Carpentry

Level-II

Learning Guide-33

Unit of Competence: apply basic leveling procedure

Module Title: Applying basic leveling procedure

LG Code: EIS CRP2 M08 LO3-LG-33

TTLM Code: EIS CRP2 M08 TTLM 0919v1

LO 3: Clean up

Instruction Sheet	Learning Guide # 4

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

- .House keeping
- Cleaning, checking, maintaining tools and equipment

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:

- Clear work area and dispose of reuse or recycle materials, in accordance with legislation, regulations, codes of practice and job specification.
- Clean, check, maintain, including levelling device operator maintenance, and store tools and equipment are in accordance with manufacturer recommendations and standard work practices

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Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 4.
3. Read the information written in the information “Sheet 1, and Sheet 2,
4. Accomplish the “Self-check1, and Self-check2, respectively.

Information Sheet-1	House keeping

1.1. House keeping

The Producer(she/he) shall, during the production period maintain and clean up both permanent and temporary facilities. He/she shall provide temporary site drainage to leave the facilities free of standing water, accumulation of scrap, debris, waste material, and maintain good standards of hygiene.

Inspection shall be carried out daily to ensure that sufficient workmen/women, tools and facilities are provided to maintain the standard of hygiene.

Final cleaning of the site and removal of all temporary facilities shall be carried out to approval at completion of works.

Managing waste –

Reduce, Reuse, Recycle or Dispose? ‘every substance extracted from the earth’s crust, or harvested from the forest, fishery, or agriculture is a potential waste…it soon becomes an actual waste in almost all cases with a delay of a few weeks to a few years at most..... materials consumed by the economic industrial system do not disappear .. they are merely transformed to less useful forms’’

Recycling is the process of converting waste materials into new materials and objects. It is an alternative to "conventional" waste disposal that can save material and help lower greenhouse gas emissions. Recycling can prevent the waste of potentially useful materials and reduce the consumption of fresh raw materials, thereby reducing: energy usage, air pollution (from incineration), and water pollution (from landfilling).

Waste Watch estimates that for each tonne of household waste, five tonnes of waste are produced in manufacturing and 20 tonnes in the raw materials extraction phase. The Environment Agency estimated that 90% of all resources we consume are either thrown away as ‘waste’ or discarded into the environment as effluent or air emissions [10]. The focus on resources consumed is an important element in the drive for co efficiency. Therefore there has been a move towards viewing waste as not only the traditional municipal and controlled wastes, but also as resources that can be recycled, recovered or reused.

The priority in which wastes should be managed is detailed in the waste hierarchy (Figure 3) as explored in most waste management publications and promoted in the UK waste management strategy.

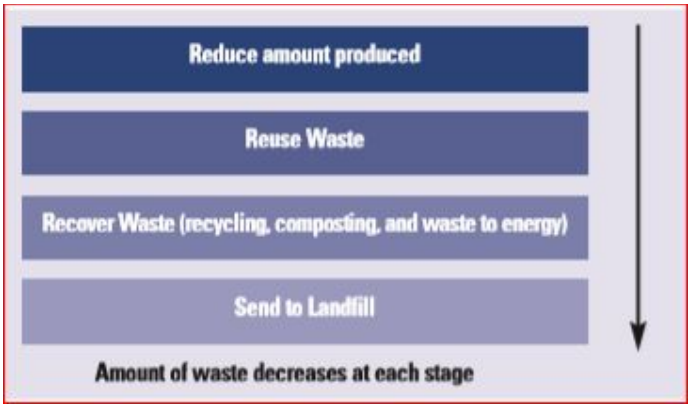


Figure 1: The Waste Management Hierarchy

This hierarchy stresses the need to firstly reduce the amount of waste created, then re-use wastes, then recover (via recycling, composting or waste-to-energy facilities) and finally, as a last resort to dispose of waste to landfill.

The most successful way to manage waste is not to produce it in the first place and this is the driving force behind the idea of waste minimization.

Figure 2: Waste Minimization Techniques

- **<u>Disposing</u>**

  Removing and destroying or storing damaged, used or other unwanted domestic, agricultural or industrial products and *substances*

- **<u>Recycling</u>**

The process of turning an item into raw materials which can be used again, usually for a completely new product. This is an energy consuming procedure.

