

Appendix 5: Water sources - sanitary risk inspection and water sample collection form

Enumerator's name: _____	Date of interview: ___ / ___ / ___ (dd/mm/yy)
Time: _____	

Q1a. In which village is the water source located? (*Choose from drop down list*)

Q1b. Local name of the water source (*Choose local name and unique Id of the water source from drop down list*)

Q1c. If 'OTHER', Provide the name of the village where the water source is located and the local name of the water source and take GPS coordinates for water source.

Q1d. Local name of water source (*Write the local name and type of the water source only if its NOT on the list provided (e.g Alesi River)*)

Take photograph of source (with GPS-enabled camera), avoiding photographing people. Please try to fit all of the water source and some surroundings into the photo.

Q2. Are you going to take a water sample and observe hazards at this source, or just observe hazards without taking a sample?

Take water sample and observe hazards

Observe hazards only

Q3. Have you previously been to this source before during this sampling round, because it is also used by another household apart from the one you just visited?

Y/N

If Y then end data collection if source has already been visited during this round of data collection (because you should already have collected this information). Otherwise continue with remaining observations / questions.

Q4 Is it possible to take a water sample from this source?

YES

NO

If Yes, skip to Q6

Q5. If no, reason why sample cannot be taken:

SOURCE NOT FUNCTIONING / NO WATER PROVIDED

PERMISSION NOT GRANTED TO SAMPLE FROM SOURCE

NOT SAFE TO APPROACH SOURCE

OTHER – SPECIFY: _____

Q6. Take sample and record sample ID number on sample bottle: _____

Q7. Look at the sample of water and tick all observations that you see

COLOURED WATER
CLOUDY WATER
FLOATING / SUSPENDED PARTICLES
CLEAR WATER

Water temperature-----
Water PH-----
Conductivity(μS)-----
Turbidity (NTU)-----

Q8: Has it rained in the past week (including today)?

Y/N

If NO, skip to Q10

Q9. When did it rain (select all that apply):

TODAY
YESTERDAY
EARLIER THIS WEEK

Q10. What type of source is this? *See picture guide for help on identifying each type of source (W1, W2..W12 labels are used on pictures).*

W1. PIPED WATER – INTO DWELLING
W2. PIPED TO YARD OR PLOT
W3. PUBLIC TAP OR STANDPIPE
W4. TUBEWELL OR BOREHOLE
W5.- PROTECTED WELL /
W6.– UNPROTECTED WELL /
W7.– PROTECTED SPRING
W7A.– UNPROTECTED SPRING (*i.e. springs without protection like box or concrete walls shown in protected spring pictures*)
W8. RAINWATER
W9. BOTTLED WATER
W11. TANKER TRUCK
W10. CART WITH SMALL TANK
W12A– FREE-FLOWING RIVER OR STREAM -
W12B- STAGNANT WATER IN DAM, POND OR LAKE
W12C– CANAL OR IRRIGATION CHANNEL
W13. WATER KIOSK
W14. MIXED RAINWATER AND PIPED SYSTEM
W15. BURST PIPES

W16. UNPROTECTED SPRING FEEDING WATERPAN/DAM

OTHER: SPECIFY _____

Q11. Source of piped water

UTILITY

BOREHOLE

LAKEWATER SYSTEM

DON'T KNOW

Q12A. Can you get water from this source now?

YES

NO

DON'T KNOW *If no,*

Q12b. For how long have people been unable to get water from this source?

