



Ministry of Health
National Malaria Control Centre

June 2009



IRS Spray Operator Training Manual

Indoor Residual Spraying

05



Ministry of Health
National Malaria Control Centre



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1.0 Introduction

1.1 Scope

Through the National Malaria Control Centre (NMCC), the Ministry of Health (MOH) has identified Indoor Residual Spraying (IRS) with DDT and other insecticides, as recommended by the World Health Organization (WHO), as a central intervention in their fight against malaria. IRS, according to the WHO, is a proven and effective way to control the malaria vector and substantially curtail malaria transmission, morbidity, and mortality as long as it is implemented well. A requisite for such successful implementation is well trained and motivated IRS spray operators. To this end, this manual has been developed for those involved in the training of spray operators, such as district managers and others intending to implement IRS, in Zambia.

“IRS, according to the WHO, is a proven and effective way to control the malaria vector and substantially curtail malaria transmission, morbidity, and mortality as long as it is implemented well.”

1.2 Purpose

This manual is intended as a guide for trainers at both national and district level, such as district managers, supervisors, and others intending to implement IRS, to ensure the quality and standardization of all IRS spray operator trainings in Zambia.

2.0 Training Overview

2.1 Contents

The training outlined in this document covers general, theoretical, and practical IRS knowledge. It is 21 days long and should follow the schedule included at the end of this document. At the conclusion of the training, trainees should know the vision and goals of the Malaria Control Programme, the reasons vector control is a means of combating malaria, IRS practical skills, the theory behind IRS practical skills, and strategies for various real work situations. Some of the specific training areas and activities are:

- (a) Preparing the sprayer
- (b) Handling and transporting the sprayer
- (c) Spraying with water
- (d) Sprayer pressurization
- (e) Spray pattern and spray swathes
- (f) Spray rhythms
- (g) Care and cleaning of the sprayer
- (h) First test: knowledge of theory, methods, and procedures
- (i) Spraying in difficult situations
- (j) Insecticide handling and safety
- (k) Preparation of insecticides
- (l) Site preparation
- (m) Communication skills
- (n) Final test: hands-on troubleshooting and spraying

These, and others, are detailed below. It must be emphasized that trainers should be directly and actively involved during the entire training and follow the schedule provided at the end of this document strictly.

2.2 Goal

The training should equip trainee spray

operators with the necessary knowledge to implement quality IRS services.

“The training should give trainee spray operators the capacity to conduct safe and correct IRS ”

2.3 Objectives

The training should give trainee spray operators the capacity to conduct safe and correct IRS. By the end of the training, they should be able to:

- (a) Recount general knowledge about malaria and IRS
- (b) Recount general knowledge about the Malaria Control Programme in Zambia
- (c) Handle, use, and dispose of IRS insecticides safely
- (d) Handle, use, and maintain IRS equipment
- (e) Spray insecticides using proper technique
- (f) Sensitize households and prepare houses for spraying
- (g) Complete daily report forms accurately

2.4 Methodology

The training should incorporate a variety of interactive teaching methods such as:

- (a) Small group work
- (b) Demonstration
- (c) Role play
- (d) Practical drills
- (e) Brainstorming
- (f) Discussion
- (g) Pre and post tests (use score chart)
- (h) Post evaluation

2.5 Required Equipment

- (a) IRS Spray Operator Training

- Manual (this document)
- (b) WHO recommended 15 L pneumatic sprayer (at least 5, no more than 10)
- (c) Bucket and strainer for each trainee
- (d) Toolkit for each team of trainees that includes a pair of 6-inch pliers, an 8-inch adjustable wrench, and screw drivers
- (e) Sufficient portable water to fill each sprayer at least twice
- (f) At least two different food colours (for spray pattern demonstrations)
- (g) Prepared solid practice wall at least 2 m in height
- (h) Stopwatch
- (i) Tape measure
- (j) Ball of building line
- (k) 50 cm straight stick
- (l) Practice obstacles, e.g. chairs, boxes, pictures
- (m) Measuring cylinder
- (n) Teaching aids (documents outlining processes and procedures)
- (o) Handouts
- (p) 10 x 2 m white calico sheets

3.0 Training: Theory and Procedure

3.1 Introduction to IRS

The Trainee should be informed of the vision and goals of the Malaria Control Programme in Zambia. Furthermore the trainee should be given basic knowledge concerning IRS and vector control and up-to-date evidence supporting its efficacy. The following should be covered:

