

## Personal Protective Equipment for Culling Operation

### 1. Personal Protective Equipment (PPE)

- Protective clothing, preferably impermeable coverall or disposable impermeable gowns with long cuffed sleeves
- Disposable cap
- Eye protection (preferably full face shields)
- N95 respirator or surgical mask
- Heavy duty rubber gloves (surgical gloves may be used together as inner gloves)
- Rubber boots

Personnel Protective clothing	Outside the culling area <sup>1</sup> with physical separation from the culling area	Inside the culling area, where culling operation is conducted
Impermeable coverall or disposable impermeable gowns with long cuffed sleeves		✓
Disposable cap		✓
Eye protection <sup>2</sup>		✓
N95 respirator <sup>3</sup> or surgical mask	Surgical masks	✓
Surgical gloves		optional <sup>4</sup>
Heavy duty rubber gloves		✓
Rubber boots		✓

<sup>1</sup> Risk of acquired infection is relative low outside culling area. Put on surgical mask as minimal PPE. In case of contact with contaminated environment/ personnel; use other PPE (e.g. gloves and gown) based on risk assessment.

<sup>2</sup> Face shield is recommended to provide full facial protection.

<sup>3</sup> N95 respirator masks are preferred. Standard well-fitted surgical masks should be used if N95 respirators are not available. [http://www.who.int/csr/disease/avian\\_influenza/guidelines/Avian%20Influenza.pdf](http://www.who.int/csr/disease/avian_influenza/guidelines/Avian%20Influenza.pdf)

<sup>4</sup> Optional to use as inner gloves, but have to remove with heavy duty rubber gloves at the same time

## 2. Donning Procedures

Donning procedures are in the following order -

### 2.1 For those who wear impermeable coverall (Appendix 2a):

- Perform hand hygiene (As Appendix 1)
- Put on N95 respirator or surgical mask
- Put on impermeable coverall
- Put on eye protection
- Put on disposable cap
- Put on rubber boots
- Perform hand hygiene
- Put on surgical gloves (optional) and heavy duty rubber gloves

### 2.2 For those who wear disposable impermeable gown with long cuffed sleeves (Appendix 2b):

- Perform hand hygiene (As Appendix 1)
- Put on N95 respirator or surgical mask
- Put on eye protection
- Put on disposable cap
- Put on disposable impermeable gowns with long cuffed sleeves
- Put on rubber boots
- Perform hand hygiene
- Put on surgical gloves (optional) and heavy duty rubber gloves

After donning on the above mentioned PPE, it is important to ensure the culling workers are protected against heat stress during the field operation. Therefore, in addition to a suitable work-rest cycle with adequate supply of drinkable water, other appropriate means, for example, putting on the cooling vest, should also be considered for controlling the risk of heat stress on the workers concerned.

### 3. Post Operation Decontamination

After culling operation, the outer surface of the PPE and the soles of the boots (body parts that may have been contaminated should be disinfected too) should be initially decontaminated<sup>5</sup> by using 500 ppm bleach spray\* before entering into the enclosed de-gowning area for don off procedures.

\*500 ppm bleach solution can be prepared by adding 1 part of 5.25% household bleach in 99 parts of water or using product containing chlorine such as Presept tablet dissolved in water with proper dilution as indicated in the product insert. ***As spraying of household bleach may cause droplets carrying viruses to be air-borne, it is advisable that workers performing this procedure should wear gowns, gloves, N95 respirators and eye protection.***

### 4. Doffing Procedures

Doffing procedures are in the following order–

#### 4.1 For those who wear impermeable coverall (Appendix 3a):

- Remove all gloves (heavy duty rubber and surgical gloves)
- Perform hand hygiene
- Remove disposable cap, and remove eye protection
- Perform hand hygiene
- Remove impermeable coverall and rubber boots
- Perform hand hygiene
- Remove N95 respirator or surgical mask
- Perform hand hygiene
- Put on surgical mask

#### 4.2 For those who wear disposable impermeable gown with long cuffed sleeves (Appendix 3b):

- Remove all gloves (heavy duty rubber and surgical gloves)
- Perform hand hygiene
- Remove disposable impermeable gown with long cuffed sleeves
- Perform hand hygiene
- Remove disposable cap and eye protection
- Perform hand hygiene
- Remove N95 respirator or surgical mask
- Take off rubber boots
- Perform hand hygiene
- Put on surgical mask