- **<u>Reusing</u>**

Refers to using an object as it is, without treatment. This reduces pollution and waste, thus making it a more sustainable process.

Figure3. Waste management system

Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products. Recycling can benefit your community and the environment.

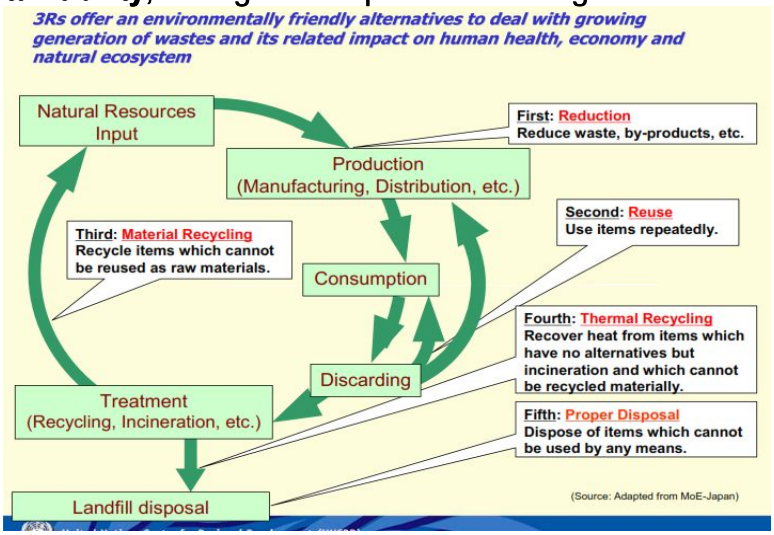
Recycling reduces waste disposal by transforming useful materials such as plastic, glass and paper into new products

The reusing process is not just about re-purposing materials, but the object as it is. This includes buying and selling used goods and repairing items rather than discarding them. Reusing is better than recycling because it saves the energy that comes with having to dismantle and re-manufacture products. It also significantly reduces waste and pollution because it reduces the need for raw materials, saving both forests and water supplies.

Waste that cannot be reused or recycled in some form eventually finds its way to disposal. This disposal includes landfills, but an increasing number of municipalities have elected to divert waste into resource recovery. These recovery methods use the waste to generate electricity or produce raw materials for industry.

Purpose

When looking into **environmental sustainability**, cutting consumption or reducing rubbish during a house clearance, it's more than likely that you'll come across the following 3Rs: reduce, reuse and recycle. Learn how Disposing, reusing(R), and recycling(R) can help you, your community, and the environment by saving money, energy, and natural resources.



Self-Check 1	Written Test

***Instructions**:* Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers. Write your answers in the sheet provided in the next page.

1. List out rules of cleaning work area? (5 points)

Matching: match terms under column "A" to its correct definition under column "B", write your answer on the answer sheet provider.(4 points)

A	B
1. Recycling	A. Minimizing by products
2. Reusing	B. Converting waste into new
3. Reducing	C. Removing and destroying unwanted products
4. Disposing	D. Using an object without treatment

Note: **Satisfactory rating – 3 points Unsatisfactory - below 3 points**

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

Answer Sheet

Score = _____

Rating: _____

Name: _____ **Date: _____**

Short Answer Questions

1. _____

   _____

Matching

1. _____
2. _____
3. _____
4. _____

Information Sheet-2	Cleaning, checking, maintaining tools and equipment

Maintenance

Maintenance on plant and equipment is carried out to prevent problems arising, to put faults right, and to ensure equipment is working effectively.

Maintenance may be part of a planned program or may have to be carried out at short notice after a breakdown.

Important of maintenance plant and equipment

An effective maintenance programme will make plant and equipment more reliable. Fewer breakdowns will mean less dangerous contact with machinery is required, as well as having the cost benefits of better productivity and efficiency.

Additional hazards can occur when machinery becomes unreliable and develops faults. Maintenance allows these faults to be diagnosed early to manage any risks. However, maintenance needs to be correctly planned and carried out. Unsafe maintenance has caused many fatalities and serious injuries either during the maintenance or to those using the badly maintained or wrongly maintained/repaired equipment.

