POLLUTION CONTROL ASSOCIATION OF THE PHILIPPINES
REGION IV-A CHAPTER, INC.
PCOs helping PCOs

February 22, 2022

Attention: **To All Pollution Control Officer/s (PCO/s)**
Subject: **The Learning Curve Series (Non-Accredited On-line Courses): TLC Series on Wastewater Management**

Dear Sir/Madam:

In this global pandemic, PCAPI Region 4A Chapter is in full support to the world's campaign of a "new normal" with virtual connection and reduced direct contact. Businesses worldwide are affected but still saddled with the challenge and requirement to comply with environmental laws. To help the businesses in our country cope up with their environmental compliance, PCAPI R4A is now transitioning from its traditional pen and paper trainings and seminar to its brand new and upgraded virtual trainings.

PCAPI Region IV-A will conduct an **On-line "TLC Series on Wastewater Management for Pollution Control Officers"** on **July 7-8, 2022** through **Microsoft Teams (MS Teams)**. The program will be most beneficial to PCOs and other professionals who are currently working as mid-level managers, administrators, and technical personnel of a proposed project or in a newly established/expanded facility. The key learning objectives of this training are:

- ✓ To get updates on regulations on water and wastewater relevant in workplace
- ✓ To identify the process in the characterization of wastewater or effluent
- ✓ To identify the processes in the conduct of water and wastewater sampling.
- ✓ To understand the basic principles of different wastewater treatment technologies
- ✓ To learn from the existing practices (BEP – Best Existing Practices) of managing and disposal of wastewater.
- ✓ To learn about common wastewater minimization schemes (BEP).
- ✓ To identify water and wastewater treatment technologies (BAT – Best Available Technology), and evaluate appropriateness to the workplace.
- ✓ To showcase actual wastewater treatment in a facility, showcasing industry best practices presented.

Similar to all face-to-face PCAPI 4A trainings in the past, this Online TLC Series is a 2-day immersive training, but will be tailored in the MS Teams platform and delivered in real-time streaming. This will be presented by accomplished and powerful resource persons and facilitated by PCAPI 4A's dynamic Training Team composed of its Facilitators, Training Director and Secretariat who will guide the PCO Trainee in their 2-day virtual training experience.

In this regard, we would like to invite your Pollution Control Officers/s and Environmental Staff to attend this couse. Training fees are listed below, and shall be inclusive of electronic copy of presentation materials and training certificate.

Php **3,700.00**/pax	PCAPI 4A MEMBER
Php **3,900.00**/pax	PCAPI 4A NON-MEMBER

SLOTS ARE LIMITED, and REGISTRATION IS ON A FIRST-COME, FIRST-SERVED BASIS AFTER PAYMENT & CONFIRMATION.

For pre-registration, visit the **ONLINE REGISTRATION** thru this link:
https://www.pcapi-r4.org.ph/tlc-the-learning-curve-series/

For additional queries, kindly contact: PCAPI Region IV-A Secretariat Office (0917-814-4751 / 0998-534-7850); E-mail Address: onlinetraining@pcapi-r4.org.ph. Thank you very much and we look forward to see you in the virtual Training!

Very truly yours,

Brefelin J. Robles
President, PCAPI Region IV-A Chapter

Why train after the Basic PCO Training?

Increased Productivity & Performance

- Advanced Training improves PCOs' skills and knowledge of the job and builds their confidence in their abilities.
Advanced Training improves PCOs' performance and make them work more efficiently and effectively.

Reduced wastage

- When PCOs are trained, they will learn to make good, safe and economical use of the company's materials, tools and equipment. Accidents and equipment damage will be minimized, and this will keep wastes to a minimum.

Reduced Supervision

- Though training PCOs should not totally eliminate the need for supervision, it can significantly reduce the need for excessive supervision in the workplace.

Boosted morale

- PCOs who go through additional training programs will boost their morale and will make them do their jobs with more self-confidence, as they will find their selves working more efficiently and effectively.

Improving Water use and Reducing Water Pollution

IS YOUR COMPANY WATER-WISE?

PCOs must be “water-wise” in their area of expertise: conserving water and ensuring treatment systems for industrial wastewaters are safely discharged to the environment.

Which WW treatment to apply?

Unsure which appropriate WW Treatment Process is applicable to your operations?

