Animal health care service

NTQF Level - II

Learning Guide -05

Unit of Competence: - Carry out Sanitation and Waste Management Duties

Module Title: Carry out Sanitation and Waste Management Duties

LG Code: AGRAHC2M04LO5-LG- 05

TTLM Code: AGRAHC2 TTLM 1019v1

LO5: complete work

Instruction Sheet	Learning Guide #-

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics –

- Cleaning and storing PPE and equipment
- Disposing excess chemicals
- Reporting incidents
- Storing unused chemical
- Adhering all re-entry and withholding periods

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to –**

- Clean and store PPE and equipment
- Dispose excess chemicals
- Report incidents
- Store unused chemical
- Adhere all re-entry and withholding periods

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 2 to 19
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1 on page 7”
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #5.
7. Submit your accomplished Self-check. This will form part of your training portfolio

8. Read the information written in the “Information Sheets 2”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
9. Accomplish the “Self-check 2 on page 9”
10. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 2).
11. If you earned a satisfactory evaluation proceed to “Information Sheet 3”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #5.
12. Submit your accomplished Self-check. This will form part of your training portfolio
13. Read the information written in the “Information Sheets 3”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
14. Accomplish the “Self-check 3 on page 13”
15. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 3).
16. If you earned a satisfactory evaluation proceed to “Information Sheet 4”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #5.
17. Submit your accomplished Self-check. This will form part of your training portfolio
18. Read the information written in the “Information Sheets 4”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
19. Accomplish the “Self-check 4 on page 16”
20. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 4).

21. If you earned a satisfactory evaluation proceed to “Information Sheet 5”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity #5.
22. Submit your accomplished Self-check. This will form part of your training portfolio
23. Read the information written in the “Information Sheets 5”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
24. Accomplish the “Self-check 5 on page 18”
25. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 5).
26. Submit your accomplished Self-check. This will form part of your training portfolio

Information sheet -1	Clean and store PPE and equipment

1.1. Clean and store PPE and equipment

A comprehensive personal protective equipment (PPE) program not only can be one of the easiest safety and health programs your department can implement and maintain, but it also can be one of the most beneficial. Before we even consider PPE we must follow the hierarchy of controls (Engineering, Administrative and then PPE). First take the hazard out of the work areas by instituting engineering controls, e.g., ventilation hoods, gas cabinets, guarding, etc. Then, consider administrative controls, e.g., limit the amount of time an individual is allowed to work with or is exposed to a given hazard. Last is personal protective equipment. Since PPE can fail, and relies on the worker to use it properly, and leaves the hazard in the workplace, PPE is always our last line of defense against workplace contaminants and physical hazards.

Why do we use PPE? Experience tells us that we can prevent most workplace injuries with the help of properly selected, worn and maintained PPE. In some cases it's also the law! According to state law all employees are required to wear at least safety glasses in our laboratories. Most laboratories also require gloves and lab coats, plus other unique PPE. In the United States, thousands of people are blinded each year from work-related eye injuries that could have been prevented with eye protection. According to OSHA, eye injuries alone cost more than $300 million per year in lost production time, medical expenses, and worker compensation.

Storage for PPE

Where PPE is provided, adequate storage facilities for PPE must be made available for when it is not in use, unless the employee may take PPE away from the workplace, e.g., footwear or clothing. All PPE must be stored in a clean and sanitary condition ready for use. Accommodation may be simple, e.g., pegs for waterproof clothing or safety helmets, and it need not be fixed, e.g., a case for safety glasses, a container in a vehicle, or zip-lock bags on a designated shelf. Storage should be adequate to protect the PPE from contamination, loss, damage, water or sunlight. Proper storage often requires a dry and clean place that is not subject to temperature extremes. A hard hat hanging in the back window of a truck, for example, may suffer sun and heat damage

that prematurely ages the shell, reducing worker protection. Where PPE may become contaminated during use, storage should be separate from any storage provided for ordinary clothing. Some departments maintain a supply of PPE. Individual units may arrange for the supply of required PPE to staff. Regardless of the arrangements for supply, it is management responsibility to ensure that correct PPE is available and a program is in place. When considering arrangements for providing replacement PPE it must be remembered that unless a task requiring PPE can be stopped, avoided or delayed until new PPE is obtained, replacement PPE must always be readily available.

Employees must take reasonable steps to ensure that PPE provided is properly used.