Put the impermeable coveralls /disposable impermeable gowns with long cuffed sleeves, disposable caps, surgical masks, N95 respirators, surgical gloves and disposable eye protection into refusal bags and spray with 1 part of 5.25% household bleach in 49 parts of water/ treat them with chloride of lime. Tie up the bags with plastic straps and put them properly into refusal bins. ***As spraying of household bleach may cause droplets carrying viruses to be air-borne, it is advisable that workers performing this procedure should wear gowns, gloves, N95 respirators and eye protection.*** Used rubber boots and goggles should be immersed in 1 part of 5.25% household bleach in 49 parts of water for 10 minutes and rinse with clean water afterwards. Dry and store properly for future use.

Staff (included those who perform decontamination procedure) should take a thorough shower, change clothes and put on new surgical masks before leaving the scene.

<sup>5</sup> [http://www.who.int/csr/resources/publications/surveillance/CDS\\_EPR\\_ARO\\_2006\\_1.pdf](http://www.who.int/csr/resources/publications/surveillance/CDS_EPR_ARO_2006_1.pdf)

## 屠雞行動工作人員的個人防護裝備

### 1. 個人防護裝備 (PPE):

- 保護衣 (最好用全身防水保護衣或即棄防水長袖保護袍)
- 即棄頭套
- 護眼用具 (最好用全面罩)
- N95 呼吸器或外科口罩
- 厚膠手套 (可先戴上外科手套為內層保護)
- 膠水靴

工作人員 保護衣物	場外人仕 <sup>1</sup> 而身體不 會接觸到屠雞行動 的工作區域	屠雞行動進行期間 在工作區域的人仕
全身防水保護衣或即棄防水長袖保護袍		✓
即棄頭套		✓
護眼用具 <sup>2</sup>		✓
N95 呼吸器 <sup>3</sup> 或外科口罩	外科口罩	✓
外科手套		選擇性 <sup>4</sup>
厚膠手套		✓
膠水靴		✓

<sup>1</sup> 在屠雞行動的工作區域外，受感染的機會相對較低，戴上外科口罩是最基本個人防護裝備。若要接觸被污染的環境/人仕，要因應相對風險戴上手套和穿上保護衣。

<sup>2</sup> 最好用全面罩。

<sup>3</sup> 最好使用N95呼吸器。若沒有N95呼吸器的情況下，可改用標準外科口罩。

[http://www.who.int/csr/disease/avian\\_influenza/guidelines/Avian%20Influenza.pdf](http://www.who.int/csr/disease/avian_influenza/guidelines/Avian%20Influenza.pdf)

<sup>4</sup> 可選擇性先戴上外科手套才戴重工用膠手套，但緊記要在完工時將所有手套脫下。

## 2. 穿上／佩戴保護衣物之次序：

工作人員須依照以下次序穿上／佩戴保護衣物：

### 2.1 穿著全身防水保護衣的人仕 (附錄 2a)

- 進行手部衛生(洗手或以酒精搓手液潔手)
- 戴上 N95 呼吸器或外科口罩
- 穿上全身防水保護衣
- 戴上護眼用具
- 戴上即棄頭套
- 穿上膠水靴
- 進行手部衛生
- 戴上外科手套(選擇性)和厚膠手套

### 2.2 穿著即棄防水長袖保護袍的人仕 (附錄 2b)

- 進行手部衛生(洗手或以酒精搓手液潔手)
- 戴上 N95 呼吸器或外科口罩
- 戴上護眼用具
- 戴上即棄頭套
- 穿上即棄防水長袖保護袍
- 穿上膠水靴
- 進行手部衛生
- 戴上外科手套(選擇性)和厚膠手套

重要事項：要確保屠雞行動的工作人員於穿上整套個人防護裝備後不會受暑熱壓力的影響。因此，在行動中可採取適切的工作輪替、提供充裕的飲用水及其他合理可行的措施(可考慮使用降溫衣)。

### 3. 屠雞行動後之淨化步驟：

屠雞行動完成後，脫除個人防護裝備前要進行淨化<sup>5</sup>。在個人防護裝備和一雙膠水靴(任何身體部份有機會被污染的也需進行淨化)的外層噴上 500ppm漂白水\*進行初步的消毒，然後才進入指定的卸衣區進行脫除個人防護裝備的程序。