DAYS

WEEKS

DON'T KNOW

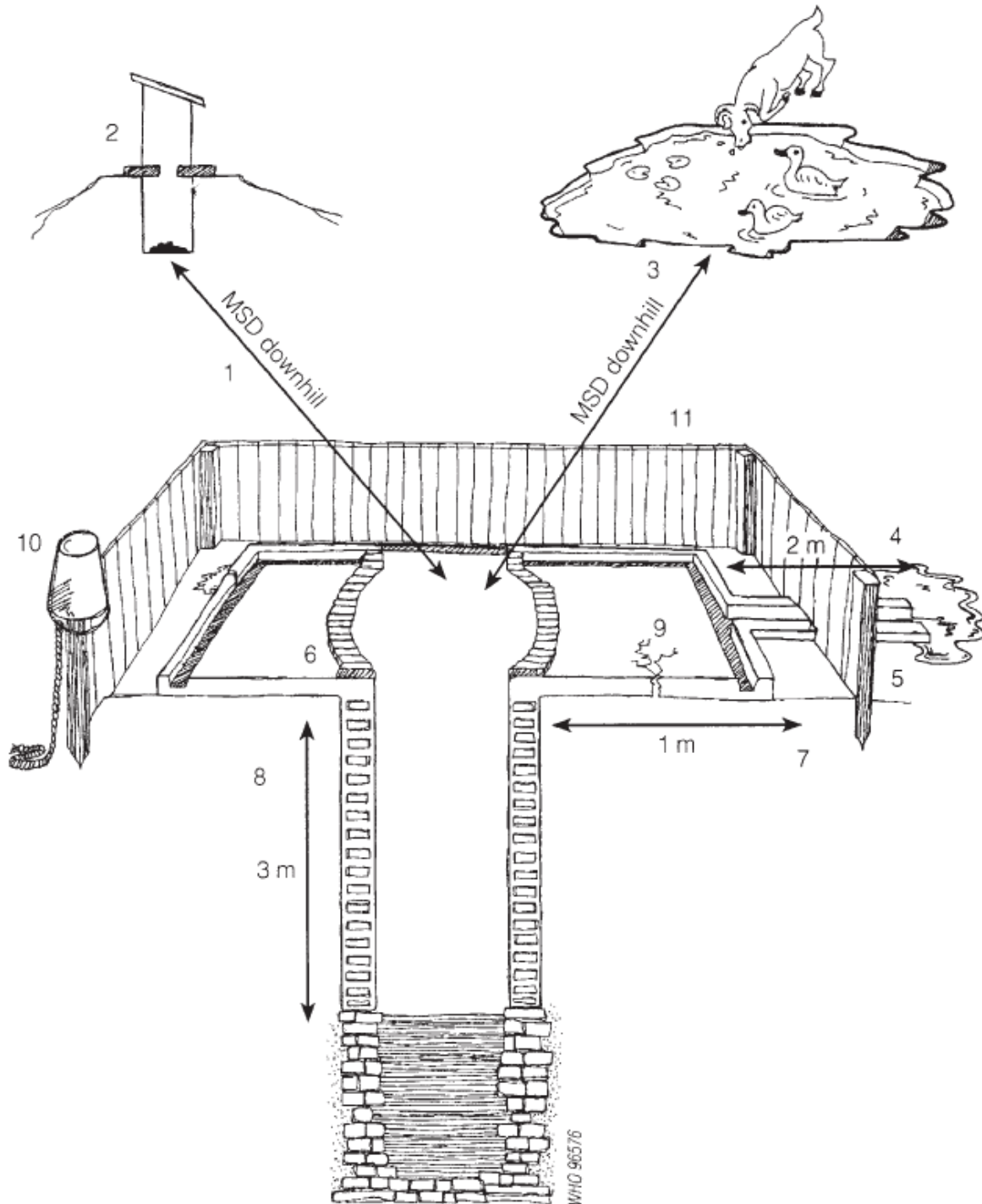
Q12c. If days/weeks:

NUMBER OF DAYS UNAVAILABLE

NUMBER OF WEEKS UNAVAILABLE

Now move to the sanitary risk inspection form for the source type you are looking at. If you recorded this source as 'other', use the sanitary risk inspection form for the water source type that is most similar to the one you are looking at. Note that the numbers shown next to each observation question indicate what to look for on the diagram.

W6. Unprotected Well Sanitary Risk Inspection:



Observe if the following are present (see diagram above):

A. Is there a latrine in the vicinity of the well? [Diagram: 2]

Y/N

If No, skip B and C and go on to D.

B. Approximately how far away is the nearest latrine from this well? _____ metres [Diagram 1]

C. Is the nearest latrine? [Diagram 1]

ON HIGHER GROUND THAN THE WELL
ON LOWER GROUND THAN THE WELL
AT ABOUT THE SAME LEVEL AS THE WELL

D. Is there any of the following sources of contamination in the vicinity of the well? Tick all sources of contamination that you observe. [Diagram 3]

ANIMAL EXCRETA
HUMAN FAECES
GARBAGE
CEMETERY / ANIMAL BURIAL SITE
ANIMAL SLAUGHTER AREA
NONE

If none are observed, skip E and F and move to G.

E. Approximately how far away is the nearest of these contamination sources? ____ metres [Diagram 3]

F. Is the nearest contamination source.....? [Diagram 3]

ON HIGHER GROUND THAN THE WELL
ON LOWER GROUND THAN THE WELL
AT ABOUT THE SAME LEVEL AS THE WELL

G. Is the drainage poor, causing stagnant water within 2 m of the well? [Diagram 4]

Y/N

H. Is there a drainage channel for this well? [Diagram 5]

Y/N

If no, skip I and move to J.

I. Is the drainage channel broken, permitting ponding? [Diagram 5]

Y/N

J. Is there a low wall (parapet) around the well? [Diagram 6]

Y/N

If no, skip K and move to L.

K. Is the wall (parapet) around the well inadequate (e.g. too low or with gaps), allowing surface water to enter the well? [Diagram 6]

Y/N

L. Is there a concrete floor around the well? [Diagram 7]

Y/N

If no, skip M & N and move to O.

M. Is the concrete floor less than 1m wide around the well? [Diagram 7]

Y/N

N. Are there any cracks in the concrete floor around the well which could permit water to enter the well? [Diagram 9]

Y/N

O. Are the walls of the well inadequately sealed at any point for 3m below ground? [Diagram 8]

YES

NO

DON'T KNOW – CANNOT SEE

P. Is there a rope and bucket for taking water from this well? [Diagram 10]

Y/N

If no, skip the next 2 questions.