For example:

- PPE must be worn and used in accordance with the instructions provided;
- Employees must take all reasonable steps to ensure that PPE is returned to proper storage after it has been used (unless the employee may take PPE away from the workplace e.g. footwear or clothing);
- PPE must be examined before use;
- Any loss or obvious defect must be immediately reported to their supervisor; and
- Employees must take reasonable care of any PPE provided to them and not carry out any maintenance unless trained and authorized

Following proper cleaning, drying, maintenance and storage protocols will help to protect from exposed to harmful toxins. It is your responsibility to make sure that your PPE receives routine cleaning after every call and that it gives advanced cleaning when necessary from trained person.

Dirty PPE is a health risk;

- Inspect it as required
- Clean it correctly

Provide clean, dry, and well ventilated storage areas

- Provide dedicated space away from living areas and out of a apparatus bays
- Provide appropriate gear racks

Control exposure to light for PPE

- Be aware of windows and openings
- Donot store PPE in direct sun light

Minimize personal and the public exposure to solid or contaminated PPE

- Donot wear or store PPE in living areas
- Donot take solid or contaminated PPE home.

Self-Check -1	Written Test

Directions:

Write short answer for the following questions (5pnt each)

1. What is PPE?

2. Why PPE is important?

Note: **Satisfactory rating - 5 points** **Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

Name: _____ IDN0:_____

Score = _____

Rating: _____

Answer sheet:

Part one: Write short answer for the following questions (2.5pnt each)

1. ……

……..

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2. ……

……

Information sheet -2	Dispose excess chemicals

2. 1. Dispose excess chemicals

Disposing of chemicals

When disposing chemicals you need

- Check the label for advice on disposal of chemicals
- Triple rinse empty container to remove all traces of the chemical
- Uncap, puncture and crush all rinsed containers do not burn them.
- Ask you local government authority about collection requirements.

The chosen disposal site should have the following

- Have a depth between 50 cm and 1m
- Be located to avoid contaminating homes, underground water, surface water, crops or livestock
- Have a heavy duty plastic pit liner where there is risk chemicals may leak
- Be level, preferably with a clay liner and have time spread across the bottom

Preparation of chemicals for disposal

- Waste chemicals destined for disposal should be segregated into compatible groups and packaged in sturdy cardboard box.
- Consult the safety data sheet for the materials to determine compatible groupings
- Five-gallon solvent cans in good condition do not need to be- over packed
- Drums greater than five-gallon capacity will not be picked upon regularly scheduled rounds. Arrangements for picked up drums can be made by contacting the environmental health safety office
- Packaging should be done to minimize the possibility of breakage or leakage during handling.
- Containers should be placed upright in the box to prevent spilling of the contents.

- Bottles should not came in contact with each other, and the space between bottles should be filled with a cushioning material to prevent bottle movement during handling.
- Bottle of liquid chemicals should be packed with absorbent materials to contain the material in the event of breakage.
- Do not place any chemical waste in biological waste containers
- Total weight box should not exceed more than 35 pound.

All hazardous material and hazardous chemical waste must be picked up by environmental health safety. Sharp objects all sharp objects such as needles, syringes and broken glassware must be placed in a hard-walled container and labeled with hazardous waste,

Self-Check -2	**Written Test**

Directions:

Write short answer for the following questions (5pnt each)

1. When disposing chemicals what do you need?

2. How could you prepare for disposing chemicals?

Note: **Satisfactory rating - 5 points** **Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

Score = _____

Rating: _____

Name: _____ IDN0:_____

Answer sheet:

Part one: Write short answer for the following questions (2.5pnt each)

1. ……

……

2. ……

Information sheet -3	Report incident

3.1. Report incident

Incident report: is a tool that documents any event that may or may not have caused injuries to a person or damage to a company asset. It's used to cupture injuries and accidents, near misses, proper and equipment damage, health and safety issues, security breaches and work place misconduct. Accident report can be used in the investigation and analysis of an event. it includes the root cause and corrective actions to eliminate the risk involved and prevent similar future occurrence. Incidence report can be olso used as safety documents which indicate potential risks and uncontrolled hazards found in the work place.

An incidence report can be used by:

- An authority to create a report of an accident;
- An employee to report an incident he/she has witness
- A member of organization to raise awareness about an incident that has occurred in work place.

An incident report should be completed at the time an incident occurs no matter how minor injury is. Generally an incident report is defined as any event, condition or situation which:

- Causes disruption or interference to an organization;
- Causes significant risks that could affect members within an organization;
- Impact on the systems and operations of work place;
- Attractive negative media attention or negative profile of work place.