- (a) Definition of IRS
- (b) Objectives of IRS
- (c) Indicators of IRS
- (d) Expected outcomes when implemented appropriately

3.2 Insecticides and Safety

Trainers should go through and explain each of the various types of insecticides used for IRS and the risk they pose to spray operators, households, and the environment if not properly used. They should also emphasize the importance of proper insecticide storage and accountability. In addition, trainees need to have basic knowledge of the following:

3.2.1 Insecticide Management Safety

- (a) Introduction to types of insecticides
- (b) Mixing and handling of insecticides
- (c) Insecticide storage and field accountability
- (d) Insecticide transportation

3.2.2 Spray Operator Safety

- (a) Potential harm in case of accident
- (b) Importance of all Personal Protective Equipment (PPE)
- (c) Modes of insecticide exposure: dermal, mouth, and lungs
- (d) Measures taken to mitigate harm when exposed

3.2.3 Household Safety

- (a) Preparation of houses for spraying
- (b) Removal of pets and domestic animals during spraying
- (c) Removal and coverage of food and water
- (d) Procedures followed after spraying

3.2.4 Environmental Safety

Trainers should refer to the Guidelines for the Safe, Lawful,

and Environmentally Sound Management of IRS Insecticides and the IRS Manual for Zambia for further details:

- (a) Modes of transportation
- (b) Modes of disposal
- (c) Procedures followed during spraying
- (d) Measures taken to mitigate harm in case of contamination

3.3 Public Relations

Trainees should be trained on how to communicate with households. They are required to be courteous and patient and should ensure that each household understands the programme. Trainees need to have basic knowledge of how to communicate the following to households:

- (a) The reasons for their visit
- (b) The importance of spraying
- (c) The steps that will be taken to prepare the house for spraying
- (d) What to expect after spraying
- (e) The “Dos and Don’ts” for the household after spraying
- (f) The time to wait before entering the house after spraying (the walls should be completely dry and the rooms aerated)

3.4 Field Forms

Trainees are expected to already have a basic education that enables them to read and write well enough to properly fill in IRS forms. After training, they should know how to:

- (a) Gather accurate information
- (b) Complete forms correctly
- (c) Submit forms to team leaders or supervisors at the end of each work day

4.0 Training: Practical Skills

4.1 Overview

The exercises below are designed to teach trainees to how to operate the spray pump and how to maintain a proper spray pattern and rhythm to achieve proper insecticide deposition. Trainers should remember the check for the following throughout all the exercises:

- (a) Sprayers should be filled with water at all times so that trainees get used carrying full sprayers
- (b) Trainees should agitate the sprayers at regular 15 – 20 minute intervals (explain that this keeps the insecticide suspended in the water)

4.2 Spraying Swathes

4.2.1 Training Wall Preparation

The wall used for practice should be prepared before hand by trainings. It should be vertical, smooth (preferably plastered), and at least 2 m high and 10 m long. It should be divided visually into vertical sections each 75 cm wide. Within each section, a dotted line should run vertically 5 cm from in from its end. The centre of each section should be marked with an arrow; each arrow should indicate the proper path of each successive swathe of insecticide intended to cover each section of



wall. Starting from the left, the arrows should alternate pointing, first, down, then up, then down again, and so on until the end of the wall.

4.2.2 Exercise

For each practical exercise, between 5 and 10 spray pumps should be used. An equal number of trainees, in rotation, should practice spraying following the prepared pattern.

4.3 Spray Pump Maintenance

After the training, trainees should be able to:

- (a) Inspect spray pumps to see whether they

- (b) were cleaned after their previous use
- (b) Explain the importance of maintaining clean and dry pumps
- (c) Demonstrate the proper cleaning procedure with clean, uncontaminated water
- (d) Explain the importance of keeping pumps in good, working condition at all times

4.4 Filling the Spray Pump

Trainers should demonstrate how to properly fill a spray pump and then have trainees follow suit on their pumps and compare results.

After the training, trainees should be able to explain the importance of correct dilution and fill sprayers accurately to the correct 10 L level.

4.5 Carrying and Handling the Spray Pump

Trainers should show how trainees should carry spray pumps, explain why, and give the dangers of not doing so.

