

**Department of Agriculture**  
**National Directorate Veterinary Services**

**Notice No. VPN/10/2007-01**

**To: STATE VETERINARY OFFICERS**

**SUBJECT: Standard for Post-Mortem Meat Inspection and Hygiene Control at Game Meat Establishments**

**Definitions**

<b>PART I</b>	<b>Offloading</b>
<b>PART II</b>	<b>Post-mortem inspection</b>
	<b>Schedule 1</b>
<b>PART III</b>	<b>Hygiene Control</b>
	<b>Schedule 2</b>
<b>PART IV</b>	<b>Marking and Inspection of Export Consignments</b>
<b>PART V</b>	<b>Other Veterinary Procedural Notices Applicable for the export of game meat.</b>
<b>ANNEX A</b>	<b>Control list for auditing of Meat Inspection.</b>
<b>ANNEX B</b>	<b>Compliance form: Export of wild game meat to the EU</b>

**THIS VPN/10/2007-01 REPLACES THE VPN/10/2006-01**

  
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**Dr. Mpho Maja**  
**Director: Veterinary Services**

2008-04-09

.....  
**Date**

## **PART I: OFFLOADING**

### **1. OFFLOADING OF PARTIALLY DRESSED GAME CARCASSES AT THE PROCESSING PLANT:**

It is the duty of the Official Veterinary Officer to:

- 1.1 Verify that the seal on the chiller truck as applied by the Game Meat Inspector or Game Meat Examiner at the point of harvest is unbroken and that the seal number concurs with the seal number as indicated on Annex B (VPN/09). If broken, an explanatory letter to explain why it was broken is required.
- 1.2 Verify that the number of partially dressed game carcasses and corresponding tag number correlate with the information as provided on Annex B (VPN/09)
- 1.3 Inspect all partially dressed game carcasses for suitability to be processed for export game meat taking into consideration information provided on Annex B (VPN/09).
- 1.4 Supervise the storage of partially dressed game carcasses in the holding chillers. Record the date and time of arrival as well as tag numbers.
- 1.5 Ensure the receipt of Annex B (VPN/09) and place it on record. (This document is important for certification as well as for traceability and reconciliation of mass of meat exported with mass of carcasses received - the Official Veterinarian must create a reconciliation sheet for this purpose).
- 1.6 Ensuring the receipt of Annex A of VPN/09 certifying the Animal Health Status of the registered game farm and placing it on record.
- 1.7 Ensure that record systems enhance traceability.

## **PART II: POST-MORTEM INSPECTION**

### **2. POST-MORTEM INSPECTION AT GAME PROCESSING PLANT**

- 2.1 It is the duty of the Official State Veterinarian to supervise the Post-mortem meat inspection of the meat inspection team of all partially dressed game carcasses as per Schedule 1 (attached). In addition Annex A of VPN/10 "Control list for auditing of meat inspection" must be used as a template to ensure that criteria for routine meat inspection are taken account of.
- 2.2 The Official State Veterinarian must record the checks of the monitoring as well as the corrective action taken in cases of non-compliance (Annex A). Frequency of check must be based on performance.
- 2.3 The Official State Veterinarian must inspect all suspect game carcasses, and provide a final decision on the suitability / not of such suspected carcasses for approval for export of meat derived from these suspected carcasses.

For this purpose laboratory procedures may be required.

- 2.4 Carcasses will be detained under the direct supervision of the Official State Veterinarian to be submitted to maturation at a temperature above +2<sup>0</sup> C for at least 24hours before the bones are removed.  
The carcasses will only be released after the thermograph record has been evaluated and found within specifications.
- 2.5 Records of above laboratory results must be recorded and correlated to tag numbers of relevant carcasses.
- 2.6 Records must be kept of all carcasses not fit for export providing reasons therefore – these carcasses must be condemned.
- 2.7 Residue Monitoring

Refer to the VPN/19 for the standard relating to the National Residue-Monitoring programme.

## SCHEDULE 1

### POST-MORTEM INSPECTION

#### POST-MORTEM MEAT INSPECTION – CATEGORY A GAME

##### General

1. The inspection of category A game will be in accordance with an approved protocol.
2. These will include-
  - (1) African Elephant – *Loxodonta africana*
  - (2) Hippopotamus – *Hippopotamus amphibius*
  - (3) Giraffe – *Giraffe camelopardalis*

#### POST-MORTEM MEAT INSPECTION - CATEGORY B GAME

##### General

1. All relevant information, including Annex A and B of VPN/09 and health records must be taken into consideration when doing meat inspection.
2. No carcass, part thereof, rough or red offal may be sold/ dispatched from an abattoir unless inspected and approved by a registered inspector.
3. No person may remove, cut/debone or otherwise handle any carcass or meat prior to inspection.
4. No person may remove any sign or evidence of any disease, condition, contamination or soiling by washing, trimming or any other manner prior to meat inspection.
5. No lymph nodes may be removed prior to meat inspection.
6. The registered inspector must inspect the carcass and viscera by observation, palpation and if necessary incision.
7. Head, feet, rough and red offal must at all times be identifiable with the carcass of origin if not inspected at the depot.

##### Examination of the category B game carcass

8. The registered inspector must examine a carcass by means of observation, palpation, smell and, where necessary incision and take the following into consideration-
  - (1) state of nutrition;
  - (2) colour;
  - (3) odour;
  - (4) symmetry;
  - (5) efficiency of bleeding;
  - (6) contamination;
  - (7) pathological conditions;
  - (8) parasitic infestation;
  - (9) injection marks;
  - (10) bruising and injuries;
  - (11) any abnormalities of muscles, bones, tendons, joints, or other tissues;
  - (12) the species, age, and sex of the animal from which it was derived.

9. When examining the hindquarter, the registered inspector must examine bilaterally-
  - (1) the parietal peritoneum by observation;
  - (2) the *Lnn iliaci mediales et laterales* and the *Lnn subiliacus* by multiple incisions;
  - (3) the *Lnn inguinalis superficialis* by multiple incisions;
  - (4) the muscular part of the diaphragm by making two incisions approximately 25 mm apart and removing the peritoneal layer to expose the muscle;
  - (5) kidneys by exposure or incisions if necessary and the *Lnn. renalis* by incisions if necessary.
  