What types of incident should be reported?

Here are four types of incident you should report:

1. Sentinel events: these are un expected occurrences that resulted in serious physical injury or death eg. Slips, trips and falls, natural disasters, vehicle accidents, disease out break

2. Near misses- These are situations where the people involved had no injuries but could have been potentially harmed by the risks detected.

3. Adverse events: this is related to medicine, vaccines and medical devices. These event occur when an act of admission or omission harmed a patient rather than from the existing disease or condition

4. No harm event: these are incidents that need to be communicated across an organization to raise awareness of any harm that may happen.

Five element of a good incident report:

An incident report should state all the essential information about the accident or near miss. It should contain the following elements to ensure that all facts and necessary details are complete and properly documented. An incident report should be:

1. Accurate: all data must be clear and specific. Most in accuracies are due to typos and simple grammar and spelling errors. Eg. Incorrect details of names of people involved, date and time of incident, contact number, etc. provide more specific details of what you are referring and avoid any vague statements that may cause confusion.

2. Factual: an incident report should be objective and supporting by facts. Avoid including emotional opinionated and biased statement in the incident report. It should provide both sides of the story and should not favor one side.

3. Complete: ensure that all essential questions (what, where, when, why and how) are covered in the incident report. Record not only the people who were injured and what caused the incidence to happen, but olso include details such as people who witnessed and reported the incident or those who will conduct an investigation.

4. Graphic: photos, diagrams and illustrations should be included as supporting evidence. Take many photos of the injury, damage and surrounding environment. These supplements the facts stated and provide more clarity to be easily understood by the recipient.

5. Valid: upon completion, those who are involved in the incident eg. Victim, witnesses, manager, reporter etc. should sign of f to testify and validate all the information that wos mentioned in the incident report. This confirms that incident report is truthful and unquestionable

The incident report should be submitted to an investigation team to futher study and look for deeper causes. An investigation should be conducted by those who are competent in collecting and analyzing information and evidence gathered from the incident report. Those conducting the investigation should be knowledgeable in occupational health safety fundamentals. The purpose of investigation an incident is not to find fault but to determine the root cause and develop correction actions to prevent similar incidents from happening. Incident report should be kept properly as they are important record of every organization/sector. Creating incident reports can be time consuming and requires rigorous documentation of the incident. However understanding the purpose of incident reporting will help the organization determine root cause of an incident and set corrective measures to eliminate potential risks.

Self-Check -3	Written Test

Directions:

Write short answer for the following questions (5pnt each)

1. What is incident report?

2. What type of incident should be reported?

Note: **Satisfactory rating - 5 points Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

Score = _____

Rating: _____

Name: _____ IDN0:_____

Answer sheet:

Part one: Write short answer for the following questions (2.5pnt each)

1. ……

……

2. ……

Information sheet -4	Storing un used chemicals

4.1. Storing Un used chemicals

Poor or incorrect chemical storage practices can lead to inadvertent reactions between incompatible materials with the potential to cause harm, fire or even explosions. All chemicals should be stored in such a manner as to prevent incompatible materials from being accidentally mixed together in the event of the breakage of one or more containers in the storage area, or to prevent the formation and build-up of reactive vapours. The correct storage of chemicals within storage areas / stock rooms, workshops and laboratories is an on-going problem which can sometimes be complex and potentially confusing. The overall purpose of correct storage is to maintain control over the chemicals so that they can be both stored and retrieved safely. Many chemicals, including waste chemicals awaiting safe disposal, have special storage requirements with temperature, time, or security restrictions and practical problems can arise because of the number of separations that could be desirable. Correct storage must address the compatibility issues of flammable substances, unstable materials, highly reactive chemicals and vapours of highly toxic materials. Safe storage of chemicals can be achieved by arranging the materials to provide separation based on their chemical properties. This requires planning and will involve, an inventory list, accurate labeling, an appreciation of chemical incompatibilities and a range of suitable containers and storage facilities. In essence, the most important reasons for proper chemical storage are:

1. To provide for effective management of chemicals
2. To lessen the risk of fire
3. To prevent accidental mixing in emergencies
4. To minimise exposure to corrosive and toxic chemicals
5. To comply with relevant statutory security obligations

