

Worker Protection and Occupational Health

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Worker Protection and Occupational Health

- **Topics of Discussion:**
 - **Function of an Occupational Health Program**
 - **Employee Health Monitoring**
 - **APHIS Occupational Medical Monitoring Program**
 - **HPAI 2014 – 2015**
 - **Challenges**
 - **Preparedness**
 - **Worker Protection for APHIS Employees**
 - **Public Health Monitoring**
 - **Incident Stress Management**

Worker Protection and Occupational Health

Function of an Occupational Health Program

- Protect and promote the health and safety of employees
- Protect the public and the environment from hazards that may arise from workplace activities
- The primary focus is on the prevention of occupational injuries and illnesses and
- The prevention of occupationally related harm to public health and the environment

Worker Protection and Occupational Health

Employee Health Monitoring

- The goal of monitoring is to ensure that measures to protect the employee from workplace hazards are effective by conducting medical surveillance
- The practice of occupational medicine relies on the profession of industrial hygiene
- The industrial hygienist assesses the:
 - Effectiveness of procedures
 - Effectiveness of work practices
 - Effectiveness of engineering controls and
 - Effectiveness of Personal Protective Equipment for protecting employee health

Worker Protection and Occupational Health

- APHIS Occupational Medical Monitoring Program
 - Administered by Federal Occupational Health (FOH) an agency of the Department of Health and Human Services
 - Covers all 8,000+ employees, of which approximately 2,500 employees are enrolled
 - Services include medical monitoring, environmental health services, and ergonomics
 - Medical Monitoring needs are identified through development of SOPs, job hazard analyses (JHA), and documenting potential hazard exposures
 - FOH Medical Advisor reviews potential hazard exposures and determines medical needs
 - Needs may include serum titers (rabies, Brucella, Q Fever, etc.), vaccinations (rabies, tetanus, influenza, etc.), TB testing, respiratory medical clearance, etc.

XENOMORPH BLEEDING SOP

Purpose

To provide the steps needed to bleed Xenomorphs at a quarantined farm or facility.

Scope

This procedure only applies to the XYZ farm in Nowhere, USA.

Precautions and Limitations

Ensure all required equipment and PPE are on hand before arriving at the XYZ facility.

Procedure Steps

- 1) Place blood collection kit in plastic bucket, tray, or plastic bag.
- 2) Don Tyvek suit, puncture resistant gloves, face shield, or goggles, respiratory protection, and protective boots.
- 3) Discuss with farm/facility management hazards at this location.
- 4) Establish clean/ dirty line
- 5) Enter the premises.
- 6) Ensure adequate lighting.
- 7) Use rope, snare or squeeze chute to restrain the animal.
- 8) Prepare collection kit and needle for the blood draw.
- 9) Locate the anatomical landmarks for the blood draw.
- 10) Draw the sample.
- 11) Place sample in approved container.
- 12) Free the animal.
- 13) Leave the pen.
- 14) Proceed to the clean/ dirty line.
- 15) Decontaminate using the approved chemical decontamination process.
- 16) Double bag the sample kit.
- 17) Doff the PPE.
- 18) Dispose of the PPE as appropriate.
- 19) Exit the farm/facility.
- 20) Return to the office.
- 21) Prepare the sample for shipment to the lab.
- 22) Dispose of sharps
- 23) Decontaminate the lab area where the sample was readied for shipment.

JOB HAZARD ANALYSIS

Job Description <u>Xenomorph</u> Blood Collection		JHA No. 001
Job Location: Animal Pens		Department Name: SHEPB
Prepared By: (Originator) George P. <u>Burdell</u>		Date: 7/28/2016
Signatures - Team Members		
SEQUENCE OF BASIC JOB STEPS	POTENTIAL ACCIDENTS OR HAZARDS	RECOMMENDED SAFE JOB PROCEDURE
1.) Place blood collection kit in plastic bucket, tray, or plastic bag.	Broken glass – need to resupply	Use plastic collection tube. Exercise caution, work over a ‘soft’ surface
2.) Don Tyvek suit, puncture resistant gloves, face shield, or goggles, respiratory protection, and protective	Eye exposure to biological material from the infected animal	Face shield or goggles
	Needle stick	Wear puncture resistant glove on hand subject to potential needle stick.
	Inhalation/ingestion of airborne infectious material	Wear an N-95 filtering face piece respirator
3.) Discuss with farm/facility management hazards at this location.	Uneven walking surfaces – a slip or fall	Walk, do not run. Take your time and use baby steps when walking surface is uncertain. (covered in manure)
	Dimly lit. Unseen hazards.	Ensure adequate lighting. Use temporary lighting if necessary.
	High temperatures – heat stress related issues.	Ensure portable ventilation is used. Limit your stay time to 15 minutes or less per entry.

