

Chen

Gulf Science and Technology Company

MEDICAL AND HEALTH RESOURCES DIVISION

R. T. Cheng, Ph. D., P. E.
REGIONAL INDUSTRIAL HYGIENE DIRECTOR, WESTERN REGION
INDUSTRIAL HYGIENE AND RADIATION
HEALTH PHYSICS DEPARTMENT

P. O. Box 81608
San Diego, CA 92138

August 13, 1980
RTC:80-98

B. H. Gambrill, President
CHINA GULF PLASTICS CORPORATION
Post Office Box 22144
Taipei, Taiwan 105
REPUBLIC OF CHINA

Dear Bryan:

It is, indeed, a pleasure to read your letter of August 4, 1980. I am greatly impressed by the many actions you have taken or plan to take to improve the industrial health status at China Gulf Plastics Corporation. Refer to "Item L" of your letter, I have worked out the attached training schedules (two) for China Gulf Plastics Corporation, Asia Polymer Corporation and Taita industrial hygiene personnel.

Schedule #1 is a proposed advanced industrial hygiene and safety training for Mr. Ed Lu. As mentioned in your March 12th letter, Ed Lu will assume responsibility as hygiene advisor to Asia Polymer Corporation and Taita, as well as retain his role as manager of safety and hygiene for China Gulf Plastics Corporation. Ed has completed the basic industrial hygiene courses in 1975. The proposed training in occupational respiratory protection will enable him to develop and supervise a comprehensive respirator program for China Gulf Plastics Corporation as well as Asia Polymer Corporation and Taita. The course covers respiratory protective devices, equipment selection, qualitative and quantitative testing, operating procedures and records, maintenance, storage and inspection, and training of employees in the use of respirators.

The 2-1/2 day "Recognition of Accident Potential in the Workplace Due to Human Factors" is a sophisticated course for safety managers. The course will enable the student to identify the principal elements of accident causation and to apply methodology for control. Enrollees will be able to recognize the human factors which help to predict the occurrence of accidents in the workplace.

Schedule #1 also includes one or two short field trips to a United States VCM/PVC manufacturing plant and/or an acrylonitrile manufacturing plant to gain new knowledge and to compare industrial hygiene practices and



B. H. Gambrill
China Gulf Plastics Corp.

RTC:80-98
August 13, 1980

approaches. One of many useful and timely things to learn during the field trips will be the know-hows in the installation and operation of an automatic VCM monitoring system which has been proposed in your 1981's AFE. I will attempt to work out the details of the field trips with industrial hygienists from other United States companies if you agree with the field trip concept and confirm that the training courses in Schedule #1 are suitable. As the two training courses are offered in November, and there are many details to be worked out, I would appreciate receiving your response as early as possible.

Industrial hygiene training course in Schedule #2 is meant for junior industrial hygienists from China Gulf Plastics Corporation, Asia Polymer Corporation and/or Taita. They will take an "Applied Industrial Hygiene" course which will emphasize the recognition, evaluation, and control of health hazards. Students will become familiar with the principles and practices of industrial hygiene. They will also take an "Industrial Ventilation" course which teaches the fundamentals of industrial exhaust ventilation, including the design of exhaust systems. The training courses in Schedule #2 are offered in May, 1981. Therefore, we still have plenty of time to work on the details. I am considering the addition of a course in "Industrial Hygiene Chemistry" or "Industrial Hygiene Laboratory Quality Control" to Schedule #2, if the trainee is in charge of China Gulf Plastic Corporation's laboratory operation. However, those two courses are rarely offered. I will let you know if one of the two courses become available.

Warm regards,

Robert Cheng

R. T. Cheng

RTC:vic

cc: R. L. Gibson, M.D.
C. R. Grimes
H. E. Runion
L. S. Ting
S. K. Yeh
K. Yu

SCHEDULE #1

Advanced Training For Mr. Ed Lu

<u>TRAINING COURSE DESCRIPTION</u>	<u>LOCATION</u>	<u>TIME</u>	<u>TUITION</u>
NIOSH 512, Recognition of Accident Potential In the Work Place Due to Human Factors.	University of Southern California, Los Angeles, Calif.	Nov. 12-14, 1980*	\$190.00
NIOSH 593, Occupational Respiratory Protection.	University of Southern California, Los Angeles, Calif.	Nov. 17-21, 1980	\$375.00
FIELD TRIP(S), Visiting U.S. VCM/PVC Plant and/or an Acrylonitrile Plant.	Unknown**	Nov. 24-27, 1980	

* The trainee (Mr. Ed Lu) is to arrive Los Angeles, California, on November 10, 1980. Dr. R. T. Cheng will meet the trainee at the airport.

** Contacts with other companies and detailed field trip arrangements will be made after CGPC's acceptance of this training schedule.