\*500ppm 漂白水可用一份 5.25%家用漂白水加 99 份清水稀釋或使用含氯產品如漂白丸(Presept)，並依指引加以稀釋溶解。*在噴霧式淨化過程中，帶有病毒的飛沫有可能在空氣中傳播。因此，協助淨化過程的工作人員建議穿上保護袍、戴手套，N95 呼吸器和護眼用具。*

### 4. 脫除個人防護裝備的程序:

脫除個人防護裝備的程序如下：

#### 4.1 脫除全身防水保護衣的人仕 (附錄 3a)

- 脫下所有手套 (重工用膠手套和外科手套)
- 進行手部衛生(附錄 1)
- 脫下即棄頭套和護眼用具
- 進行手部衛生
- 脫下全身防水保護衣和膠水靴
- 進行手部衛生
- 脫下外科口罩或 N95 呼吸器
- 進行手部衛生
- 戴上外科口罩

#### 4.2 脫除即棄防水長袖保護袍的人仕 (附錄 3b)

- 脫下所有手套 (重工用膠手套和外科手套)
- 進行手部衛生 (附錄 1)
- 脫下即棄防水長袖保護袍
- 進行手部衛生
- 脫下即棄頭套和護眼用具
- 進行手部衛生
- 脫下外科口罩或 N95 呼吸器
- 脫下膠水靴
- 進行手部衛生
- 戴上外科口罩

將全身防水保護衣、即棄防水長袖保護袍、頭套、外科口罩、N95 呼吸器、外科手套和即棄護眼用具放入垃圾袋內，並噴上以一份 5.25%家用漂白水加四十九份清水稀釋之消毒液/灑上消毒粉。用膠帶把袋口綁緊再妥善棄置於垃圾桶內。*在噴霧式淨化過程中，帶有病毒的飛沫有可能在空氣中傳播。因此，協助淨化過程的工作人員建議穿上保護袍、戴手套，N95 呼吸器和護眼用具。*把使用過的膠水靴及護眼罩浸入以一份 5.25%家用漂白水加四十九份清水稀釋之消毒液內十分鐘，然後以清水沖洗，待乾後妥為收存。留待日後再用。

工作人員(包括協助淨化過程的工作人員)應作全身淋浴，換上乾淨的衣服，戴上新外科口罩才離開工作場地。

<sup>5</sup> [http://www.who.int/csr/resources/publications/surveillance/CDS\\_EPR\\_ARO\\_2006\\_1.pdf](http://www.who.int/csr/resources/publications/surveillance/CDS_EPR_ARO_2006_1.pdf)

# Hand Hygiene

## Steps for Hand Hygiene

### a) Handwashing with soap and water:

1. Wet hands under running water.
2. Apply liquid soap and rub hands together to make a soapy lather.
3. Away from the running water, rub the palms, back of hands, between fingers, back of fingers, thumbs, finger tips and wrists. Do this for at least 20 seconds.
4. Rinse hands thoroughly under running water.
5. Dry hands thoroughly with either a clean cotton towel, a paper towel, or a hand dryer.
6. The cleaned hands should not touch the water tap directly again.
  - The tap may be turned off by using the towel wrapping the faucet; or
  - after splashing water to clean the faucet.

### b) Use of alcohol-based handrub

Apply a palmful of alcohol-based handrub and cover all surfaces of the hands. Rub the palms, back of hands, between fingers, back of fingers, thumbs, finger tips and wrists for at least 20 seconds until the hands are dry. The picture below demonstrates the 7 steps in the use of alcohol-based handrub.



# 手部衛生

正確潔手步驟：

甲) 用梘液洗手, 程序如下:

1. 開水喉洗濯雙手。
2. 加入梘液，用手擦出泡沫。
3. 最少用二十秒時間揉擦手掌、手背、指隙、指背、拇指、指尖及手腕，揉擦時切勿沖水。
4. 洗擦後才用清水將雙手徹底沖洗乾淨。
5. 用乾淨毛巾或抹手紙徹底抹乾雙手，或用乾手機將雙手吹乾。
6. 雙手洗乾淨後，不要再直接觸摸水龍頭
  - 可先用抹手紙包裹著水龍頭，才把水龍頭關上；或
  - 潑水將水龍頭沖洗乾淨。