10. When examining the forequarter, the registered inspector must examine bilaterally-
  - (1) the parietal pleura;
  - (2) *Lnn cervicalis superficialis* by palpation;
  - (3) *M triceps brachii* of animals larger than Blesbuck by making one deep transverse incision through the distal part of the muscle.

## POST-MORTEM MEAT INSPECTION – CATEGORY C GAME

### General

1. All relevant information, including Annex A and B of VPN/09 and health records must be taken into consideration when doing meat inspection.
2. No carcass, part thereof, rough or red offal may be sold/ dispatched from an abattoir unless inspected and approved by an registered inspector.
3. No person may remove, cut/debone or otherwise handle any carcass or meat prior to inspection.
4. No person may remove any sign or evidence of any disease, condition, contamination or soiling by washing, trimming or any other manner prior to meat inspection.
5. No lymph nodes may be removed prior to meat inspection.
6. The registered inspector must inspect the carcass and viscera by observation, palpation and if necessary incision.
7. Head, feet, rough and red offal must at all times be identifiable with the carcass of origin.

### Examination of the category C game carcass

8. The registered inspector must examine a carcass by means of observation, palpation, smell and, where necessary incision and take the following into consideration-
  - (1) state of nutrition;
  - (2) colour;
  - (3) odour;
  - (4) symmetry;
  - (5) efficiency of bleeding;
  - (6) contamination;
  - (7) pathological conditions;
  - (8) parasitic infestation;
  - (9) injection marks;
  - (10) bruising and injuries;
  - (11) any abnormalities of muscles, bones, tendons, joints, or other tissues;
  - (12) the species, age, and sex of the animal from which it was derived.
9. When examining the hindquarter, the registered inspector must examine bilaterally-
  - (1) the parietal peritoneum by observation;
  - (2) the *Lnn iliaci mediales et laterales* by observation;
  - (3) the *Lnn inguinalis superficialis*, *Ln subiliacus*, *Ln popliteus* and *Ln analis* by palpation;
  - (4) kidneys by exposure, observation and palpation and the *Lnn. renalis* by palpation;
  - (5) the muscular part of the diaphragm by visual inspection.

10. When examining the forequarter, the registered inspector must examine bilaterally-
  - (1) the parietal pleura and thoracic cavity;
  - (2) *Lnn cervicalis superficialis* by palpation.

## POST-MORTEM MEAT INSPECTION – ZEBRA

### General

1. All relevant information, including Annex A and B of VPN/09 and health records must be taken into consideration when doing meat inspection.
2. No carcass, part thereof, rough or red offal may be sold/ dispatched from an abattoir unless inspected and approved by a registered inspector.
3. No person may remove, cut/debone or otherwise handle any carcass or meat prior to inspection.
4. No person may remove any sign or evidence of any disease, condition, contamination or soiling by washing, trimming or any other manner prior to meat inspection.
5. No lymph nodes may be removed prior to meat inspection.
6. The registered inspector must inspect the carcass and viscera by observation, palpation and if necessary incision.
7. Head, feet, rough and red offal must at all times be identifiable with the carcass of origin.
8. In the event of meat being exported to the EU, the consignments must be tested for Trichinosis.

### Examination of the zebra carcass

9. The registered inspector must examine a carcass by means of observation, palpation, smell and, where necessary incision and take the following into consideration-
  - (1) state of nutrition;
  - (2) colour giving special attention to melanosis;
  - (3) odour;
  - (4) symmetry;
  - (5) efficiency of bleeding;
  - (6) contamination;
  - (7) pathological conditions;
  - (8) parasitic infestation;
  - (9) injection marks;
  - (10) bruising and injuries;
  - (11) any abnormalities of muscles, bones, tendons, joints, or other tissues;
  - (12) age and sex of the animal from which it was derived.
10. When examining the hindquarter, the registered inspector must examine bilaterally-
  - (1) the parietal peritoneum by observation;
  - (2) the *Lnn iliaci mediales et laterales*, *Lnn inguinalis superficialis* and the *Ln. subiliacus* by observation;
  - (3) kidneys by exposure and incisions through the entire kidney and the *Lnn. renalis* by incisions if necessary;



11. When examining the forequarter, the registered inspector must examine bilaterally-
  - (1) the parietal pleura;
  - (2) *Lnn cervicalis superficialis* by palpation.
12. Carcasses must be split after which the sternum, ribs, vertebrae and spinal cord must be inspected.
13. Carcasses must be examined for the presence of *Trichinella*.

## POST-MORTEM INSPECTION - SUSPECT CARCASSES - GAME

1. Suspect carcasses must be marked “detained” and must be subjected to secondary meat inspection by a registered veterinarian.
2. During a secondary examination the following information regarding the carcass must be ascertained–
  - (1) species, age and sex;
  - (2) organ or part of the carcass affected;
  - (3) condition or disease;
  - (4) probable cause of condition or disease;
  - (5) judgement and motivation where applicable.
3. Depending on the judgement, the following action can be taken with the carcass, organ or meat:
  - (1) Approve;
  - (2) Conditionally approve – subject to treatment;
  - (3) Partially approve by removing the condemned part;
  - (4) Totally Condemn.