Q. Are there signs of dirt on the rope and bucket?

Y/N

R. How is the rope and bucket stored after use? [Diagram 10]

LEFT ON GROUND

LEFT INSIDE THE WELL

TIED AND LEFT ON THE OUTSIDE OF THE WELL

TAKEN AWAY

S. Does the installation have a wall or fencing that keeps out animals? *If it has a wall fencing, but the wall or fencing is poorly maintained with gaps that animals can enter through, choose 'no'.* [Diagram 11]

Y/N

T. Are there signs (e.g. footprints, animal droppings, feathers, or animals present when you visit the source) that animals have been within 3m of the well? *Tick all that apply.*

FOOTPRINTS

ANIMAL DROPPINGS

FEATHERS

ANIMALS PRESENT AT SOURCE DURING VISIT

NONE

Measure the depth of the well (i.e. distance from ground surface to top of water):

U. Well depth: _____ m

If No, skip B and C and go on to D.

B. Approximately how far away is the nearest latrine from this well? _____ metres [Diagram 1]

C. Is the nearest latrine? [Diagram 1]

ON HIGHER GROUND THAN THE WELL
ON LOWER GROUND THAN THE WELL
AT ABOUT THE SAME LEVEL AS THE WELL

D. Are there any of the following sources of contamination (e.g. animal excreta, human faeces, garbage, and cemeteries or animal burial site) in the vicinity of the well? Tick all sources of contamination that you observe. [Diagram 3]

ANIMAL EXCRETA
HUMAN FAECES
GARBAGE
CEMETERY / ANIMAL BURIAL SITE
ANIMAL SLAUGHTER AREA
NONE

If none are observed, skip E and F and move to G.

E. Approximately how far away is the nearest of these contamination sources? _____ metres [Diagram 3]

F. Is the nearest contamination source.....? [Diagram 3]

ON HIGHER GROUND THAN THE WELL
ON LOWER GROUND THAN THE WELL
AT ABOUT THE SAME LEVEL AS THE WELL

G. Is the drainage poor, causing stagnant water within 2m of the cement floor of the hand-pump? [Diagram 4]

Y/N

H. Is there a drainage channel for this well? [Diagram 5]

Y/N

If no, skip Q8 and move to Q9.

I. Is the drainage channel broken, permitting ponding? [Diagram 5]

Y/N

J. Is there a wall or fencing around the hand-pump to keep animals out? *If it has fencing, but the fencing is poorly maintained with gaps that animals can enter through, choose 'no'. [Diagram 6]*

Y/N

K. Are there signs (e.g. footprints, animal droppings or animals present when you visit the source) that animals have been within 3m of the well? *Tick all that apply.*

FOOTPRINTS

ANIMAL DROPPINGS

FEATHERS

ANIMALS PRESENT AT SOURCE DURING VISIT

NONE

L. Is there a concrete floor around the well? [Diagram 7]

Y/N

If no, skip M to O and move to P

M. Is the concrete floor less than 1m wide all around the hand-pump? [Diagram 7]

Y/N

N. Is there any ponding on the concrete floor around the hand-pump? [Diagram 8]

Y/N

O. Are there any cracks in the concrete floor around the hand-pump which could permit water to enter the hand-pump? [Diagram 9]

Y/N

P. Is the hand-pump loose at the point of attachment to the base so that water could enter the casing? [Diagram 10]

Y/N

Q. Was the cover of the well in place when you arrived and does it fit properly on the well opening? *Answer no unless it was fitted onto the well when you arrived and does fit properly without gaps on the well opening. [Diagram 11]*

