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Waste and Environmental Services

Standard Operating Procedure

for **GAME ANIMAL SAMPLING**

APPROVAL SIGNATURES:

Subject Matter Expert:	**Organization**	**Signature**	**Date**
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1.0 PURPOSE AND SCOPE

The purpose of this procedure is to describe the method of sample collection for game animals like deer and elk. This procedure applies to the individual assigned to collect meat and bone from game animals as part of the Foodstuffs Monitoring Program mandated by DOE Order 450.1. This procedure is applicable to personnel within the Los Alamos National Laboratory (Laboratory or LANL) Waste and Environmental Services (WES) Division.

2.0 BACKGROUND AND PRECAUTIONS

2.1 Background

This document establishes the basic requirements for collecting game animal samples. Work performed under this procedure by LANL personnel will occur only after required training to applicable documents has been completed and documented.

Within this procedure, deer and elk will be collected as road kills, and the front shoulder portion will be sampled. Both meat and bone are collected.

2.2 Precautions

Individuals are required to be trained in the following prior to performing this procedure:

- First aid;
- Cardiopulmonary Resuscitation (CPR);
- General Field Safety for All Employees.

A minimum of two (2) people is required to go out in the field. Do not perform work under conditions you consider unsafe. Before beginning work described in this procedure, review safety needs and requirements, identify hazards, and develop hazard mitigation measures.

3.0 EQUIPMENT AND TOOLS

• Disposable plastic bags (e.g., trash bags); • Sharp knife; • Meat saw; • Permanent marker for labeling; • Soap/water solution (for washing knife); • Water (for rinsing); • Paper towels;	• Chain-of-custody forms; • Ice chest with blue ice; • Ziplock™ bags (two gallon size); • Personal Protective Equipment (e.g., safety glasses, safety/field shoes, rubber gloves, face shield, Kevlar gloves, and hat; • GPS.

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4.0 STEP-BY-STEP PROCESS DESCRIPTION

4.1 Preparatory Activities		
Sampler or Field Team Leader (FTL)	1.	Game animal sampling is done on recently killed deer and elk (usually road kill) and is collected as deer and elk become available to the Environmental Surveillance Team. Usually we will get notice from the Department of Game and Fish that a road kill has occurred from onsite, perimeter or offsite locations. If information about road kill has come from a different source, notify the Laboratory's Department of Game and Fish reserve conservation officer. Currently, that is Manuel L'Esperance (667-6211). Notice of a road kill is short and action to collect the sample should be fast. Thus, a sample kit (ice chest) with all of the required equipment is recommended to be on hand.
	2.	Conduct a hazard review in accordance with Attachment 1, Hazard Review for Game Animal Sampling.
	3.	Before leaving the field, check the condition of the vehicle and the fuel level.
	4.	Identify a Point-of-Contact to provide pertinent information of destination, expected time-in, and methods of notifying the field team.
	5.	When leaving Los Alamos County, notify the group office to place you on travel status.
	6.	Ensure you have a working cell phone and a pager.
4.2 Sampling Steps		
Sampler or FTL	1.	Travel to the sampling location to collect meat and bone for analysis. Since reported locations may not be precise, carefully survey the area for the sample when approaching the site. Also, identify a safe place (e.g., a turn-out next to the road) to stop the vehicle as close to the animal as possible.
	2.	If needed, move the animal carcass to a safer location off the pavement and as far from traffic as practical.
	3.	With cut-resistant gloves on, remove a sample of meat (about two to three pounds) from the shoulder area with a clean, sharp knife (or meat saw, as required). Similarly, remove a sample of bone.
	4.	Place the sample(s) into individual two gallon Ziplock™ bags.
	5.	Complete a chain-of-custody form with the appropriate sampling information. Label the COC with the sample location, date, time, and sampler's initials. Seal each bag with chain-of-custody tape and pack on ice for transport back to the Laboratory.
	6.	Obtain an X and Y coordinate for each sample location.
	7.	Once at the Laboratory, store the samples on ice or in a freezer until samples are shipped to the analytical laboratory.
	8.	Maintain proper chain-of-custody procedures for samples (see 4.4) until submitted to the analytical laboratory for analysis (Paragon Analytics, Inc., Fort Collins, CO).