### Additional Examination for Tuberculosis or a Pyaemic Condition

5. The registered inspector finding evidence of tuberculosis or suspecting a pyaemic condition in a game carcass during examination, must detain such carcass and organs for secondary inspection by the registered inspector/veterinarian who will–
  - (1) require the carcass to be split and examine the vertebrae, ribs, sternum, spinal cord and the brain and if a lesion of a kidney is visible or suspected, incise the kidney;
  - (2) the lymphnodes, which are least likely to be infected according to visual evidence e.g. if the head shows lesions, the hind quarter must be inspected before the forequarter;
  - (3) examine and incise by means of multiple incisions the following lymph nodes, if not previously incised–

*Lnn. cervicales profundi caudales;*  
*Lnn. sternalis craniales et caudales;*  
*Ln. axillaris proprius;*  
*Lnn. intercostales;*  
*Ln. cervicales superficiales;*  
*Lnn. inguinales superficiales;*  
*Lnn. iliaci mediales et laterales;*  
*Lnn. lumbales aortici* and;  
if considered necessary, the *Ln. subiliacus* and *Ln. popliteus*.
  - (4) in the case of the carcass of a bush pigs and warthogs, examine and incise by means of multiple incisions the following lymph nodes bilaterally, if not previously incised –

*Lnn. cervicales superficiales;*  
*Lnn. inguinales superficiales;*  
*Lnn. intercostales;*  
*Lnn. lumbales aortici;*  
*Lnn. iliaci mediales et laterales;*  
*Ln. subiliacus* and;  
if he considers it necessary, the *Ln. popliteus*;

6. The registered inspector/veterinarian must pass, conditionally pass or condemn the carcass as well as organs where evidence of tuberculosis was found in accordance with the following –
- (1) the method of spread of the disease, the character and age of the tuberculosis lesion, the extent of the disease and the condition of the animal. The existence of tuberculosis in the lymph node of an organ will act as evidence of the disease in that organ;
  - (2) the entire carcass and all the organs must be condemned where there is –
    - (a) tuberculosis associated with fever or emaciation;
    - (b) evidence of active generalisation, e.g. acute miliary tubercles in the lungs or widespread active lesions;
    - (c) any congenital tuberculosis of suckling animals;
    - (d) tuberculosis in intermuscular lymph nodes, bone, joints, central nervous system or muscular tissue;
  - (3) the entire carcass and organs must be condemned if-
    - (a) active caseous change and inflammatory hyperaemia in any organ or lymph node;
    - (b) any acute extensive exudative tuberculosis of pleura, peritoneum, pericardium or meninges;
    - (c) any massive caseous or extensive organ tuberculosis;
    - (d) tuberculosis of the liver.
  - (4) subject to the provisions of (3), all tuberculous organs and their lymph nodes must be removed and condemned, and the rest of the carcass passed, when the disease is localised.
  - (5) for purposes of condemnation of portions of the carcass, meat or viscera, the following must be considered –
    - (a) care must be taken not to contaminate surrounding healthy tissue, or any adjoining sound carcass or edible offal;
    - (b) where an organ or its lymph node is tuberculous, both must be condemned;
    - (c) where the *Lnn. mesenterici* are affected, the mesentery, stomach and intestines must be condemned;
    - (d) in tuberculosis of the lungs or pulmonary lymph nodes, the lungs, heart, diaphragm, oesophagus and associated lymph nodes must be condemned;

#### **Additional examination for Cysticercosis and treatment**

7. A carcass, head and red offal found to be infested with *Cysticercus bovis* or *Cysticercus cellulosae* must be detained by the registered inspector and during secondary inspection he must–
- (2) make two additional incisions into each *M. triceps brachii*, parallel and proximal to the original incisions.
  - (3) base his decision on the following table:

<b>Area bilaterally</b>	<b>No. of surfaces</b>
M triceps brachii	12
Masseters muscles	8
Pterygoid muscles	4
Diaphragm	8
Heart muscles	6

**Total** **38 surfaces**

- (4) If one or more cysticerci are found on the majority of surfaces (at least 20 of the surfaces) the carcass must be condemned by the registered veterinarian;
  - (5) Where the infestation is not excessive (less than 20 surfaces affected) conditionally pass the carcass and organs.
8. A conditionally passed carcass must be identified by roller marking in red ink along its entire side with the letter "M" being a minimum of 2 cm in height.
  9. All parts belonging to the carcass must be identified by "M" tags, and must thereafter be treated in the following way-
    - (1) Freezing:
      - (a) At minus 18 °C for 72 hours;
      - (b) At minus 10 °C for 10 days;
      - (c) In a chest type freezer with approval and according to a protocol of the provincial executive officer;
      - (d) After reaching a deepbone or core temperature of less than minus 6 °C, confirmed by the registered inspector and in accordance with the protocol approved for the specific abattoir by the provincial executive officer, the meat may be released.
    - (2) Untreated Cysticercosis meat may only be deboned in accordance to a protocol approved by the provincial executive officer.
    - (3) The container in which measly meat is placed must be marked with the letter "M" and the date of introduction into the freezing chamber must be indicated.
    - (4) The core temperature of the meat inside the containers must be below minus 6 °C before it can be released by the registered inspector.
    - (5) Records of thermometer readings, freezer temperatures and batches of containers, meat and organs introduced for freezing must be kept by the abattoir owner for at least six months and it must be available for inspection purposes.

#### **Additional Examination for suspect game carcasses**

10. An animal which was suspect, must be examined by the registered inspector/veterinarian who must pay particular attention to the following-
  - (1) Carcass colour, blood content of intercostal veins and the small vessels beneath the serosa of the abdominal wall and in the retroperitoneal fat in the walls of the pelvis;
  - (2) Split the carcass, examine all visible lymphnodes, loosen a shoulder and open an acetabulum from the medial aspect to observe the exposed connective tissue, fat lymphnodes and articular surface;
  - (3) Examine the condition of the musculature and also pay attention to abnormal odours;
  - (4) If necessary, the carcass or meat should be submitted to laboratory examination in order to make a final decision.

## Records

11. The results of the ante-mortem in the field, primary meat inspection and secondary meat inspection must be recorded and where zoonotic and notifiable diseases are diagnosed, the local state veterinarian must be notified on the day of slaughter.

### **PART III: HYGIENE CONTROL**

#### **3. VERIFICATION OF A HYGIENE MANAGEMENT SYSTEM (HMS)**

It is the function and responsibility of management to implement an approved Hygiene Management System. Furthermore it is the responsibility of management to validate on a continuous basis the effectiveness of such a system.

It is however essential that such a Hygiene Management System must be based on the regulatory requirements set under the Meat Safety Act of 2000 (Act No. 40 of 2000) or at least contain the same elements as addressed in the Hygiene Management System (HMS) as proposed in the above Regulations.