Chemical Storage Facilities

General Considerations

Safe storage of chemicals must begin with identification of the chemicals to be stored and their intrinsic hazardous properties. Since many chemicals have several hazards, which may vary in degree of severity, depending on quantity and concentration, it is not always straight forward to determine what protection is needed for safe storage and where best to store a particular chemical. However, typical storage considerations may include temperature, ignition control, ventilation, segregation and identification. Separation (i.e. use of distance), segregation (i.e. use of a physical boundary) or isolation is recommended depending upon the severity of hazard, total quantities stored, and the size, break resistance and durability of individual containers (i.e. fragility of glass bottles, perforation or degradation of plastic containers, and corrosion or puncture of metal containers). Hence, the physical composition and even the size of storage containers may also affect the need for special storage practices and safety procedures. It should be noted that ventilation is needed for chemicals and their containers which may release dangerous or damaging quantities of vapours or gases that are flammable, corrosive, irritating or toxic. Ventilated storage is particularly important for those substances classed as fuming or highly volatile. Ventilation should be by air extraction from the storage area to an external exhaust at a safe distance, at least 3 m, from openings into the building. This can sometimes be achieved via appropriate connection to an adjacent fume cupboard extraction system (consult the LEV Duty Appointed Person). Highly odorous chemicals should also be stored in a well-ventilated area; a ventilated cabinet is preferable.

In general the storage of chemicals within fume cupboards is strongly discouraged, unless it is for the reaction at hand, as materials stored in the fume cupboard can adversely affect the containment provided and increase the risk of accidental spillage and /or contact with incompatible substances. Chemicals stored at the bench or other work areas should be those that are used frequently and quantities should be limited to the minimum that is convenient

Self-Check -4	Written Test

Directions:

Write true or false for the following questions (5pnt each)

1. The overall purpose of correct storage is to maintain control over the chemicals?

2. Ventilated storage is particularly important for those substances classed as fuming or highly volatile?

Note: **Satisfactory rating - 5 points** **Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

Score = _____

Rating: _____

Name: _____ IDN0:_____

Answer sheet:

Part one: Write short answer for the following questions (2.5pnt each)

1. ……

……

2. ……

Information sheet -5	Adhere all re-entry and with holding periods

5.1. Adhere all re-entry and with holding periods

With holding period can be defined as the minimum period of time that must elapse between the last applications of an agricultural or veterinary chemical product. Every registered chemical that is intended for use for food crops will have a maximum residual level and an associated with holding period set for it. this is minimum permissible time between the last application of an agrichemical to a crop and a harvesting for human consumption, or grazing by animals. The withholding period may olso be known as the pre-harvest interval. A with holding period allow sufficient for residual level of chemical on the crop to drop to a level below. The withholding period is determined from chemical decay rates observed in actual, local field trials and compared with work overseas, withholding period assume you applied the agrochemical in accordance with the instructions on the label. The critical factors ensuring maximum residual level are not exceeded are:

- Following with holding periods
- Not applying agrichemicals at above level rates eg poor calibration

Re-entry interval

The re-entry interval or re-entry period: is the minimum amount of time that must pass between the time the agrichemical wos applied to an area or crop and the time that the people can go into that area without protective clothing and equipment. Re-entry are set to protect people against poisoning by agrichemicals if they enter a treated area too soon after application with proper protective equipment. If there is no re-entry time specified on the label, recommended practice is to wait until spray has dried. Unfortunately, it is relatively easy to be exposed to agrichemicals after they have been applied to their target. For example:

- Breathing in vapor, dusts or mists
- Touching residues on the sprayed plants

- Getting the agrichemical in your eye through vapours, dusts or mists or by rubbing your eyes with your hands
- Eating food that has been treated or eating without frist washing hands

When treated plants are touched during work activities such as weeding, thinning or brushing against plants, some agrichemical residue may be transferred to skin. Workers in a field can olso cause residues on plants and on the soil surface to 'fly up' as a dust- the dust settles on the workers skin and are in haled. People in treated areas may olso breathe fumes(vapours) from a recent agrichemical application.

Reference : Reference :

Self-Check -5	**Written Test**

Directions:

Write short answer for the following questions(5pnt each)

1. Define re- entry?

2. Define withholding period?

Note: **Satisfactory rating - 5 points** **Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

Score = _____

Rating: _____

Name: _____ IDN0:_____

Answer sheet:

Part one: Write short answer for the following questions (2.5pnt each)

1. ……

……

2. ……

Reference Materials

1: hhps://www.growsafe.co.nz/standard manual/after-spray.

2. https://www.safetyculture.com/topics/incident-report