They should show trainees how to adjust their shoulder straps for comfort and emphasize that they should never carry their pumps using the cover handles, or anything for that matter, apart from the shoulder straps.

Trainees should learn that when not spraying, they should carry their spray pumps on their backs because it is less tiring.

When spraying, however, they should carry their spray pumps under left shoulders because then:

- (a) The pressure gauge can be easily checked
- (b) The pump can be easily handled in a low or narrow room
- (c) The pump will not interfere with protective headgear
- (d) The pump can be easily unloaded and re-pressurized

4.6 Nozzle Discharge Rate and Nozzle Wear

Trainers should show trainees how to calibrate spray pumps, demonstrating on nozzles with variable discharge rates due to variable wear and tear.

Using five spray pumps in total, they should:

- (a) Replace the nozzle of one spray pump with a new 8002 nozzle
- (b) Pressurize the pumps to 40 psi and spray each for 30 seconds into different measuring cylinders

- (c) Compare the volumes collected in each cylinder filled by the various nozzles amongst themselves; the new nozzle should have discharged 380 ml (for a new 8001 nozzle, the volume of the discharge should be 190 ml)
- (d) Compare these volumes against those found on the standardized chart
- (e) Replace nozzles that are too worn (discharge volume 10% over normal)
- (f) Explain that the discharge of a nozzle increases as it gets worn out and decreases if it is blocked

4.7 Pressure and the Operation of the Sprayer

Trainers should explain how each of the following work:

- (a) Aircushion
- (b) Pressure gauge
- (c) Discharge of liquid
- (d) Pressure release valve (pressure of regulator)

Trainers should then teach trainees that they should:

- (a) Pressurize the spray pump by pumping with full, even strokes from top to bottom (short, irregular strokes are less efficient so more would be required)
- (b) Never pump the plunger more than 55 full strokes if the tank is $\frac{3}{4}$ full
- (c) Always release the pressure when the sprayer is not in use especially if it standing in a warm place or being transported to and from a spray site

4.8 Maintaining Operational Pressure

Trainers should follow these steps to teach



trainers how to maintain operational pressure:

- (a) Fill 5 sprayers to 10 L and pressurize them as follows:

	Pressure	Expected Discharge
Sprayer 1	10 psi	230 ml
Sprayer 2	20 psi	320 ml
Sprayer 3	25 psi	325 ml
Sprayer 4	40 psi	360-380 ml
Sprayer 5	55 psi	400-450 ml

- (b) Spray each for 30 seconds into a different measuring cylinder
- (c) Compare the volumes discharged from each
- (d) Spray swathes from each on a practice wall and observe,

- (e) compare, and contrast each swathe's width and appearance
- (e) Explain the importance of maintaining correct pressure

4.9 Effects of Pressure and Volume in the Spray Pump

Trainers should follow the steps below to demonstrate that as the aircushion inside the sprayer grows (that is, the level of the liquid drops), more pumping is required to pressurize the sprayer to a certain level.

However, the pressure then lasts longer:

- (a) Fill five sprayers to 10 L and pressurize them to 55 psi
- (b) At the practice wall, with the lance in middle position, operate the

sprayers in turn until their pressure gauges register 25 psi (note the time in seconds it takes for the pressure to drop from 55 psi to 25 psi and calculate the rate)

- (c) Open them and note the level of the liquid inside (also, calculate the volume discharged and the size of the aircushion)
- (d) Re-pressurize and repeat several times, comparing the volumes and times collected each time

Due to this phenomenon, pressure cannot be accurately estimated.

Trainers should emphasize to trainees that they should depend solely on the pressure gauge to gauge pressure.