See schedule II relating to the National Standardised Hygiene Management System.

4. It is the function of the Official State Veterinarian to verify that such a Hygiene Management system is indeed in place and that the Hygiene Control Programs (HCPs) (also known as Pre-Requisite Programs PRPs) and associated monitoring systems reflect an accurate representation of the systems and procedures implemented at the establishment to assure the highest possible hygiene standard and safety of the game meat produced for export.

The Official State Veterinarian may make use of his/her inspection team to verify the accuracy of the checks made in the above Hygiene Control Programs.

#### **5. RECORDS OF VERIFICATION PROCEDURES MUST BE DOCUMENTED AND BE AVAILABLE FOR:**

- a. Audits by National Controlling Authority.
- b. Audits by inspectors of importing countries.

#### **6. MICROBIOLOGY**

See standards for the microbiological monitoring of meat (VPN/15) and water (VPN/16).

Microbiological monitoring of sanitation, personal hygiene, etc. - basic principles remain the same.

The above standards apply to abattoir management. It is however the function of the Official State Veterinarian to verify the validity of the above microbiological results, by submitting parallel samples to nationally approved laboratories. Results of above must be documented and recorded.

## **SCHEDULE 2**

# **HYGIENE MANAGEMENT SYSTEMS**

## 1. Schematic drawing of the abattoir

- 1.1 The second step in the design of a H.M.S. is to obtain updated schematic drawings of the abattoir.
- 1.2 Schematic drawings of the abattoir should include the following:
  - 1.2.1 All the different areas on each level.
  - 1.2.2 All the different rooms in each area indicating the process or operation that takes place in the room.
  - 1.2.3 The flow of the product.
  - 1.2.4 Ancillary structures on the premises.
  - 1.2.5 For rooms where temperature control is prescribed, the required temperature, as well as the capacity of the specific room, must be indicated.
  - 1.2.6 Ablution facilities for workers in clean and dirty areas as well as the personnel entrances and personnel flow routes to the different areas will have to be indicated on the plan.
  - 1.2.7 All entrances to rooms/areas/building.
  - 1.2.8 Any other information as required.
- 1.3 A site plan indicating all structures and buildings, as well as roadways, boundaries entrances/exits as well as any other relevant information is essential.
- 1.4 A1 or A0 full scale drawings can be used in the office (ops room), but smaller A4 or A3 size reduced scale drawings are more versatile and can also be filed/documentated more readily. Computerised systems should be available.
- 1.5 Different schematic drawings are used for different systems.
- 1.6 Examples are:
  - 1.6.1 Diagram indicating workstations and personnel flow, routes of entry and exit. Colour coding can indicate clean and dirty functions.
  - 1.6.2 Diagram indicating position of slaughter equipment, work stations, sterilizers, HWB's, boot washes etc.
  - 1.6.3 Diagram indicating position of reticulation system with identifiable checkpoints for water quality control. Water source, reservoirs holding tanks etc. must be indicated. Hot and cold water systems may be colour coded.
  - 1.6.4 Diagram of chillers, freezers, holding rooms, outloading areas etc. indicating required max. or min. temperatures (as well as points of monitoring) must be available for thermo control program.
  - 1.6.5 Diagram indicating bait stations for vermin control.
  - 1.6.6 Diagram indicating vapour control areas.
  - 1.6.7 Diagram indicating location sites of soap containers, disposable towels and toilet paper.



- 1.7 The above are but **some** of the uses these schematic drawings can be used for. No set system is prescribed. The HM may combine more than one diagram or even split, enlarge or condense different diagrams to suit the system applied.

## **2. Flow diagram of slaughter and processing process**

- 2.1 This diagram should include all steps involved in the process, from receiving of the slaughter animals to outloading and transportation of the end product. The diagram must include sufficient detail and technical data. Types of data could include: equipment layout and characteristics, sequence of all steps, technical parameters of operations, flow of products, segregation of clean and dirty areas, personnel routes and product storage procedures. Maintenance procedures must be incorporated in the maintenance management program.

- 2.2 This diagram can also be fragmented to categories for specific areas/functions.

## **3. Hazards**

- 3.1 The HM must compile a list of all potential biological, chemical or physical hazards that may occur at each step of the process.

- 3.2 Hazards may include the unacceptable contamination of carcasses or meat by:

### 3.2.1 Biological hazards:

- (i) Pests e.g. Blow fly larvae
- (ii) Spoilage organisms e.g. micro-organisms, yeasts and molds
- (iii) Pathogenic micro-organisms
- (iv) Toxins and/ or other undesirable products of microbial metabolism

### 3.2.2 Chemical hazards:

- (i) Including antibiotics or other pharmacological residues, pesticides, sanitisers etc.

### 3.2.3 Physical hazards

- (i) Including glass, pieces of metal, soil/ dirt, hair etc.

- 3.3 Modern Hygiene Management systems include ineffective chilling and breaks in the cold chain as critical hazards to meat and edible products.

## **4. Hygiene Management Systems**

- 4.1 The owner of an abattoir must –

- 4.1.1 provide the provincial executive officer with a documented hygiene management system (HMS) containing detailed information on control measures or programs required to monitor identified control points, including the methods of monitoring or checking these control points, for approval;
- 4.1.2 provide relevant records of observations/checks/measurements or results;
- 4.1.3 provide sampling programs for laboratory analyses, as well as names of accredited laboratories to do the required analysis;