SCHEDULE #2

Basic Industrial Hygiene Training For
CGPC, APC and TAITA Industrial Hygiene Personnel

<u>TRAINING COURSE DESCRIPTION</u>	<u>LOCATION</u>	<u>TIME</u>	<u>TUITION</u>
NIOSH #549, Applied Industrial Hygiene.	University of Southern California, Los Angeles, Calif.	May 4-8, 1980*	\$375.00
NIOSH #588, Industrial Ventilation.	University of Southern California, Los Angeles, Calif.	May 11-15, 1980	\$375.00

Possible Other Courses**

- * The trainees are to arrive Los Angeles, California, on May 2, 1981. Dr. R. T. Cheng will meet the trainees at the airport.
- ** NIOSH #587 "Industrial Hygiene Laboratory Quality Control" or NIOSH #590 "Industrial Hygiene Chemistry" will be added if available.

OCCUPATIONAL RESPIRATORY PROTECTION (593)

This course, aimed at individuals who have responsibility for any portion of a respirator program, is designed to provide the necessary information to initiate or upgrade a program to comply with the requirements of the OSHA Act. Applied training is included in both Lecture & Laboratory exercises.

PREREQUISITES: None

OBJECTIVES: At the conclusion of this course, the trainee will be able to initiate and supervise an entire respirator program which will meet the minimum requirements set forth in OSHA section 1910.134.

COURSE TOPICS INCLUDE:

GOVERNING LEGISLATION:
Discussion, explanation and definition of the requirements and terminology of OSHA section 1910.134. Discussion will cover methods of compliance, minimum to ultimate, with the regulations.

RESPIRATORY PROTECTIVE DEVICES:
Discussion on and applied training with devices. Includes inspection for defects; donning and actual use of devices, including exercises with air purifying devices; supplied air respirators, suits and hoods; and self-contained breathing apparatus.

SELECTION:
Comprehensive discussion on selection of the proper protection based on the hazard assessment.

STANDARD OPERATING PROCEDURES AND RECORDS.
Discussion of sample SOP's and records required by OSHA.

FITTING:
Applied training with devices and fitting equipment. Includes laboratory exercises with several acceptable qualitative and quantitative fit test methods.

MAINTENANCE, STORAGE AND INSPECTION:
Disassembly, cleaning, disinfection, reassembly and leak check of devices, including use of equipment. Discussion of storage and inspection requirements, and demonstrations of equipment used.

TRAINING:
Discussion of methods and information necessary for the user of respiratory protective equipment to competently use and care for his personal equipment.

APPLIED INDUSTRIAL HYGIENE (549)

This course is designed to familiarize an individual with the fundamental principles of industrial hygiene with the major emphasis on recognition, evaluation, and control of hazards. An overview is presented, including program design, environmental and medical aspects.

PREREQUISITES: None

OBJECTIVES: At the conclusion of this course, the trainee will be able to:

- Identify hazards resulting from the physical and chemical agents in an occupational environment.
- Describe how to evaluate the hazards.
- Describe control methods to reduce the hazards.
- Describe how to measure the effectiveness of the controls.

COURSE TOPICS INCLUDE: Introduction to Occupational Safety and Health
Threshold Limit Values
Sampling for Solids, Liquid, and Gaseous Contaminants
Ventilation
Noise Measurements
Hearing Conservation
Heat Stress
Illumination
Safety (Various Topics)
Disease of the Lungs, Skin, Etc.

WHO SHOULD ATTEND: Personnel who are new to the field and have direct responsibility for making determinations of potential or existing hazards. Engineers, chemists and industrial hygienists with little practical experience are encouraged to attend.

COURSE DURATION: Five (5) Days

CONTINUING EDUCATION CREDIT: 4 C.E.U.'s

INDUSTRIAL VENTILATION (588)

This course covers the fundamentals of industrial exhaust ventilation including the air flow design of industrial exhaust systems. Designs will include exhaust and air supply ventilation systems, selection of exhaust hoods, principles and selection of fans, determination of air volumes and minimum duct velocities, sizing and selection of ducts, calculation of system pressure losses, and the selection of air cleaning devices. Computer design and cost analysis of ventilation systems will be discussed. Lectures will be augmented by laboratories and a field trip in order to acquaint the trainee with various instruments.

PREREQUISITES: Familiarity with engineering design calculations is required.

OBJECTIVES: Each participant will be able to:

- Select and identify appropriate exhaust ventilation systems for industrial processes.
- Measure the performance of exhaust systems using air flow, velocity and pressure measuring instruments.
- Design industrial exhaust systems.

COURSE TOPICS INCLUDE: Air Flow Principles
Local Exhaust Ventilation
Hood Design
Entry Loss Calculations
General Ventilation
Duct Design Calculations
Computer Design of Industrial Ventilation Systems
Fans and Blowers
Measuring Instruments
System Performance Evaluation
Cost Analysis of Ventilation Systems
Collection Systems

WHO SHOULD ATTEND: Industrial Hygienists, Plant Engineers and Mechanical Engineers who design industrial systems.

COURSE DURATION: Five (5) Days

**CONTINUING EDUCATION
CREDIT:** 4 C.E.U.'s