**OCCUPATIONAL MEDICAL MONITORING PROGRAM
OCCUPATIONAL EXPOSURES**

(Please print all information)

Section A (To be completed by employee)

Name (Last, First, Middle Initial) BUSY-GUY, Ima		Social Security Number 123-45-6789	Work Address (Include Laboratory, Building and Room) 123 East Happy Go Lucky Blvd. Northwest Wallis Parrot View, Nebraska 01234
Date of Birth 09/27/1900	Title, Series, Grade Veterinary Medical Officer, GS0504-11		
Sex <input type="checkbox"/> Female <input checked="" type="checkbox"/> Male	Telephone Number 987-654-3210		

Section B (To be completed by employee)

Are you a respirator user? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, what type? (Check all that apply) <input checked="" type="checkbox"/> Negative Pressure <input checked="" type="checkbox"/> PAPR <input checked="" type="checkbox"/> SCBA			Pesticide Applicator <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Name of Occupational Exposure (List all actual/potential occupational exposures with which you work. Use continuation sheet, if necessary)	CAS or EPA Number	Work Use (Note 1)	Route of Entry S, I, R (Note 2)	Check box(es) Frequency (Note 3)			Check box(es) Duration (Note 4)			
				1F	2F	3F	4F	1D	2D	3D
Noise - Pilot of Bell Model 63T Helicopter	NA	O, AP, SH, E	R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Noise - Bird Relocation near USMC Harrier Jets	NA	O		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Noise - Inspections of Dog/Puppy Rearing Facilities	NA	O & Indoors		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pesticide - Cumophos applications on horses/cattle		O & Indoors	S,I,R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pesticide - Monitoring of Methyl Bromide Fumigations	NA	O & Indoors	S,I,R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Biological - Avian Influenza Surveillance	NA	O & Indoors	S,I,R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chemical - Ammonia in Heated Chicken Houses	NA	Indoors	S, R	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chemical - Isopropyl Alcohol for Insect samples		BT	S,I,R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monkeys - Inspections - Exposed to Feces & Urine	NA	O & Indoors	S,I,R	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Deer - Perform necropsies of tick infested deer	NA	O & Indoors	S,I,R	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Beaver Dam Removal Operations with Plastic Explosive	NA	O		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aerial Gunning from Un-Manned Drone	NA	O, AC, SH,E		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Radiation - Sterilization Irradiator Operator	NA	Indoors		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hazardous Waste - Spent Dibrom Trap Storage	NA	Indoors	S,I,R	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rabies - Pickup both live and dead rabid animals	NA	O	S	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ozone form Office Copier	NA	Indoors	R	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Specify other work use:

Note 1 (Work Use): FM-Fume-Hood, BT-Bench Top, BS-Back Sprayer, T-Tractor, BSC-Biological Safety Cabinet, O-Outdoors, AP-Aircraft, E-Explosives, SH-Shooting; Note 2 (Route of Entry): S-Skin, I- Ingestion, R- Respiratory; Note 3 (Frequency): 1F-Daily, 2F-Weekly, 3F-Monthly, 4F-Seasonal; and Note 4 (Duration): 1D-Less than 1 hour, 2D-1 to 8 hours, 3D-More than 8 hours.

Section C (To be completed by employee)

I have reviewed the information and certify that it is accurate to the best of my knowledge.

Address	Signature	Telephone Number
		Date

Section D (To be completed by employee's supervisor)

I have reviewed the information provided by the employee and certify that it is accurate to the best of my knowledge.

Address	Signature	Telephone Number
		Date

Worker Protection and Occupational Health

- HPAI 2014 – 2015
 - APHIS responders working in the hot zones (potentially infected/contaminated premises) are required to be in Level C personal protective equipment
 - Protective clothing (e.g. Tyvek ® or Tychem ®)
 - Gloves
 - Respirator (at a minimum, an N-95 disposable respirator)
 - Eye protection
 - Boots or protective foot covers
 - Seasonal influenza vaccine (highly encouraged)



**ADHIS SAFETY OFFICER 2016
RALEIGH, NC**



Worker Protection and Occupational Health

- HPAI 2014 – 2015
 - Respiratory Medical Clearance Evaluation
 - Mandated by 29 CFR 1910 as part of respiratory protection program
 - FOH Medical Advisor established criteria for a baseline evaluation
 - Criteria include:
 - History and physical examination
 - Vision and hearing
 - Chest x-ray
 - ECG
 - Spirometry
 - Blood chemistries, CBC, and urinalysis
 - Update tetanus/diphtheria; encourage seasonal influenza vaccination