- 4.1.4 provide written accounts of decisions relating to corrective actions when taken.
- 4.1.5 Assess the hygiene status of the abattoir by means of the hygiene assessment system (HAS) and provide results to the PCA for verification as frequently as he/she may require.
- 4.2 An effective document management system must provide for –
  - 4.2.1 the retrieval of documents relating to an identified production batch (traceability);
  - 4.2.2 a register for the recording of each production batch containing information regarding date of harvesting, species, mass/quantities, identification (tag numbers) and destination, must be provided;
  - 4.2.3 a documented product recall procedure approved by the provincial executive officer must be provided.
- 4.3 Management must provide an updated schematic plan of the abattoir which must include the following details:
  - 4.3.1 All the different areas on each level;
  - 4.3.2 Identified all the different rooms in each area indicating the process or operation including the capacities or rates of operation that takes place in such rooms;
  - 4.3.3 The flow of the product;
  - 4.3.4 For rooms where temperature control is prescribed, the required temperature as well as the capacity of the specific room must be indicated;
  - 4.3.5 Ancillary structures on the premises;
  - 4.3.6 Different ablution facilities for workers in clean and dirty areas as well as the personnel entrances to the different areas must be indicated on the plan;
  - 4.3.7 All entrances to rooms/areas/building;
  - 4.3.8 Boundaries indicating entrances/exits to and from premises.
- 4.4 Management must provide a flow diagram of the process which includes –
  - 4.4.1 all steps involved in the process, including delays during or between steps, from harvesting and receiving of harvested game to placing of the end product on the market;
  - 4.4.2 sufficient details and technical data including equipment layout and characteristics, sequence of all steps, technical parameters of operations, flow of products, segregation of clean and dirty areas, hygienic environment of the establishment, personnel routes and hygienic practices, product storage and distribution procedures;
  - 4.4.3 confirmation, on site, during operational hours is required for verification.
- 4.5 Management must provide a list of all potential biological, chemical or physical hazards that may occur at each step of the process including –

- 4.5.1 unacceptable contamination or recontamination of a biological, chemical or physical nature;
  - 4.5.2 unacceptable survival or multiplication of pathogenic micro-organisms;
  - 4.5.3 unacceptable production or persistence of toxins or other undesirable products of microbial metabolism;
- 4.6 Management must provide documented and approved Hygiene Control Programs (HCP) to prevent, eliminate or reduce hazards mentioned in regulation 5 to acceptable levels and management must –
- 4.6.1 ensure that control measures for each possible hazard is effectively implemented;
  - 4.6.2 establish critical limits for control points;
  - 4.6.3 establish a monitoring or checking system for each control point;
  - 4.6.4 provide documented and approved corrective actions that can be taken without hesitation when a deviation is observed and such corrective action must include –
    - (a) proper identification of the persons responsible for the implementation of the corrective action;
    - (b) a description of the means and action required;
    - (c) action to be taken with regard to the meat having been processed during the period when the process was out of control;
    - (d) written record of measures taken;
- 4.7 The following Hygiene Control Programs (HCP) must be implemented:
- 4.7.1 HCP for ante-mortem inspection on the game farm, including control measures to –
    - (a) ensure that all animals which for some reason or other cannot be processed into safe meat are identified;
    - (b) identify animals with symptoms that may not be seen during post-mortem meat inspections;
    - (c) identify animals with zoonotic diseases;
    - (d) identify animals with highly contagious diseases or with notifiable diseases;
    - (e) identify animals that pose a high contamination risk such as those with septic conditions or animals that are excessively soiled; and
    - (f) These animals/ carcasses must be handled within a prescribed manner.
  - 4.7.2 HCP for harvesting and dressing.
    - (a) Control Measures (CM) must be taken to ensure that no contamination of meat and edible products occur either from:

- (i) External surface of the animal harvested;
  - (ii) Wind and dust;
  - (iii) Contents of hollow organs;
  - (iv) Persons working with edible products; and
  - (v) Contact with unclean objects;
- (b) Harvesting and dressing procedures must be such as to limit any contamination to the absolute minimum;
  - (c) All workers must be trained in correct harvesting and dressing techniques including principles of hygiene practices and be monitored effectively;
  - (d) A programme for the daily checking of carcasses for soiling must be compiled to provide for regular checking of a representative sample of carcasses throughout the day on a random basis to determine the levels of contamination of carcasses;

4.7.3 HCP for meat inspection – The supervisory registered meat inspector (SMI) assisted by the official veterinarian must monitor meat inspection by means of implementation of documented HCP's/CM's to ensure –

- (a) that meat inspection is done according to regulatory requirements;
- (b) the competency of the meat inspectors and meat examiners;
- (c) the personal hygiene of the meat inspectors and meat examiners;
- (d) that the head, feet, red and rough offal, if available, is correlated to the carcass of origin;
- (e) the security of detained carcasses and organs;
- (f) the security of the stamp of approval; and
- (g) the security of condemned material;
- (h) the implementation of standard operational procedures (SOP's) for –
  - (i) dirty partially dressed game carcasses; and
  - (ii) dropped meat;

4.7.4 HCP for personal Hygiene of workers in that –

- (a) an approved general code of conduct for personnel and in particular or workers who come into direct contact with meat and edible product must be available;
- (b) a training program as well as registers of attendance for all personnel to apply the principles of the code of conduct referred to in 7(4)(a) must be available; and

- (c) record of surveillance/supervision including records of disciplinary action in cases of repetitive misconduct/non compliance must be available;
- 4.7.5 HCP for medical fitness of workers –
- (a) Record of initial medical certification that workers are fit to work with meat and edible product, prior to employment must be available; and
  - (b) Record of daily fitness checks including corrective actions applied in cases of illness and injury, must be available;
- 4.7.6 HCP for sterilizers temperatures and maintenance of sterilizers – Control measures to ensure the continuous availability and accessibility of sterilizers in good working order at temperatures of 82 °C, including registers for daily checks indicating frequency of check as well as corrective action procedures in cases of non-compliance must be available;
- 4.7.7 HCP for the availability of liquid soap and soap dispensers, toilet paper, and disposable towels – Control measures to ensure the continuous availability and accessibility of liquid soap and soap dispensers for hand washing purposes, toilet paper and disposable towels at pre-identified points must be available;
- 4.7.8 HCP for sanitation and continuous cleaning including a cleaning schedule provided by management providing for the following information:
- (a) A list of all the areas to be cleaned;
  - (b) A list of all the rooms that have to be cleaned within every area;
  - (c) The name of the person responsible for the cleaning of each area, section or room;
  - (d) For each room within a particular area the cleaning of each structure must be described in detail including the following aspects:
    - (i) Frequency of cleaning;
    - (ii) Prescribed step by step methods of cleaning;
    - (iii) Data concerning the chemicals which are used (e.g. registration data, safeness, dilutions, application prescriptions etc.);
    - (iv) Correct application of the detergents (dilution, temperatures, contact times);
    - (v) Rinsing off of applied chemicals; and
    - (vi) Target results to be obtained as an objective of the cleaning programme;
  - (e) An addendum must be added for each room in which the cleaning of each structure must be described in detail including aspects such as method, frequency and target results;
  - (f) Cleaning teams must be trained in the effective execution of these programs;
  - (g) Control over the storage of detergents to prevent contamination of edible products is important;