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4.3	**Maintaining Custody of Samples**	
Sampler or FTL	1.	Document chain-of-custody for all samples used to demonstrate compliance.
	2.	Verify the possession and handling of samples is traceable at all times. [NOTE: A sample is considered in custody if it is one of the following: • In one's physical possession; • In one's view after being in one's physical possession; • In one's physical possession and then locked up so that no one can tamper with it; or • Kept in a secure area where access is restricted to authorized and accountable personnel only. A secured area is an area that is locked (e.g., a room, cooler, vehicle, or refrigerator).]
	3.	If the area cannot be secured, use a custody seal to secure the area or the sample container.
4.4	**Transferring Custody of Samples**	
Sampler or FTL	1.	Whenever samples are transferred into the custody of another person or organization, complete the "relinquished by/received by" and "date" sections of the form. [NOTE: These sections of the form must provide a complete history of custody of the samples from collection to transfer to the analytical laboratory.]
4.5	**Broken Chain-of-Custody**	
Sampler or FTL	1.	Whenever there is a break in the chain-of-custody of a sample, document the failure by initiating a deficiency report in accordance with ISD 322-4, *Issues and Corrective Action Management Process*.
	2.	Document the occurrence, evaluate the potential impact (if any) on the samples, and propose a fix to prevent recurrence.
4.6	**Emergency Actions to Take in the Event of Control Failure**	
FTL	1.	Perform First Aid for cuts, as appropriate.
	2.	For all injuries, provide first aid and see that the injured person is taken to Occupational medicine (only if immediate medical attention is not required) or to the nearest hospital.
	3.	Notify the individual's supervisor and group office as soon as possible.
4.7	**Records**	
FTL	1.	Submit the following records generated by this procedure to the Records Processing Facility: • Completed Chain of Custody form.

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5.0 PROCESS FLOW CHART

Flow chart is to be included at a later date.

6.0 ATTACHMENTS

Attachment 1 Hazard Review for Game Animal Sampling (2 pages)

7.0 REVISION HISTORY

Author: Phil Fresquez

Revision No. *[Enter current revision number, beginning with Rev.0]*	Effective Date *[DCC inserts effective date for revision]*	Description of Changes *[List specific changes made since the previous revision]*	Type of Change *[Technical (T) or Editorial (E)]*
0	10/04/96	New Document	T
1	3/99	Reformatted in accordance with LIR300-00-01, Safe Work Practices.	E
2	4/01	Added new Section 9.0, Training.	T
3	4/02	Change in directorate.	E
4	4/03	Team name change to Environmental Surveillance.	E
5	5/12/04	Updated and reformatted document to conform to MAQ procedures.	E
6	05/31/05	Quick-change revision to convert HCP to HR, remove chain-of-custody form, and refer to new c-of-c procedure.	T
0	1/30/08	Renumbered and reformatted to WES Division	E

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ATTACHMENT 1: HAZARD REVIEW FOR GAME ANIMAL SAMPLING	
Hazard Review for Game Animal Sampling	Records Use only

Work Tasks/Steps	**Hazards, Concerns, and Potential Accidents; Likelihood/Severity**	**Controls, Preventive Measures** (e.g., safety equipment, administrative controls, etc.)	**Hazard Level** (from IMP 300-00-00, Hazard Grading Matrix)
Collect samples as described in this procedure.	Oncoming vehicular traffic improbable/catastrophic = medium	If you are collecting a sample from a road kill on the side of a road, park your vehicle as close to the animal as possible and activate the hazard lights. Be cognizant of the fact that you are next to a road and be aware of oncoming traffic. Move animal off pavement and as far away from traffic as practical.	Low
Same as above.	Use of knives improbable/moderate = minimal	Use care when cutting and wear cut-resistant (Kevlar) gloves.	Low
Same as above.	Handling heavy objects (loading/unloading/transporting/ positioning) Occasional / moderate = low	Use proper lifting techniques.	Low
Same as above.	Blood-borne pathogens improbable/critical = low	Wear safety glasses and gloves.	Low

Wastes or Residual Materials Resulting from Process

After processing, bag all animal parts not used and dispose at the LA area landfill. Do not place animal parts into any dumpster.

Emergency Actions to Take in Event of Control Failure

For all injuries, provide first aid and see that injured person is taken to Occupational Medicine (only if immediate medical attention is not required) or the nearest hospital. Notify supervisor and group office as soon as possible.