Biological Treatment

Chemical Treatment

Physical Treatment

OBJECTIVES

- To get **updates on regulations** on water and wastewater relevant in workplace
- To identify the process in the **characterization of wastewater or effluent**
- To identify the **processes in** the conduct of **water and wastewater sampling.**
- To understand the basic principles of **different wastewater treatment technologies**
- To learn from the existing practices (BEP – **Best Existing Practices) of managing and disposal of wastewater.**
- To learn about common **wastewater minimization schemes** (BEP).
- To identify water and wastewater treatment technologies (BAT – Best Available Technology), and **evaluate appropriateness to the workplace.**
- To showcase actual wastewater treatment in a facility, showcasing industry best practices presented.

TOPIC OUTLINE

1. Updates on Clean Water Act (RA 9275), and Revised General Effluent Standards (GES)

2. Cleaner Production and Pollution Prevention (Wastewater Minimization)

3. Water and Wastewater Characterization and Wastewater Management Plan

- Water and Wastewater Characterization
- Stream Identification
- Flow Measurement
- Material Balance
- Sampling and Monitoring Plan

TOPIC OUTLINE

4. Overview of Wastewater Treatment and Practices

- Overview of Principles Wastewater Treatment
- Standard in Flow Measurement
- Collection Methodologies Disposal Area
- Basic Wastewater Treatment Practices

5. Physical and Chemical Treatment Processes for Industrial Wastewater

6. Biological Treatment Process

- Role of Microorganisms in Wastewater Treatment
- Aerobic (Digestion)
- Anaerobic
- Biological Nutrient Removal

7. Operation and Maintenance of Wastewater Treatment Facilities (WWTF)

- Conventional Activated Sludge (CAS)
- Anaerobic Digesters
- Sequential Batch Reactor (SBR)
- Rotating Bio-contactor (RBC) WWTF
- Common Troubleshooting of WWTF
- PCO Guidelines in Accepting Turn-over
- Sample of Best Practice in WWTF

8. Management and Application of Effluent and By-products from Wastewater Treatment Facilities (WWTF)

- Sludge and FOG Management
- Reuse of wastewater for Irrigation and other Agricultural uses

9. Workshop on the Identifying Appropriate WWT Process or Applicable BEP Options

THE TRAINERS

For. BREFELIN J. ROBLES

Education

• M.S. Environmental Science, (2014 to Present), School of Environmental Science and Management, University of the Philippines Los Baños
• B.S. Forestry, Major in Forest Biological Sciences, specialized in Forest Biotechnology, University of the Philippines Los Baños

Professional Background

• Licensed Forester (License # 900684308 Reg. No. 0009464)
• Accredited Advance Training Module Trainer of DENR-EMB
• Accredited Safety Practitioner of DOLE
• Accredited Pollution Control Officer of LLDA & DENR-EMB
• PCAPI-R4A Outstanding PCO Award 2016

Engr. FLORANTE PANGANIBAN

Education

- B.S. Mechanical Engineer, Adamson University, Manila

Professional Background

- Licensed Mechanical Engineer (PRC License No. 0049094)
- Seasoned practitioner in the field of environmental management and workplace safety dealing mainly on water pollution, air emission, solid waste disposal, toxic and hazardous wastes storage and disposal, industrial hygiene and occupational safety in the workplace
- Worked as Management Representative (MR) for Environmental Management System (EMS) and championed the establishment of ISO 14001-EMS leading to certification of a sugar manufacturing company in February 2011.
- Chairman of the Central Safety and Health Committee (CSHC) and leading the establishment of OSHAS 18001 through Integrated Management System implementation in a sugar manufacturing company.
- Conceptualized and implemented several environmental management programs and safety programs in the factory and awarded as Outstanding Pollution Control Officer by Pollution Control Association of the Philippines, Inc. (PCAPI) (2008)