- (h) A detailed description must be compiled for the continuous cleaning on the processing line during processing and must include –
  - (i) a list of all the actions in this program;
  - (ii) a step by step description of each action;
- (i) These programs must be approved; and
- (j) Laboratory checks as control of effectivity of the cleaning programs must be instituted and documented;

4.7.9 HCP for availability and quality of water:

- (a) The owner of the abattoir must account for the source of water supply and the status of such water;
- (b) The owner must be able to demonstrate the water distribution system within the abattoir and provide an updated schematic plan of the water distribution on the premises;
- (c) A sampling program must be followed to ensure that all outlets, including water hoses must be checked on a repeated consequential basis within an allotted period of time. The sampling procedure must be described and documented; and
- (d) The owner is responsible to ensure that water used in the abattoir is potable. Records of microbiological and chemical water test results must be available;

4.7.10 HCP for vermin control:

- (a) The owner of the abattoir must provide a documented control programs for each vermin type for approval by the relevant authorities and such program must include:
  - (i) Schematic drawings indicating the position of bait stations;
  - (ii) A poison register including specifications for the use of different poisons; and
  - (iii) Training programs for persons working with poisons;

4.7.11 HCP for waste disposal including condemned material:

- (a) The owner of the abattoir must provide documented control program for the removal of each different category of waste material including general refuse removal for approval by the relevant authorities; and
- (b) Security arrangements (measures) to prevent condemned material from entering the food chain must be described;

4.7.12 HCP for in contact wrapping and packing materials:

- (a) The owner of the abattoir must provide a documented control program addressing the suitability as well as the hygienic storage and handling of all in contact wrapping and packing material;

- (b) CM's to prevent contamination in store rooms must be provided; and
  - (c) CM's to prevent contamination of wrapping materials;
- 4.7.13 HCP for maintenance – the owner of the abattoir must provide a documented CP addressing the routine maintenance of all equipment and structures;
- 4.7.14 HCP for thermo control:
- (a) A map must be provided that indicates the layout of all the chillers, freezers and processing rooms where temperature control of the room is required and must include the following details:
    - (i) Each temperature controlled room or area;
    - (ii) Number of the room or area;
    - (iii) Temperature requirement of each room; and
    - (iv) Throughput (capacity) of each room;
  - (b) Each room must be equipped with a recording thermograph, or equivalent means of monitoring and recording must be used, that indicates the temperature measurements in the room on a continuous basis;
  - (c) The graphs or data must provide the actual time and temperature as well as the correct date;
  - (d) Annual calibration is necessary and certification to this effect must be available;
  - (e) Records in respect of regular testing of digital thermographs/meters against a certified fluid in glass thermometer, done by management, must be available;
  - (f) Placing of the thermo-sensors within rooms must be representative of the temperature in the room;
  - (g) If a centralized computer system is used for this purpose it must record all the relevant temperatures on an ongoing basis at least every 30 minutes;
  - (h) The temperature status of every room must be checked at least every 12 hours by management to ensure maintenance of temperatures and all deviations must be accounted for;
  - (i) Checks by management must be recorded;
  - (j) Any deviations from the required temperature must receive immediate corrective attention;
  - (k) The hygiene manager must be notified immediately in every case where a temperature breakdown has occurred;
  - (l) Records must be available for inspection; and
  - (m) The hygiene manager must indicate daily control checks by way of signature on the records.

## **5. Training**

- 5.1 A separate program must be compiled for training.
- 5.2 Training is absolutely essential in the effective implementation of any HMS.

The following must be considered:

- 5.2.1 Training courses must be developed and training schedules adhered to.
  - 5.2.2 Training material must be of high standard – if necessary make use of consultants.
  - 5.2.3 Training records must be kept.
  - 5.2.4 Competency checks must be made on workers.
  - 5.2.5 Cases of non-compliance must be recorded and CA's implemented.
  - 5.2.6 Repeated cases of non-compliance and malicious neglect must lead to disciplinary action – records must be kept.
- 5.3 Examples of training include:
- 5.3.1 Training of all personnel in the principles of the code of conduct pertaining to personal hygiene.
  - 5.3.2 Workers handling live animals.
  - 5.3.3 Workers stunning and bleeding animals.
  - 5.3.4 Slaughter men at different workstations.
  - 5.3.5 Workers in the sanitation team.
  - 5.3.6 Workers doing deboning and cutting of meat.
  - 5.3.7 Workers packing meat.
  - 5.3.8 Workers outloading meat and products.

Many other examples will be mentioned in HMP's.

## **6. Registers**

- 6.1 The Hygiene Manager (HM) and his/ her control team must create check registers for control points.
- 6.2 The HM must:
  - 6.2.1 Ensure that control points to monitor each possible hazard is identified and documented.
  - 6.2.2 Establish critical limits for control points.
  - 6.2.3 Establish a monitoring and checking system for each control point.
- 6.3 The following are examples of registers that may be required in the HMP's:



- 6.3.1 Daily checking of sterilizer temperatures
- 6.3.2 Checking for availability of soap
- 6.3.3 Availability of disposable hand drying towels
- 6.3.4 Availability of toilet paper
- 6.3.5 Checking of prescribed shooting and bleeding procedures
- 6.3.6 Training of workers
- 6.3.7 Checking for compliance with job descriptions
- 6.3.8 Recording checks on carcasses for soiling
- 6.3.9 Chemicals used in cleaning program
- 6.3.10 Daily pre-operative checks for cleanliness
- 6.3.11 Checks on the continuous cleaning program
- 6.3.12 Cleaning of intermediate water storage tanks
- 6.3.13 Inspection of intermediate water storage tanks
- 6.3.14 Daily checks on chlorine levels of water
- 6.3.15 Checks on the water chlorination alarm system
- 6.3.16 Checks on pest control program
- 6.3.17 Checks on suitability of wrapping and packing material
- 6.3.18 Checks on store rooms for wrapping and packing materials
- 6.3.19 Checks on store for chemicals used in cleaning program
- 6.3.20 Checks on vapour contamination
- 6.3.21 Checks on meat inspection procedure
- 6.3.22 Checks on temperatures
- 6.3.23 Calibration of thermographs
- 6.3.24 Calibration of laboratory test equipment
- 6.3.25 Maintenance of buildings and facilities
- 6.3.26 Effluent and waste disposal
- 6.3.27 Disposal of condemned/ inedible products
- 6.3.28 Checking of hand wash facilities
- 6.3.29 Checking illumination

6.3.30 Frequent change of footbaths

6.3.31 Checking vehicles transporting slaughter animals.

## **7. Records**

7.1 It is essential to create a "user friendly" system of record keeping.

7.2 Examples of records that must be kept, include:

7.2.1 Data obtained from check registers

7.2.2 Non-compliance report cards and verification by HM

7.2.3 Movement permits

7.2.4 Ante-mortem cards

7.2.5 Laboratory results etc.

7.3 Statistical analysis of all programs/checks/results etc. must be summarised a tendencies report must be submitted to top management during regular Hygiene meetings.

7.4 The frequency of these meetings can be based on the hygiene performance of the abattoir.

7.5 It is suggested initially not less than weekly and later not less than monthly.

**PART IV: MARKING, LABELLING AND INSPECTION OF EXPORT CONSIGNMENTS**

**8. Specifications for stamps, marks and ink used**

- 8.1 (1) All stamps or roller marks used to mark any carcass or meat must –
- (a) be constructed of a non-toxic, non corrosive material and must be so constructed as to be readily cleanable;
  - (b) be cleaned and sterilized regularly during use;
  - (c) be kept away from the floor;
  - (d) be kept and used under control of a registered inspector;
  - (e) be secured by a registered inspector when not in use and kept in safe custody;
  - (f) never be used at an abattoir where the abattoir number differs from the number on the stamp; and
  - (g) be applied in such a manner that the mark is clearly legible on the carcass or meat.
- (2) The following stamp shapes are required:
- (a) All species:



(High throughput)

- (3) The stamps must contain –
- (a) the abattoir registration number; and
  - (b) the wording shown in subregulation (2) which must be in at least two official languages, one of which must be English.
- (4) The minimum sizes of stamps are –
- (a) 60 mm in diameter for the round mark shown in subregulation (2)(a)

- (5) The letters on the stamps must be readable and may not be smaller than 8 mm high;
- (6) Marks printed on wrapping material may be smaller than the sizes stated in sub regulations (4) and (5) to suit particular circumstances provided they are approved by the provincial executive officer.
- (7) The marking ink used where stamps are applied to carcasses or meat must be manufactured of harmless, edible ingredients approved for use on foodstuffs as described in the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972).
- (8) The marks must be placed, in case of –
  - (a) All game, on each quarter of the carcass; and
  - (b) on heads of game if skins are removed.

### **Wrapping, packing and labeling**

- 8.2 (1) All labels used on meat must –
- (a) be printed on food grade paper or plastic printing material and treated in the same hygienic way as in contact wrapping material; and
  - (b) include the information required by regulation 95(3) as well as any other information required by the provincial executive officer.
- (2) Wrapping bearing the mark of approval may not be re-used after opening.
- (3) In the case of bulk packing, containers or cartons must be clearly marked with a facsimile of the mark of approval clearly visible and of readable size.
- (4) A container must be clearly marked on both ends with information required by the Agricultural Products Standards Act, 1990 (Act No.119 of 1990), as well as –
- (a) the name, address and registration number of the establishments in which the meat was packed;
  - (b) the net weight of the contents;
  - (c) an accurate description of the contents;
  - (d) the date packaged or a code which enables the date of packaging to be determined; and
  - (e) directions regarding the temperature at which the product must be stored.
- (5) Where products are individually wrapped, food grade wrapping material on which the mark of approval is printed or a label, printed with such mark, must be used.

### **General**

- 8.3 (1) No person may place a mark on, or remove a mark from, any carcass, part thereof, or a wrapping, packing or container, except under the supervision of a registered inspector.

- (2) The registered inspector may at any time re-inspect a carcass or meat, in an abattoir, notwithstanding that it may already have been passed for consumption and, if upon re-inspection he or she is of the opinion that it is no longer fit for human or animal consumption, he or she must remove the stamp of approval by trimming, and such meat must be condemned.

## Export

- 8.4
- (1) All cartons must be sealed with stick-on labels with the health mark described below printed on it. All the labels must be numbered with a consecutive serial number. The serial number must be printed outside the oval. Furthermore, this health mark may not be printed directly onto the cartons. The labels must be applied to each carton in such a way to ensure that they are torn when the carton is opened.
  - (2) The operator in charge of the slaughterhouse and cutting plant must record the serial numbers for cartons packed on each day in a register used for this purpose. This is to enable us to identify unauthorized use of the name or allocated number of your establishment.
  - (3) The health mark for the wild game meat must be an oval mark at least **6,5 cm** wide by **4,5 cm** high, bearing the veterinary approval number of the establishment in the centre.

The letters must be at least **0,8 cm** high and the figures at least **1 cm** high. All the labels must be numbered with a consecutive serial number. The serial number must be printed outside the oval.

Example:



## 8.5 Inspection Of Export Consignments

- (1) All export consignments must be inspected by the Official Veterinarian before export.
- (2) Special attention must be paid to:
  - a. Core and surface temperature of products at time of loading;
  - b. Cleanliness of the vehicle/container before loading;
  - c. Temperature of the loading space at time of loading;
  - d. Condition of the cartons to be dispatched;

- e. Verify by spot checks that cartons in the consignment are correctly supplied with the establishment number and that the numbers are applied in such a way that they will be destroyed when the carton is opened. Ensure that the number is not pre-printed directly on the cartons. The following information must also be recorded on the outside of cartons:
  - i. Name of Company.
  - ii. Name of product (including species).
  - iii. Mass.
  - iv. Date of production.
- f. Verify the details as supplied on the International export certificate;
- g. Sealing of the loading space must be done under the supervision of the veterinarian.