乙) 用酒精搓手液消毒雙手

把足夠份量的酒精搓手液倒於掌心，然後揉擦手掌、手背、指隙、指背、拇指、指尖及手腕，各處至少20 秒直至雙手乾透。請參照下圖用酒精搓手液潔手的技巧。





## The procedure of donning disposable impermeable gown with long cuffed sleeves

### 穿上個人防護裝備 (即棄防水長袖保護袍)次序



1

Perform hand hygiene  
進行手部衛生



2

Put on N95 respirator or surgical mask  
戴上 N95 呼吸器  
或外科口罩



3

Put on eye protector  
戴上護眼用具

Put on disposable caps  
戴上即棄頭套



4

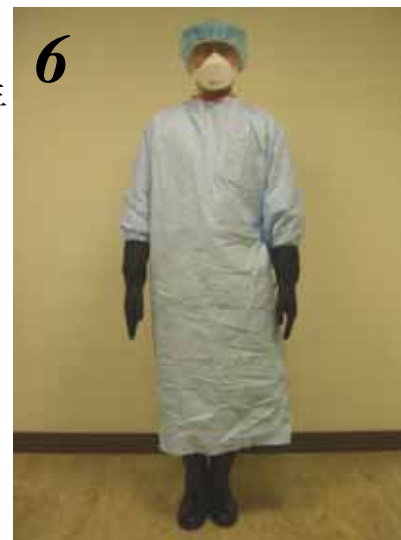
Put on disposable impermeable gowns with long cuffed sleeves.  
穿上即棄防水長袖保護袍

Put on rubber boots  
穿上膠水靴



5

Perform hand hygiene  
進行手部衛生



6

Put on surgical gloves (optional) and heavy duty rubber gloves  
戴上外科手套(選擇性)和厚膠手套

## The procedure of donning impermeable coverall

### 穿上個人防護裝備 (全身防水保護衣)次序



**1**

Perform hand hygiene  
進行手部衛生



**2**

Put on N95 respirator or surgical mask  
戴上 N95 呼吸器  
或外科口罩



**3**

Put on impermeable coverall  
穿上全身防水保護衣



**4**

Put on eye protection  
戴上護眼用具

Put on disposable cap  
戴上即棄頭套



**5**

Put on rubber boots  
穿上膠水靴



**6**

Perform hand hygiene  
進行手部衛生



**7**

Put on surgical gloves (optional) and heavy duty rubber gloves  
戴上外科手套(選擇性)和厚膠手套

# The procedure of doffing impermeable gown with long cuffed sleeves

## 脫下個人防護裝備 (即棄防水長袖保護袍) 次序



Remove all gloves  
脫下所有手套



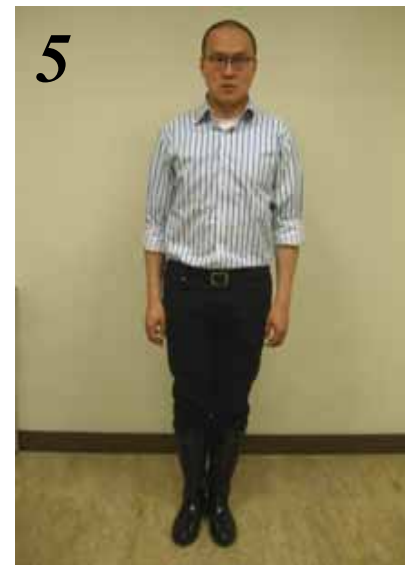
Remove disposable impermeable gown with long cuffed sleeves  
脫下即棄防水長袖保護衣



Remove disposable cap and eye protection  
脫下即棄頭套和護眼用具



Remove N95 respirator or surgical mask  
脫下 N95 呼吸器或外科



Take off rubber boots  
脫下膠水靴



Put on surgical mask  
戴上外科口罩

## The procedure of doffing impermeable coverall

### 脫下個人防護裝備 (即棄防水長袖保護袍) 次序



Remove all gloves  
脫下所有手套



Remove disposable cap and remove eye protection  
脫下即棄頭套和護眼用具



Remove impermeable coverall and rubber boots  
脫下全身防水保護衣和膠水靴



Remove N95 or surgical mask  
脫下 N95 呼吸器或外科口罩



Put on surgical mask  
戴上外科口罩