THE TRAINERS

GRAZIEL D. SAN LUIS

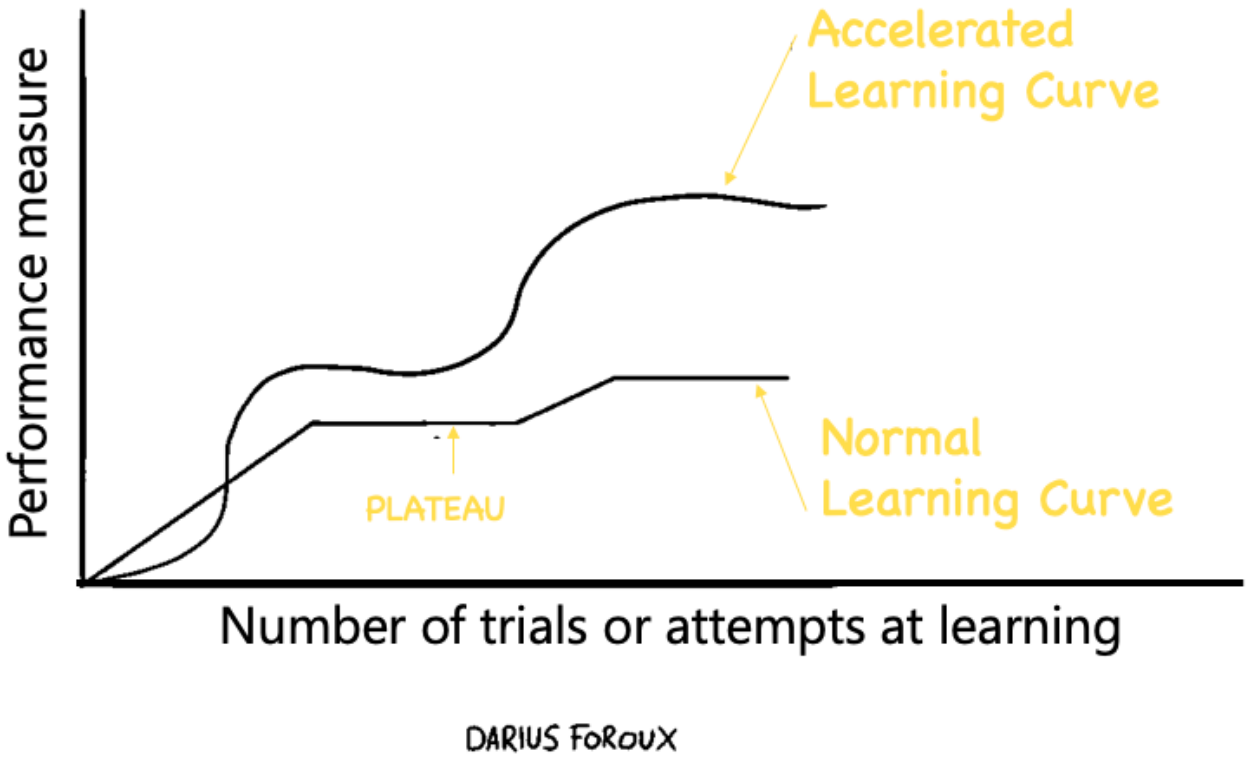
Education

- Bachelor of Science in Chemistry
  University of the Philippines
- DOST-Scholar Member

Professional Background

- Licensed Chemist (2002) PRC Lic. No. 9614
- Technical Services Manager (January 15, 2015 to present)
  CRL Environmental Corporation - Clarkfield, Philippines
- Instructor in Chemistry (June 2012 to May 2014)
  University of the Philippines-Baguio
- Production Supervisor (2011 to May 2012),
  Tara Designs Phils., Inc. October
- Quality Analyst (May 2008 to November 2008)
  Universal Robina Corporation, Cavite Plant
- Chemical Analyst (August 2004 to September 2006)
  Euro-Med Laboratories, Inc.
- Chemist (March 2004 to July 2004)
  Murase Hotelcare Corporation, Cavite
- Research Associate (November 2002 to June 2003)
  University of the Philippines, Office of the Vice Chancellor for Research and Development

Let's accelerate that learning curve!



TO RECEIVE A CONFIRMATION OF YOUR REGISTRATION SLOT,
PLEASE EMAIL DEPOSIT SLIP OR PROOF OF PAYMENT ON OR BEFORE JULY 1, 2022

MODE OF PAYMENT

☐ Cash
☐ Cheque: Please prepare cheque payable to **PCAPI-REGION 4A CHAPTER,INC.**
☐ Deposit through Bank:

Account Name	:	PCAPI REGION 4A CHAPTER, INC.
Account No	:	0911-0147-42
Name of Bank	:	Bank of the Philippine Islands (BPI)
Branch	:	Los Baños, Laguna

TO RECEIVE A CONFIRMATION OF YOUR REGISTRATION FEE, PLEASE EMAIL DEPOSIT SLIP TO
pcapir4a@yahoo.com / pcapi.calabarzon@gmail.com.

CONTACT INFORMATION

MARION LANDIG
GRACE ENGLE
0917-8144751
0998-5347850
pcapi.calabarzon@gmail.com

TLC: The Learning Curve Series

(Non-Accredited On-line Courses for PCOs)

2022 TRAINING SCHEDULE

On-line Permitting	MAY 10-11 July 5-6
Wastewater Management	MAY 12-13 July 7-8
Chemicals & Hazardous Waste Management	MAR 3-5 JUN 29-30 & JUL 1
Environmental Monitoring and Reporting	TBA
Industrial Solid Waste Management	TBA
Air Quality Management	TBA