*Under no circumstances may an International export certificate be issued for a consignment not inspected by the Official Veterinarian. This is to ensure compliance with the aforementioned.*

- h. A statistical report must be submitted monthly to the Controlling Authority before the 6<sup>th</sup> of the next month.
- i. The Official Veterinarian is responsible for verification of the Hygiene Management System (see Schedule 2 – VPN/10).

9. Compliance form for the export of wild game meat to the EU. (Annex B of VPN/10)

This form as attached must be seen as a reference copy. The format can be used by the various export establishments to compile their own “compliance form” as long as it is in equivalence with the reference copy and satisfies their needs.

**PART V: OTHER VETERINARY PROCEDURAL NOTICES APPLICABLE TO THE EXPORT OF GAME MEAT**

1. VPN/01 Procedure to register establishment
2. VPN/05 Standard for the registration or re-registration of game farm for export.
3. VPN/8 Standard for the registration of hunters for harvesting wild game intended for export of game meat.
4. VPN/9 Standard for ante- and post-mortem meat inspection and hygiene control at point of harvest.
5. VPN/15 Standard for the microbiological monitoring of meat.
6. VPN/16 Standard for the microbiological monitoring of water.
7. VPN/17 Principles of certification.
8. VPN/18 Law Enforcement at Export Establishments.
9. VPN/19 Standard relating to the National Residue monitoring Programme

## ANNEX A

(VPN/10)  
**CONTROL LIST FOR AUDITING OF MEAT INSPECTION**

**CRITERIA FOR ROUTINE MEAT INSPECTION – GAME**  
(CATEGORY A GAME MEAT INSPECTION TO BE DONE ACCORDING TO APPROVED PROTOCOL)

**Section A**

Abattoir:..... Date:.....

Method of inspection:

Depot:..... Date:.....

**O** = Observation

Inspector:.....

**P** = Palpation

**I** = Incision

Controlling Officer:.....

**COMMENTS:**

HEAD:		CATEGORY B GAME			ZEBRA			CATEGORY C GAME		
Tongue	D		P			P		O		
Hard/soft palate	D	O			O					
Skin/lips/gums	D	O			O			O		
Eyes	D	O			O			O		
Lnn. mandibularis	D			I						
Lnn. parotideus	D			I						
Lnn. retropharyngeus	D			I						
Masseter muscle X 2	D			I						
Pterigoideus muscle X1	D			I						
<b>THORACIC ORGANS:</b>										
Lungs	D		P			P			P	
Basis of the Bronchi	D			I			I			
Lnn. bronchiales	D			I			I	O		
Lnn. mediastinales	D			I			I	O		
Oesophagus & trachea	D	O		I	O		I	O		
Pericardium	D			I			I			I
Heart	D			I			I			I
Visceral pleura	D	O			O			O		
<b>ABDOMINAL ORGANS:</b>										
Liver (Portal area)	D		P	I		P			P	I
Lnn. hepaticus	D			I	O					I
Surface of stomach, intestines	D	O			O			O		
Spleen	D	O			O			O		
Omentum	D	O			O			O		
Testes & ovaries	D	O			O			O		
Lnn. mesenterici craniales	D	O			O			O		
Visceral peritoneum	D	O			O			O		



FORE-QUARTER:									
Parietal Pleura	A	O			O			O	
Diaphragm	D	O		I	O			O	
Lnn. cervicales superficiales	A		P			P			P
Triceps brachii	A			I					
HIND-QUARTER:									
Parietal peritonium	A	O			O			O	
Lnn. Iliaci	A			I	O			O	
Lnn inguinales superficiales	A			I	O				P
Kidneys & Lnn. renales	A			I			I	O	P
Lnn subiliacus	A			I	O				P
Lnn. popliteus	A								P
TAIL & FEET:		D			O			O	
			(38)		(30)			(30)	

**Section B** With above inspection the following must be considered:

	B	Z	C		B	Z	C	SCORE
State of nutrition				Parasitic infestation				CAT. (A+B) x 1.02
Colour				Injection marks				B
Odour				Bruising & Injuries				ZEBR (A+B) x 1.25
Symmetry								A
Efficiency of bleeding								CAT. (A+B) x 1.25
Contamination								C
Pathogenic conditions								Sub-total
				(10)				One category: ÷ by 1
								Two categories: ÷ by 2 =
								Sub-total
								Three categories ÷ by 3
								(out of 50)
								<b>TOTAL</b>
								(50 ÷ 2) =

**ANNEX B**

**COMPLIANCE FORM FOR THE EXPORT OF WILD GAME MEAT TO THE EUROPEAN COMMUNITY (REFERENCE COPY: REFER TO PART III PARAGRAPH 10 OF THIS VPN FOR SPECIFIC INFORMATION)**

This form as attached must be seen as a reference copy. The format can be used by the various export establishments to compile their own "Compliance form" as long as it is in equivalence with the reference copy and satisfies their needs.

Farm of origin: .....

Farm registration No: .....

Disease freedom declaration of Provincial State Veterinarian:  
(copy attached) .....

Dates of culling: .....

Date and time of departure from farm to processing plant: .....

Date and time of arrival to processing plant from farm: .....

Movement Permit from farm to processing plant  
(Certificate of Origin. Annex B VPN/09)  
(copy attached) .....

Thermograph record from farm to processing plant  
(copy attached) .....

Details of Consignment: .....

Species: .....

Weight: .....

Departure date from processing plant: .....

Health Certificate No: .....

Country of destination: .....

I, Dr .....

Certifying State Veterinarian at establishment .....

ZA number .....

Confirm the validity of the information supplied in this document.

..... Date: .....

Signature

.....  
Name in print