Alternatively, trainers can also follow these steps and demonstrate the same:

- (a) Fill two sprayers, one with 10 L of liquid and the other with 5 L
- (b) Count and compare the number of strokes needed to pressurize each to 55 psi
- (c) Note and compare the time taken for each sprayer's pressure to drop to 25 psi

4.10 Nozzle Distance from Sprayed Surface

Trainers should demonstrate the following spraying skills and trainees should practice them until trainees can consistently keep an even distance from the wall while spraying smoothly:

- (a) Pressurize the spray pump to 40 psi
- (b) With the nozzle 30 cm from the wall, spray a narrow swathe
- (c) With the nozzle 1 m from the wall, spray a wide swathe
- (d) Attach a 45 cm wooden extension rod to the sprayer and spray at

middle, upper, and lower positions all while maintaining the 45 cm distance

4.11 Speed and Rhythm of Spraying

Trainees should be able to spray at a rate of 2.5 seconds per swathe metre (put another way, they should complete a 2 m swathe every 5 seconds). They should practice by counting seconds out loud—one thousand one, one thousand two, one thousand three—up to five both while spraying 2 m swathes themselves and while observing fellow trainees do the same. Trainees should continue practicing until a sense of timing is achieved and observed by Trainers. Optionally, one or two swathes on the practice wall could be marked at 3 m in height; while spraying these, trainees should observe a 7.5 second count.

“... they should complete a 2 m swathe every 5 seconds...”

4.12 Successive Swathes

To practice spraying successive swathes, 5 trainees should space themselves 3 swathes apart on the practice wall and ready their spray lances in the middle position. After spraying one swathe trainees should move sideways to centre of next swathe and spray it as well. This side step should be sufficient to position the trainee at the centre of the second swathe.

4.13 Spraying With Water

Combining all skills learned, trainees should practice taking 1 minute to spray 10.7 swathes of wall (an equivalent of 15 m²). Trainers should observe and time them.

5.0 Training: Obstacles to Spraying and Special Cases

5.1 Overview

All potential mosquito resting sites in houses need to be sprayed even when obstructed. Trainers should explain the need for such thorough coverage and go over many of the special or difficult situations detailed below to better prepare trainees for what they may encounter in the field.

“All potential mosquito resting sites in houses need to be sprayed even when obstructed ”

5.2 Difficult to Reach Areas

Trainees should know that:

- (a) Obstacles, such as chairs, boxes, or any sort of wood, placed along the wall should be sprayed; they should not impede progress or break the normal spraying rhythm.
- (b) They will sometimes need to adopt difficult stances in order to reach the wall while still maintaining distance and speed.

5.3 Pictures and Calendars

There are two types of pictures and calendars: one that is fixed on all four corners and another that simply hangs. Trainees should know that for fixed pictures and calendars they should just spray over the top, whereas for hanging pictures and calendars, they should lift

and spray both the underside of the picture or calendar and the wall behind it.

5.4 Large Furniture and Other Objects Difficult to Move from the Wall

Trainers should explain the importance of spraying the backs of furniture and other objects that rest against the wall as well as the wall behind them. These are resting sites. Trainees should know that to spray in this situation they need to reduce the distance between their nozzle and the spraying surface. They need to spray in concentrated narrow swathes, which, to achieve correct deposition, requires greater speed and an increase in the number of swathes.

5.5 Tables, Desks, and Beds

To spray surfaces low to the ground, trainees should know that the sprayer should be placed on the floor and that it may be necessary for them to lie or kneel down in order to spray. Trainees should practice spraying the undersides of beds, tables, etc. until they can consistently obtain a uniform deposit on such surfaces.

5.6 Boxes, Bottles, and Other Movable Objects against the Wall

Since it is not known which side of a movable object will be in contact with the wall, a trainee should know that all sides of such an object should be sprayed along with the wall behind it. Also, boxes, cupboards, and other objects that open should be sprayed both inside and outside.

5.7 Ceilings and Roofs

For ceilings and roofs, even those that are not horizontal, trainees should know



IRS training in full Personal Protective Equipment

that:

- (a) Ceilings and roofs should be sprayed only after all walls are sprayed (swathes should not be continuous between wall and ceiling or roof)
- (b) The same speed, timing, and distance of spraying should be maintained, if possible, for walls, ceilings, and roofs
- (c) Horizontal beams should be sprayed last
- (d) Spray fallout should be avoided

5.8 Doors and Windows

Trainees should know that if a door or window opens inwards, both its inside and outside surfaces need to be sprayed. If it opens outwards, however, only its inside surface needs to be sprayed.

6.0 Training: Other Topics

6.1 Leftover Spray Pump Contents

Trainers should emphasize that all leftover spray pump contents need to be dealt with in one of the following three ways:

- (a) Placed in a tank and reused as the first refill on the following day
- (b) Poured into evaporation tanks bit by bit until evaporated completely
- (c) Sprayed indoors in other eligible structures

6.2 Infield and Refresher Trainings

At the end of their training, trainees

should practice spraying real structures in the field similar to those that they would encounter as a spray operator. Trainers must be present to supervise, give advice, and correct mistakes.

