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HS135:
Pesticide Risk Assessment & Incident Control

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Training Description:

This intensive training course is designed to provide participants with a detailed and up-to-date overview of pesticide risk assessment and incident control. Several governmental and international organizations perform formal risk assessments about pesticides. For example, the World Health Organization evaluates potential cancer risks, risks from food residue, and risks to the environment. Some organizations consider only the hazards and the bad stuff that can happen while some organizations consider the hazards and the likely exposure (routes and amounts) when evaluating risk. That makes it difficult to compare risk assessments from different agencies; they can be like apples and oranges.

In the United States, the EPA identifies the hazards and potential exposure(s) before calculating the overall risk. Two major types of pesticide risk assessments are human health and ecological health.

Human Health Risk Assessments look at possible health risks to humans who might be exposed to pesticides in water, food, air and through other activities. This can include the use of pesticides at home and at work. The four steps of a human health risk assessment are hazard identification, dose response assessment, exposure assessment and risk characterization.

Ecological Risk Assessments look at how wildlife, plants and water sources can be affected by a pesticide. They require data on plant and animal toxicity, as well as environmental fate. There are four phases of an ecological risk assessment including planning, problem formulation, analysis and risk characterization.

The course covers the governmental and international organizations performing formal risk assessments about pesticides; the World Health Organization evaluating potential cancer risks, risks from food residue and risks to the environment; what kind of hazardous could come from pesticides upon human, animals, plants, air, soil or water; how some organizations consider the hazards and the likely exposure (routes and amounts) when evaluating risk; the risk assessment philosophy; and the EPA identifying the hazards and potential exposure(s) before calculating the overall risk.

The course will also discuss the two major types of pesticide risk assessments that includes human health and ecological health; the human health risk assessments; the use of pesticides at home and at work; the four steps of a human health risk assessment; the ecological risk assessments; the required data on plant and animal toxicity as well as environmental fate; the four phases of an ecological risk assessment; the risk monitoring devices and testing methods; the pesticides and chemicals codes, symbols and color codes; the pesticides transporting; the pesticides storage; the pesticides MSDS; the required training courses and preparedness; the emergency preparedness; the incident RCA and investigation techniques; the collecting evidences; and the emergency equipment and tools.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Apply and gain a comprehensive knowledge on pesticide risk assessment and incident control
- ✓ Discuss World Health Organization evaluating potential cancer risks, risks from food residue and risks to the environment
- ✓ Identify the types of pesticides and the kind of hazardous that can come from pesticides upon human, animals, plants, air, soil or water
- ✓ Recognize the hazards and the likely exposure (routes and amounts) when evaluating risk

- ✓ Explain risk assessment philosophy and compare risk assessments from different agencies
- ✓ Determine how EPA identifies the hazards and potential exposure(s) before calculating the overall risk
- ✓ Identify the two major types of pesticide risk assessments covering human health and ecological health
- ✓ Determine the possible health risks to humans who might be exposed to pesticides in water, food, air and through other activities
- ✓ Describe the use of pesticides at home and at work and the four steps of a human health risk assessment
- ✓ Carryout ecological risk assessments and discuss the required data on plant and animal toxicity as well as environmental fate
- ✓ Implement the four phases of an ecological risk assessment, risk monitoring devices and testing methods
- ✓ List the pesticides and chemicals codes, symbols and color codes and apply first aid, transporting, storage and MSDS
- ✓ Employ the required training courses and preparedness including the emergency preparedness, incident RCA and investigation techniques
- ✓ Apply collecting evidences and corrective actions plan

Training Designed for:

This course is intended for chemists, chemical engineers, agriculture engineers, pesticides producers, traders and transporters as well as HSE engineers and managers.

Training Program:

DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction & Course Agenda
  - Discussing Clients Applications & Activities
- ❖ Governmental & International Organizations Performing Formal Risk Assessments About Pesticides
- ❖ The World Health Organization Evaluating Potential Cancer Risks, Risks from Food Residue & Risks to the Environment
- ❖ Types of Pesticides
- ❖ What Kind of Hazardous Could Come from Pesticides Upon Human, Animals, Plants, Air, Soil or Water
- ❖ Case Study
- ❖ Educational Video – Pesticides Needs & Types of Treatment
- ❖ Recap

DAY TWO:

- ❖ How Some Organizations Consider the Hazards and the Likely Exposure (Routes & Amounts) When Evaluating Risk
- ❖ Risk Assessment Philosophy
- ❖ That Makes It Difficult to Compare Risk Assessments from Different Agencies; They Can Be Like Apples & Oranges

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- EPA Identifies the Hazards & Potential Exposure(s) Before Calculating the Overall Risk
- Discussing the Client Activities Steps
- Two Major Types of Pesticide Risk Assessments: Human Health & Ecological Health
- Human Health Risk Assessments: Look at Possible Health Risks to Humans Who Might Be Exposed to Pesticides in Water, Food, Air and Through other Activities
- Discussing Different Scenarios
- Case Study
- Educational Video – Pesticides Chemistry & Working Mechanisms
- Recap

DAY THREE:

- The Use of Pesticides at Home and at Work
- The Four Steps of a Human Health Risk Assessment: Hazard Identification, Dose-Response Assessment, Exposure Assessment & Risk Characterization
- Participants Sharing Information
- Ecological Risk Assessments: Look at How Wildlife, Plants & Water Sources Can Be Affected By A Pesticide
- Required Data on Plant & Animal Toxicity as well as Environmental Fate
- Four Phases of an Ecological Risk Assessment: Planning, Problem Formulation, Analysis & Risk Characterization
- Risk Monitoring Devices & Testing Methods
- Case Study
- Educational Video – Pesticides Types & Applications
- Recap

DAY FOUR:

- Pesticides & Chemicals Codes, Symbols & Color Codes
- Pesticides Contact First Aid
- Pesticides Transporting
- Pesticides Storage
- Pesticides MSDS
- Required Training Courses & Preparedness
- Emergency Preparedness
- Case Study
- Educational Video – Pesticides Incident Investigation
- Recap

DAY FIVE:

- Pesticides Contact Incident
- Incident RCA & Investigation Techniques
- Participants Information Sharing
- Collecting Evidences
- Corrective Actions Plans & Learned Lessons
- Contact with Pesticides Emergency Preparedness
- Emergency Equipment & Tools

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- Course Conclusion
- POST-TEST and EVALUATION

Training Requirement:

"**Hand's on practical sessions, equipment** and **software** will be applied during the course if required and as per the client's request".

Please note that the above topics can be amended as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

As per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:30	Recess (Prayer Break & Lunch)
13:30 - 15:00	Last Session

For training registrations or in-house enquiries, please contact:
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Training & Career Development Department