disposal

Certificate of Recycling & Disposal

This document certifies that material received by **Poona E-waste Solutions** was handled in strict compliance with the guidelines set by Maharashtra Pollution Control Board (MPCB)

In the recycling of material such as CRTs, Monitors, LCDs, PCs, and other electronic waster, we assure that the previous stated material is collected, contained, and recycled in a manner that is environmentally safe and compliant with the law.

Poona E-waste Solutions releases the customer from all liabilities to the safe collection and recycling of the documented load.

Customer Name : Progressive Education Soc

Issued Date : 9/1/2016 Pickup Date : 6/1/2016

Order No : MCOE/WO/S/15-16/71

THIS IS TO CERTIFY that the above described commodity was weighted, measured, or counted.

Poona E-waste Solutions, Gat No.2334/4, Ubale Nagar, Wagholi, Pune. Mob.: 9561 276 476 www.poonawaste.com

Certificate of Recycling& Disposal

3. Waste Recycling System

- Waste water recycling unit was established in Institute. It treats the large volume of waste water generated in the campus. Total capacity of this unit is 20,000 liters per day.
- **STP (Sewage Treatment Plant)** treats the water by removing the impurities and contaminants from it. The benefit of using an **STP** is that on one hand, it gives us the recycled water that can be reused in gardens, ground and flush in toilets etc. and on the other hand, the sludge is also being released, which can after further treatment be used as a fertilizer for garden.



**Progressive Education Society's
Modern College of Engineering,
Pune-5**

Dr. G. R. Ekbote
Chairman, Business Council
Phone : 25535383



PROGRESSIVE EDUCATION SOCIETY

1186 A, Near Modern College of Engineering, Shivajinagar, Pune - 411005.
Website : www.pespune.com E-mail : pespune5@gmail.com

Prof. S. S. Deshmukh
Secretary
Phone : 25394582

Office : 25535148
25535132
Fax : 020 - 25532102

o/c

PES/ 54 /2015-16

Date : 17/04/2015

WORK ORDER

To,
Shri Ajinkya Joshi
Director,
M/s. Aquatech Solution Pvt. Ltd.,
Pune

Subject : Your Quotation for Sewage Treatment Plant for P.E. Society's Modern College of Arts,
Science and Commerce and Modern College of Engineering, Shivajinagar, Pune - 5

Sir,

Your above-mentioned quotation of Rs. 17,99,950/- is accepted on Item rate basis and you are requested to proceed with the work described as under within the scope of work and accepted amount.

The brief description of work :- Sewage Treatment Plant.

Location of Work :- P.E. Society's Modern College and Modern College of Engineering, Shivajinagar, Pune 411005.

The above mentioned work should be completed within 40 days from the date of this work order failing which the work will be carried out through other agency at your risk and expenses. The work should be completed within stipulated period mentioned in the work order. No escalation in the said amount shall be accepted and paid.

You may start the work after submitting detail specifications, make of each item and rate of each item. If there is delay in the said work to be executed, P. E. Society reserves right to terminate the contract.

The work be carried out under the supervision of P.E. Society's Hon. Con. Engineer and Building Supervisor, P.E. Society and as per their instructions.

After the satisfactory completion of the work, your bill in duplicate for actual authorized quantities and final rates of the work carried out should be submitted to this office within two months from the date of completion. In case of any dispute, Business Council of P.E. Society's decision should be final and binding on you. Please note that no advances will be paid against above-mentioned work.

Sewage Treatment Plant work order



**Progressive Education Society's
Modern College of Engineering,
Pune-5**

4. Hazardous Waste Management

- The institute avoids using hazardous chemicals in the laboratories during practical sessions.
- In the laboratories, non-hazardous chemicals are used and are diluted before disposal.