Y/N

R. Are the walls of the well inadequately sealed at any point for 3m below ground level? [Diagram 12]

YES

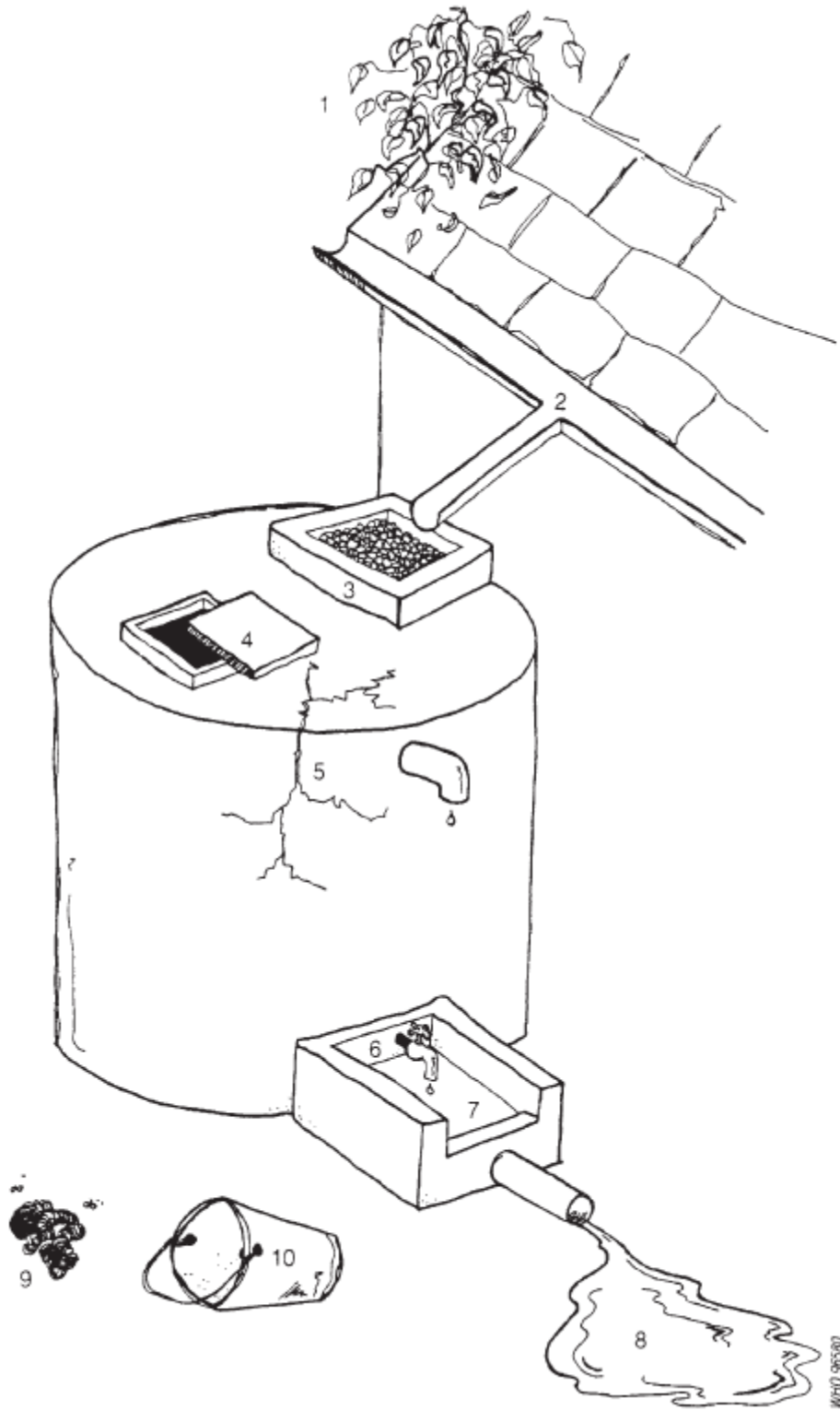
NO

DON'T KNOW – CANNOT SEE

S. Measure the depth of the well (i.e. distance from ground surface to top of water):

Well depth: _____ *m*

W8. Rainwater Sanitary Risk Inspection:



Observe if the following are present (see diagram above):

A. Can you see any risks of contamination on the roof catchment area? Tick all that you can see.

[Diagram 1]

Y/N

IF NO, then skip Question B and move to Question C.

B. Select the risks you can see.

BIRDS / BIRD DROPPINGS

PLANTS / LEAVES

OVERHANGING BRANCHES

OTHER – SPECIFY: _____

C. Are the guttering channels that collect water dirty or filled with debris such as leaves? [Diagram 2]

YES

NO

DON'T KNOW – CANNOT SEE

D. Is there a moveable inlet pipe from the gutter to the tank?

YES

NO

DON'T KNOW – CANNOT SEE

E. Is there a filter box or a sieve at the tank inlet? [Diagram 3]

YES

NO

DON'T KNOW – CANNOT SEE

If NO or DON'T KNOW, skip the next question.

F. What can you see in the tank inlet? [Diagram 3]

FINE GRAVEL

COARSE STONES / GRAVEL

DEBRIS / LEAVES / DIRT

SIEVE

OTHER SPECIFY: _____

G. Is there any other point of entry to the tank that is not properly covered? For example, is it completely uncovered? Are there any other openings at the top of the tank? [Diagram 4]

YES

NO

DON'T KNOW – CANNOT SEE

H. Is there any defect in the walls or top of the tank (e.g. cracks) that could let water in? [Diagram 5]

Y/N

I. Is there a depression on top of the tank that would allow ponding?

Y/N

J. Does the tank have a tap? [Diagram 6]

Y/N

Don't know- cannot see

If no, skip the next question.

K. Is the tap defective or leaking? [Diagram 6]

Y/N

L. Is there a concrete floor under the tap or place where water is collected? [Diagram 7]

Y/N

If no, skip the next question.

M. Is the concrete floor? Tick all that apply. [Diagram 7]

CRACKED

BROKEN

DIRTY

N. Is the water collection area inadequately drained? For example, are there pools of water there? [Diagram 8]

Y/N

O. Is there a particular bucket or other container used to fetch water? [Diagram 9]

Y/N

If no, skip the next two questions.