Necessary consideration

If you are an employer and you provide equipment for use, from hand tools and ladders to electrical power tools and larger plant, you need to demonstrate that you have arrangements in place to make sure they are maintained in a safe condition.

Think about what hazards can occur:

- if tools break during use
- machinery starts up unexpectedly
- there is contact with materials that are normally enclosed within the machine, ie caused by leaks/breakage/ejection etc

Failing to correctly plan and communicate clear instructions and information before starting maintenance can lead to confusion and can cause accidents.

Establishing a planned maintenance programme may be a useful step towards reducing risk, as well as having a reporting procedure for workers who may notice problems while working on machinery.

Some items of plant and equipment may have safety-critical features where deterioration would cause a risk. You must have arrangements in place to make sure the necessary inspections take place.

Clean and Check

- Release any stored energy, such as compressed air or hydraulic pressure that could cause the machine to move or cycle
- Support parts of plant that could fall, eg support the blades of down-stroking bale cutters and guillotines with blocks
- Allow components that operate at high temperatures time to cool
- Place mobile plant in neutral gear, apply the brake and chock the wheels
- Safely clean out vessels containing flammable solids, liquids, gases or dusts, and check them before hot work is carried out to prevent explosions. You may need specialist help and advice to do this safely
- Avoid entering tanks and vessels where possible. This can be very high-risk work. If required, get specialist help to ensure adequate precautions are taken
- Clean and check vessels containing toxic materials before work starts

Dos and don’ts of plant and equipment maintenance

Do...

- Ensure maintenance is carried out by a competent person (someone who has the necessary skills, knowledge and experience to carry out the work safely)
- Maintain plant and equipment regularly – use the manufacturer’s maintenance instructions as a guide, particularly if there are safety-critical features
- Have a procedure that allows workers to report damaged or faulty equipment
- Provide the proper tools for the maintenance person
- Schedule maintenance to minimise the risk to other workers and the maintenance person wherever possible
- make sure maintenance is done safely, that machines and moving parts are isolated or locked and that flammable/explosive/toxic materials are dealt with properly

Don’t…

- Ignore maintenance
- Ignore reports of damaged or unsafe equipment

- Use faulty or damaged equipment

Dos and don’ts of machinery safety for workers

Do…

- Check the machine is well maintained and fit to be used, ie appropriate for the job and working properly and that all the safety measures are in place – guards, isolators, locking mechanisms, emergency off switches etc
- Use the machine properly and in accordance with the manufacturer’s instructions
- Make sure you are wearing the appropriate protective clothing and equipment required for that machine, such as safety glasses, hearing protection and safety shoes

Don’t…

- Use a machine or appliance that has a danger sign or tag attached to it. Danger signs should only be removed by an authorised person who is satisfied that the machine or process is now safe
- Wear dangling chains, loose clothing, rings or have loose, long hair that could get caught up in moving parts
- Distract people who are using machines
- Remove any safeguards, even if their presence seems to make the job more difficult

Self-Check -3	Written Test

Instructions: Answer all the questions listed below.

Direction 1: write appropriate answers to the following questions on the provided answer sheet. Illustrations may be necessary to aid some explanations/answers.

1. Diiscuss dos and don’ts of tools, equipments and machineries? (10points)
2. What is advantages of applying 3R’s for environmental sustainability? (5 points)

Direction2 choice

Choose the letter of the correct answer and write on the answer sheet provided

1. One of the following is recognized as not to be done (don't…..) in maintenance procedure? (1 point)

   A. Ignore maintenance
   B. Maintenance by skilled person
   C. Scheduled maintenance
   D. Safely maintaining

2. Hazard occurs in _____? (1 point)

   A. Unexpectedly starting up machines
   B. Tool breakage during use
   C. Contact with materials that are normally enclosed within the machine
   D. All are answers

Note: **Satisfactory rating – 9 points** **Unsatisfactory - below 9 points**

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

Answer Sheet

Score = _____

Rating: _____

Name: _____ **Date: _____**

Short Answer Questions

1._____

Choice

1. _____

2. _____

List of Reference Materials

1. https://en.wikipedia.org/wiki/Recycling
2. https://www.cips.org/Documents/About%20CIPS/Develop%20Waste%20v3%20-%2020.11.07.pdf