Refresher trainings should be carried out every year prior to the annual spray programme.

7.0 Evaluation

7.1 Practical Test Checklist

Trainers should use the checklist below to evaluate trainees during both practice wall and infield tests. For both tests, they should have trainees do the following:

- (a) Fill their spray pumps to 10 L and pressurize them
- (b) Perform 3 consecutive sprayings, each in no less than 58 seconds and no more than 62, of 10.7 swathes 2 m in height

As they work, trainers should check and note the following (mark out of 10):

	YES	NO
1. Was the sprayer filled correctly? (i.e. to 10L)	<input type="checkbox"/>	<input type="checkbox"/>
2. Was the correct pressure applied to start?	<input type="checkbox"/>	<input type="checkbox"/>
3. Did the trainee agitate the sprayer before spraying?	<input type="checkbox"/>	<input type="checkbox"/>
4. Did the trainee address the wall correctly (i.e. lance and midline)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Did the trainee check the pressure gauge frequently?	<input type="checkbox"/>	<input type="checkbox"/>
6. Did the trainee take proper steps from swathe to swathe?	<input type="checkbox"/>	<input type="checkbox"/>
7. Was the pressure maintained within the operational limits?	<input type="checkbox"/>	<input type="checkbox"/>
8. Was the correct distance maintained (45 cm)?	<input type="checkbox"/>	<input type="checkbox"/>
9. Did the trainee take between 58 and 62 seconds to cover 10.7 swathes (judge two best times)?	<input type="checkbox"/>	<input type="checkbox"/>

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Specifications for Pesticides in Public Health: Insecticides, Molluscides, Repellents, Methods. 6th ed. World Health Organization, Geneva. 1985.

Manual for Indoor Residual Spraying Application of Residual Sprays for Vector Control. World Health Organization Communicable Disease Control and Eradication WHO Pesticide Evaluation Scheme. 2000.3

Vector Control Methods for Use by Individuals and Communities. Prepared by Jan A. Rozendaal. World Health Organization, Geneva. 1997.

Global Insecticide Use for Vector-Borne Disease Control. Prepared by Dr. M. Zaim. World Health Organization. 2002.2

Annex

i. Training Schedule



WEEK ONE

DAY ONE

TOPICS

Prestesting , General Information on IRS

1. Pretest
2. Vision , Goals & General Information on Malaria in Zambia

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Pretesting 2. Vision, Goals & General Information on Malaria in Zambia	0:30 hrs 1:30 hrs		Subtopics: 1. Vision , Goals & General Information on Malaria in Zambia	2 hrs		Subtopics: 1. Introduction to IRS 2. General information on IRS	1:30 hrs		Summary of Day's Presentations	0:30 hrs

DAY TWO

TOPICS

Theoretical Aspects of Insecticides

- 1.Safe Use of Insecticides
- 2.Safety to Spray Operators

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Safe Use of Insecticides	2 hrs		Subtopics: 1. Safety to Spray Operators	2 hrs		Subtopics: 1. Safety to Households 4.Safety to Environment	1:30 hrs		Summary of Day's Presentation	0:30 hrs

DAY THREE

TOPICS

Pump Handling and Repair

1. Introduction to the Pump
- 2.Handling & Cleaning the Spray Pump
- 3.Carrying the Spray Pump

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Introduction to the Pump 2. Handling & Cleaning the Spray Pump	2 hrs		Subtopics: 1. Carrying the Pump 2. Stripping and Assembling the Spray Pump	2 hrs		Subtopics: 1. Stripping and Assembling the Spray Pump 2. Servicing the Spray Pump 3.Repairing the Spray Pump	1:30 hrs		Summary of Day's Presentations	0:30 hrs

WEEK ONE

DAY FOUR

TOPICS

Spraying Techniques

1. Introduction Spraying Techniques
2. Introduction to Practice Wall

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Introduction to Spraying Techniques	2 hrs		Subtopics: 1. Introduction to Practice Wall	2 hrs		Subtopics: 1. Spraying Practice without Water 2. Spraying Practice without Water with Sticks	1:30 hrs		Summary of Day's Presentations	0:30 hrs