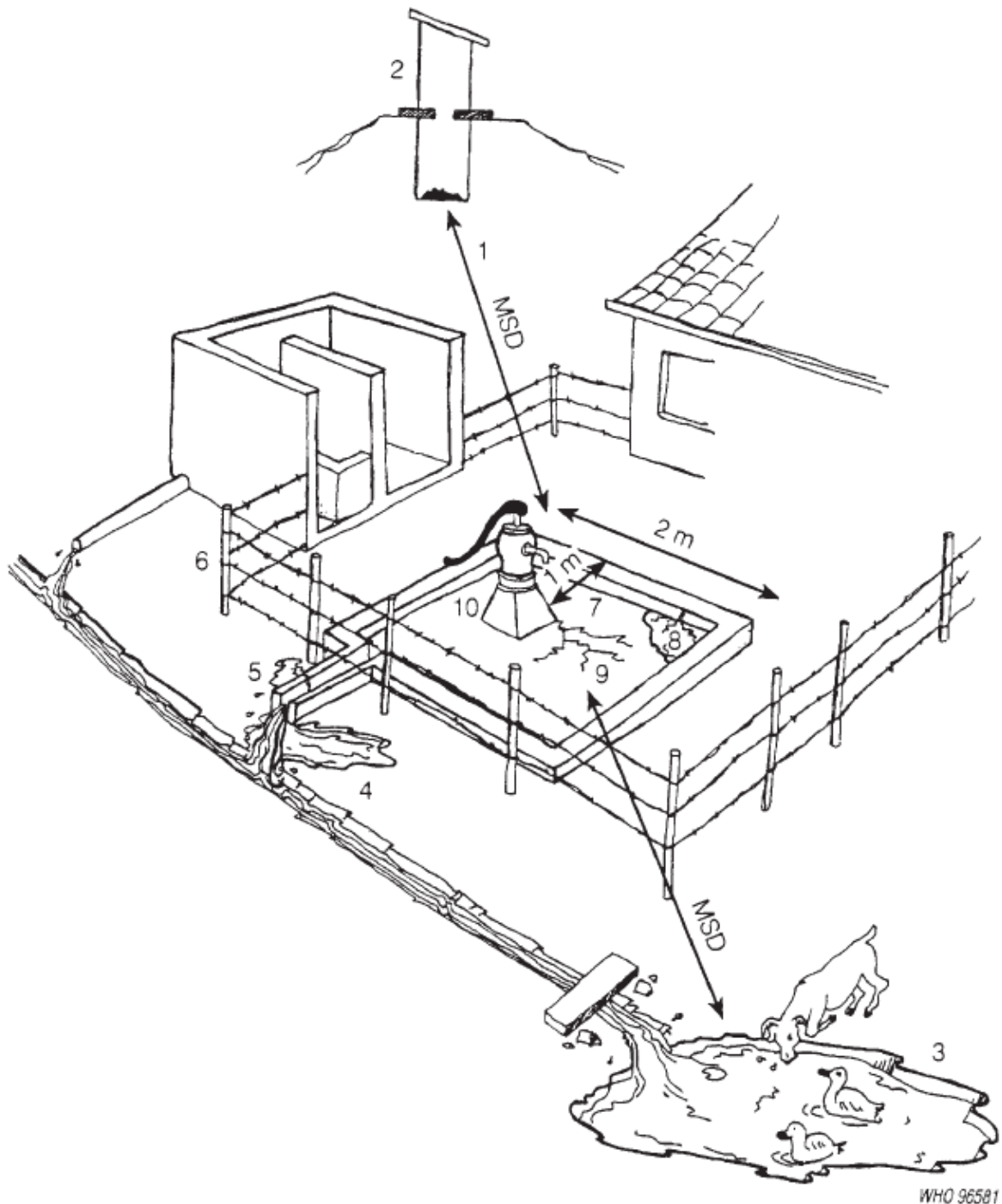
P. Is the bucket or other container left on the ground? [Diagram 10]

Y/N

Q. Does the bucket or container look dirty? [Diagram 10]

Y/N

W4. Tubewell or Borehole Sanitary Risk Inspection:



Observe if the following are present (see diagram above):

A. Is there a latrine in the vicinity of the hand-pump? [Diagram 2]

Y/N

If No, skip B and C and go on to D.

B. Approximately how far away is the nearest latrine from this borehole? _____ metres [Diagram 1]

C. Is the nearest latrine...? [Diagram 1]

ON HIGHER GROUND THAN THE BOREHOLE

ON LOWER GROUND THAN THE BOREHOLE

AT ABOUT THE SAME LEVEL AS THE BOREHOLE

D. Are there any of the following sources of contamination (e.g. animal excreta, human faeces, garbage, and cemeteries or animal burial site) in the vicinity of the borehole? Tick all sources of contamination that you observe. [Diagram 3]

ANIMAL EXCRETA

HUMAN FAECES

GARBAGE

CEMETERY / ANIMAL BURIAL SITE

ANIMAL SLAUGHTER AREA

If none are observed, skip E and F and move to G.

E. Approximately how far away is the nearest of these contamination sources? _____ metres [Diagram 3]

F. Is the nearest contamination source.....? [Diagram 3]

ON HIGHER GROUND THAN THE WELL

ON LOWER GROUND THAN THE WELL

AT ABOUT THE SAME LEVEL AS THE WELL

G. Is the drainage poor, causing stagnant water within 2m of the hand-pump? [Diagram 4]

Y/N

H. Is there a drainage channel for this borehole? [Diagram 5]

Y/N

If no, skip next question.

I. Is the drainage channel broken, permitting ponding? [Diagram 5]

Y/N

J. Does the installation have a wall or fencing that keeps out animals? *If it has a wall fencing, but the wall or fencing is poorly maintained with gaps that animals can enter through, choose ‘no’.*
[Diagram 6]

Y/N

K. Are there signs (e.g. footprints, animal droppings or animals present when you visit the source) that animals have been within 3m of the borehole? *Tick all that apply.*

FOOTPRINTS

ANIMAL DROPPINGS

FEATHERS

ANIMALS PRESENT AT SOURCE DURING VISIT

L. Is there a concrete floor around the borehole? [Diagram 7]

Y/N

If no, skip M to O and move to P

M. Is the concrete floor less than 1m wide all around the hand-pump? [Diagram 7]

Y/N

N. Is there any ponding on the concrete floor around the hand-pump? [Diagram 8]

Y/N

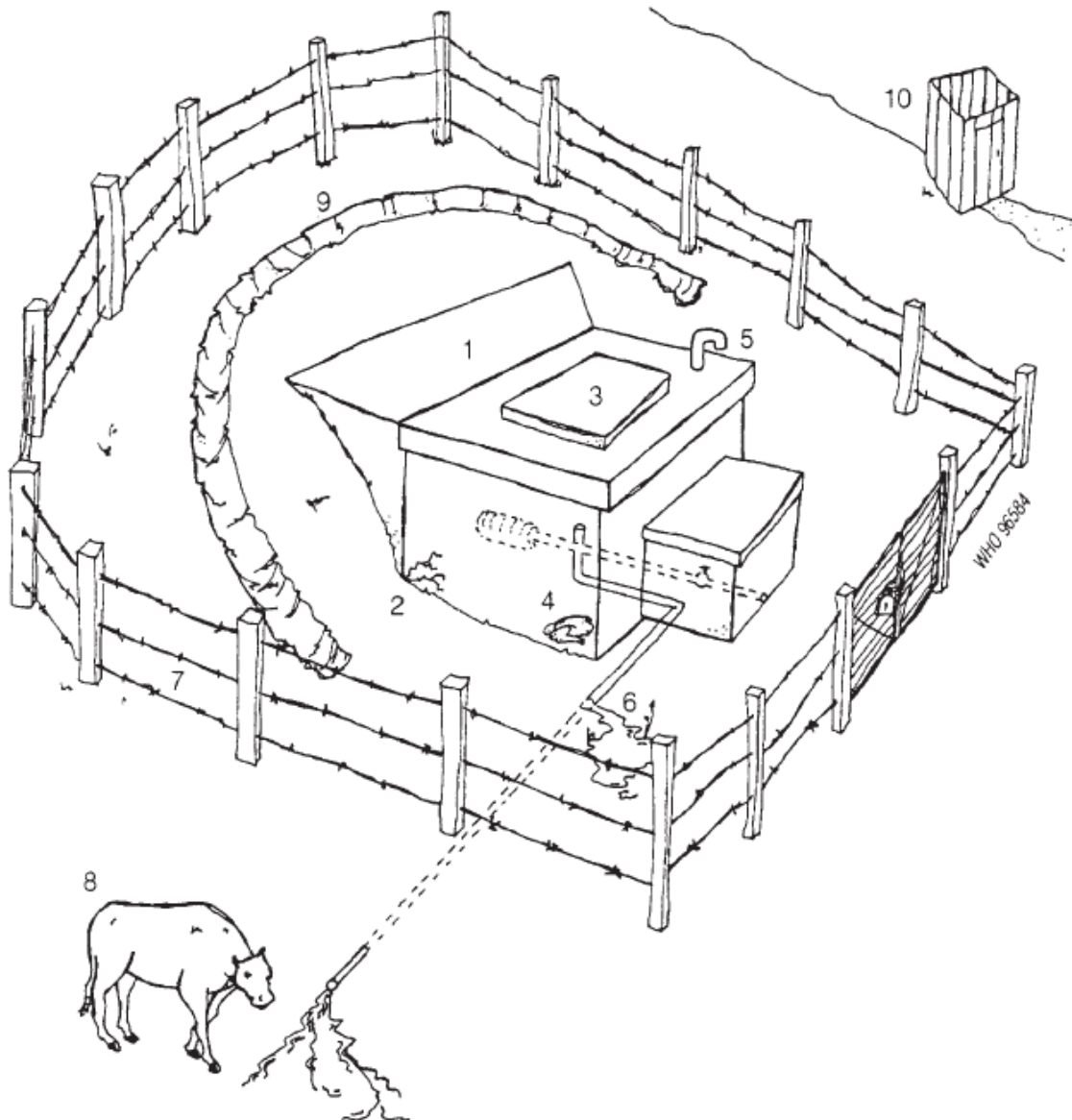
O. Are there any cracks in the concrete floor around the hand-pump which could permit water to enter the borehole? [Diagram 9]