Subtopics:

3. Spraying Practice without Water
4. Spraying Practice without Water with Sticks

DAY FIVE

TOPICS

Calibration

1. Calibration of Pump

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Calibration of Pump	2 hrs		Subtopics: 1. Calibration of Pump	2 hrs		Subtopics: 1. Practice with Water	1:30 hrs		Summary of Day's Presentations	0:30 hrs

Subtopics:

2. Practice with Water

DAY SIX

TOPICS

Practice on the Wall

1. Practice on the Wall
2. Stripping and Assembling the Spray Pump

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the wall	2 hrs		Subtopics: 1. Stripping and Assembling the Spray Pump 2. Servicing the Spray Pump	1:30 hrs		Summary of Day's Presentations	0:30 hrs

Subtopics:

3. Servicing the Spray Pump

DAY SEVEN**TOPICS****Practice on the Wall**

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

WEEK TWO**DAY EIGHT****TOPICS****Practice on the Wall**

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

DAY EIGHT**TOPICS****Practice on the Wall**

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

DAY NINE**TOPICS****Practice on the Wall**

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

WEEK TWO

DAY TEN

TOPICS

Practice on the Wall

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

DAY ELEVEN

TOPICS

Practice on the Wall

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

DAY TWELVE

TOPICS

Practice on the Wall

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

DAY THIRTEEN

TOPICS

Practice on the Wall

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

DAY FOURTEEN**TOPICS****Practice on the Wall**

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs	Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

DAY FIFTEEN**TOPICS****Practice on the Wall**

1. Practice on the Wall

Subtopics:

MORNING	HOURS ALLOCATED	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Practice on the Wall	2 hrs	Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Work	0:30 hrs

DAY SIXTEEN**TOPICS****Filling in Forms & Practice on the Wall**

1. Filling in Field Forms

Subtopics:
2. Practice on the Wall

MORNING	HOURS ALLOCATED	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics 1. Filling in Field Forms	2 hrs	Subtopics 1. Filling in Field Forms	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Presentations	0:30 hrs

DAY SEVENTEEN**TOPICS****Filling in Forms & Practice on the Wall**

1. Filling in Forms

Subtopics:
2. Practice on the Wall

MORNING	HOURS ALLOCATED	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics 1. Filling in Forms	2 hrs	Subtopics: 1. Practice on the Wall	2 hrs		Subtopics: 1. Practice on the Wall	1:30 hrs		Summary of Day's Presentation	0:30 hrs

WEEK THREE

WEEK THREE

DAY EIGHTEEN

TOPICS

Public Relations & Obstacle Spraying

1. Public Relations

Subtopics:

2. Obstacles & Hard to Reach Spraying

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Public Relations	2 hrs		Subtopics: 1. Public Relations	2 hrs		Subtopics: 1. Obstacles & Hard to Reach Spraying	1:30 hrs		Summary of Day's Presentations	0:30 hrs

DAY NINETEEN

TOPICS

Public Relations & Obstacle Spraying

1. Public Relations

Subtopics:

2. Obstacles & Hard to Reach Spraying

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Public Relations	2 hrs		Subtopics: 1. Public Relations	2 hrs		Subtopics: 1. Obstacles & Hard to Reach Spraying	1:30 hrs		Summary of Day's Presentations	0:30 hrs

DAY TWENTY

TOPICS

Field Experience of Spray Operators

1. Field Experience

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Field Experience	2 hrs		Subtopics: 1. Field Experience	2 hrs		Subtopics: 1. Field Experience	1:30 hrs		Summary of Day's Work	0:30 hrs

DAY TWENTY ONE

TOPICS

Evaluation of Spray Operators

1. Evaluation of Spray Operators

Subtopics:

MORNING	HOURS ALLOCATED	BREAK	MORNING	HOURS ALLOCATED	LUNCH	AFTERNOON	HOURS ALLOCATED	BREAK	AFTERNOON	HOURS ALLOCATED
Subtopics: 1. Evaluation of Spray Operators	2 hrs		Subtopics: 1. Evaluation of Spray Operators	2 hrs		Subtopics: 1. Post-test 2. Summary of Training Course	0:30 hrs 1:30 hrs		End of Training	0:30 hrs

POST-TEST AND EVALUATION