Y/N

P. Is the hand-pump loose at the point of attachment to the base so that water could enter the casing?

Y/N

W7 or W7A. Protected or Unprotected Spring Sanitary Risk Inspection:



Observe if the following are present (see diagram above):

A. Is the spring source protected by masonry or concrete wall or spring box? [Diagram 1]

MASONRY / CONCRETE WALL

SPRING BOX

NEITHER

If NEITHER, skip to Question I. If MASONRY / CONCRETE WALL, skip to Question F.

B. Is the spring box, masonry or wall protecting the spring source faulty? i.e. Is it cracked or broken? Are there gaps at the bottom where it meets the ground? [Diagram 2]

Y/N

C. If there is a spring box, does it have an inspection cover? [Diagram 3]

Y/N

If no, skip the next question.

D. Was the cover to the spring box in place when you arrived and does it fit properly? Only tick YES if it fits AND was in place when you arrived. [Diagram 3]

Y/N

E. Open up the cover to the spring box. Does the spring box contain any of the following hazards? Tick all that you observe [Diagram 4]

SILT

ANIMAL DROPPINGS

OTHER DEBRIS

CANNOT OBSERVE

F1. Is there is an air vent in the masonry?

Y/N

If No, then skip the next question and jump to question G.

F2. Is it unsanitary (e.g. could contaminants enter through it)? [Diagram 5]

Y/N

G. Does the spring box, masonry or wall have an overflow pipe? [Diagram 6]

Y/N

If no, skip the next question.

H. Is the overflow pipe broken? [Diagram 6]

Y/N

I. Is there a wall or fencing around the spring to keep animals out? If it has fencing, but the fencing is poorly maintained with gaps that animals can enter through, choose ‘no’. [Diagram 7]

Y/N

J. Are there signs that animals have been within 3m of the spring source? [tick all that you can see; Diagram 8]

FOOTPRINTS

ANIMAL DROPPINGS

FEATHERS

ANIMALS PRESENT AT SOURCE DURING VISIT

K. Is there a water diversion ditch above the spring?[Diagram 9]

Y/N

If no, skip the next question.

L. Is the water diversion ditch in poor condition, for example blocked or with collapsed sides? [Diagram 9]

Y/N

M. Is there a latrine in the vicinity of the spring? [Diagram 10]

Y/N

If No, skip the next two questions.

N. Approximately how far away is the nearest latrine from this well? _____ metres [Diagram 10]

O. Is the nearest latrine? [Diagram 10]

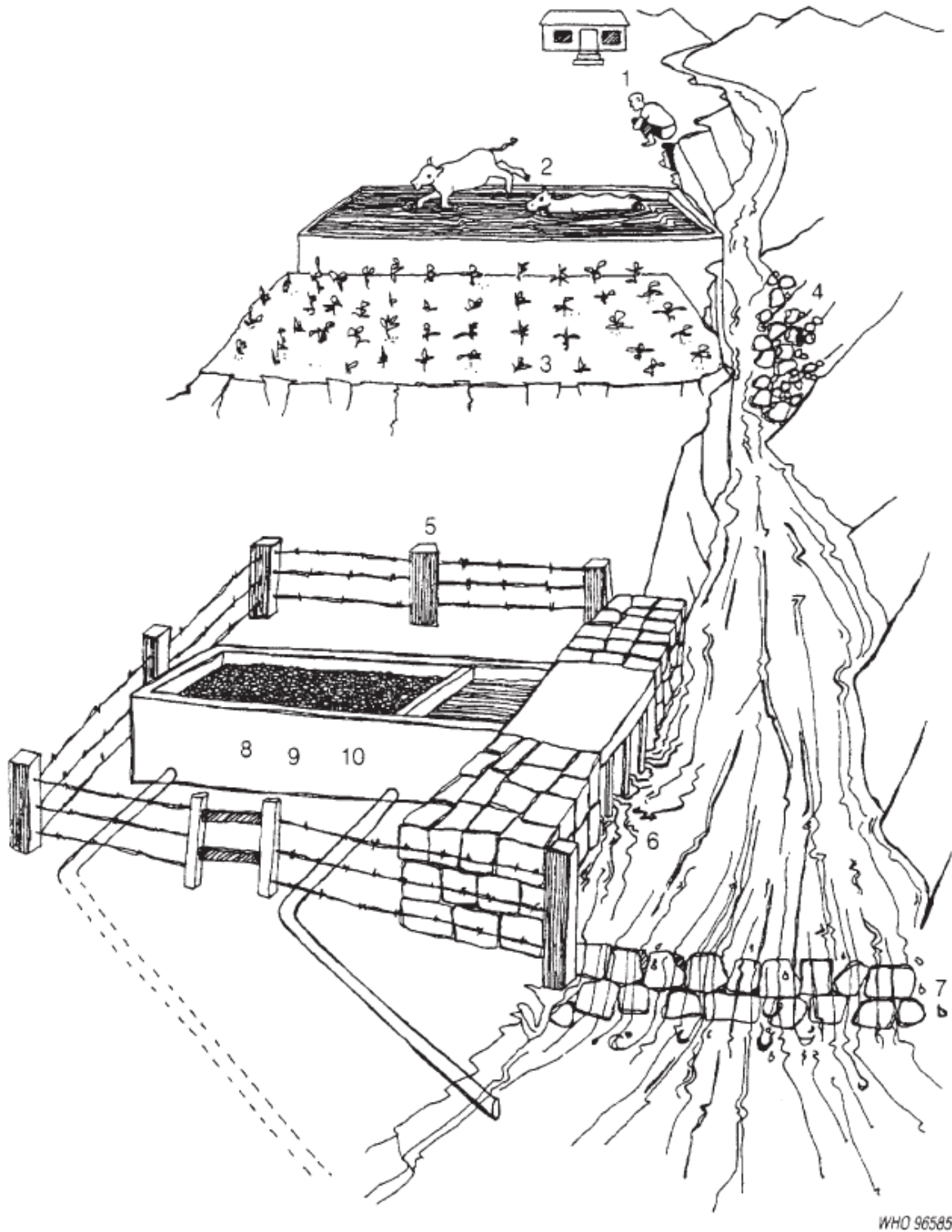
ON HIGHER GROUND THAN THE WELL

ON LOWER GROUND THAN THE WELL

AT ABOUT THE SAME LEVEL AS THE WELL

:

W12A, W12B OR W12C: Surface Water Source Sanitary Risk Inspection:



Observe if the following are present (see diagram above):

A. Does the place where people fetch water have: (choose one option)

FAST-FLOWING WATER

SLOW FLOWING WATER

STAGNANT WATER

B. Is there any human habitation visible upstream or uphill of where people collect water?

[Diagram 1]

Y/N

If No, skip the next question

C. Approximately how far away (in metres) is the nearest upstream or uphill human habitation?

[Diagram 1]

Distance: _____ metres

D. Are any latrines visible upstream or uphill of where people collect water?

Y/N

If No, skip the next question

E. Approximately how far away is the nearest upstream or uphill latrine?

Distance: _____ metres

F. Are there any places where garbage is lying upstream or uphill of where people collect water?

Y/N

If No, skip the next question

G. Approximately how far away (in metres) is the nearest upstream or uphill garbage?

Distance: _____ metres

H. Are there any cemeteries upstream or uphill of where people collect water?

Y/N

If No, skip the next question

I. Approximately how far away (in metres) is the nearest upstream or uphill cemetery?

Distance: _____ metres

J. Are there any farm animals kept upstream or uphill of where people fetch water? [Diagram 2]

Y/N

If No, skip the next question

K. Approximately how far away (in metres) is the nearest upstream or uphill place where animals are kept? [Diagram 2]

Distance: _____ metres

L. Is there any crop production upstream or uphill of where people collect water? [Diagram 3]

Y/N

If No, skip the next question

M Approximately how far away (in metres) is the nearest upstream or uphill field of crops? [Diagram 3]

Distance: _____ metres

N. Is there a wall or fencing around the place where people fetch water to keep animals out? *If it has fencing, but the fencing is poorly maintained with gaps that animals can enter through, choose ‘no’.* [Diagram 5]

Y/N

O. Are there signs (e.g. footprints, animal droppings or animals present when you visit the source) that animals have been within 3m of the place where people fetch water? *Tick all that apply.*

FOOTPRINTS

ANIMAL DROPPINGS

FEATHERS

ANIMALS PRESENT AT SOURCE DURING VISIT

P. Does the abstraction point have a minimum-head device (i.e. a weir or dam to ensure minimum head of water)? [Diagram 7]

Y/N

Q. Is there an intake installation at the place where people fetch water? [Diagram 6]

Y/N

If No, skip the next two questions.

R. Is the intake unscreened? *i.e. is there no metal grill or similar to stop debris entering?* [Diagram 6]

Y/N

If no, skip the remaining two questions.

S. Does the intake installation system have a sand or gravel filter? [Diagram 8]

Y/N

If no, skip the next question.

T. Is the flow uncontrolled (i.e. there is no flow or very fast flow)? [Diagram 10]

Y/N