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- HPAI 2014 – 2015
- Challenges
 - Readiness
 - APHIS was prepared to respond to HPAI after gearing up for a potential response to H5N1 in 2005
 - Essentially nothing happened in the years following, until 2014
 - Medical clearances for respirator use had fallen off the radar
 - Suddenly the need to medically clear several hundred responders in a timely manner became a paramount priority...employees without current clearances could not perform work requiring the use of a respirator

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- Onsite Medical Services

- Since 2006, APHIS has maintained an interagency agreement with FOH to provide onsite medical services in the event of an emergency response
- In January, 2015, the agreement was exercised for the first time to Modesto, CA for a small outbreak at a turkey producer
- Discussions were held with FOH in March, 2015, to prepare for a possible larger outbreak response
- A process was agreed upon for an expedited respiratory medical clearance evaluation
- For the Minnesota area responses, we were able to utilize an FOH clinic in St. Paul
- Then came Iowa...

Worker Protection and Occupational Health

- **HPAI in Iowa**
 - Iowa presented new challenges
 - Multiple infected sites scattered great distances
 - No FOH clinics nearby
 - Bringing on large numbers of new hires needing baseline respiratory medical clearances
 - Respirator fit-testing large numbers of new hires
 - **New Paradigm Needed**
 - **Enter the Academy...**



Worker Protection and Occupational Health

- **The Academy Provided:**
 - **Onboarding of personnel**
 - New Employee Orientation
 - Government Badging
 - Government Phones/Computers
 - **Medical Clearances**
 - **Training**
 - Fit-testing of respirators and training in how to use a respirator
 - Donning and doffing personal protective equipment
 - Decontamination
 - Working with poultry

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- Medical Clearances
 - National Center for Animal Health, Ames, IA became the center for the Academy
 - Existing clinic spaces were converted for use by FOH
 - Occupational health nurse and a physician were assigned to the unit
 - Up to 30 responders were processed during a week of the Academy, usually with a 24 hour turnaround
 - During the life of the Academy over 350 responders received medical clearances

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- **Public Health Monitoring**
 - Avian influenza viruses of public health concern are known to, or have the potential to cause serious disease in humans and also because of their pandemic potential
 - The Centers for Disease Control and Prevention (CDC) deemed the risk of infection from US HPAI H5 viruses to the general public to be low
 - May, 2015, a small number of APHIS responders became ill with influenza-like illness (ILI)
 - Evaluated and determined not to be HPAI
 - MN and other states began bombarding CDC wanting more information about what was going on and those responders returning to their state
 - CDC reaches out to APHIS to develop an ILI monitoring process

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- **Public Health Monitoring**
 - A working group consisting of APHIS subject matter experts and the CDC's Influenza Division began work that same month to develop a monitoring process
 - A well crafted process would reassure the public, partners, and stakeholders, should a human infection occur, that all parties were taking this response seriously
 - The process developed addressed the following objectives:
 - Effectively identifying ILI in responders
 - Engaging public health to provide appropriate testing for influenza virus infections (including seasonal influenza)
 - Ensuring prompt medical evaluation of ill responders
 - Engaging public health to provide appropriate testing for avian influenza viruses
 - Ensuring all potentially exposed individuals are monitored appropriately

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- **Public Health Monitoring**
 - The Safety Officers were assigned the task of coordinating ILI monitoring
 - Newly deployed responders were provided:
 - A description of the ILI monitoring plan
 - A list of signs and symptoms for self-monitoring
 - Any signs and symptoms were to be reported to the Safety Officer
 - State Public Health would be notified to direct proper testing for influenza viruses
 - At the time of demobilization, responders were instructed to self-monitor for 10 days
 - The APHIS resource ordering system generated a daily list of those responders who were demobilized and the list was sent to the CDC, who then sent to state/local public health departments
 - Language was inserted into contracts requiring contractors to follow the same monitoring guidelines

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- **Public Health Monitoring**

- State and Federal officials implemented the monitoring protocol during the latter portions of the 2014 – 2015 HPAI outbreaks and during the Indiana H7N8 outbreak in January 2016
- APHIS-Veterinary Services-One Health Coordination Center hosted a workshop in August, 2016 with Federal and State public and animal health agencies to conduct a “Review of ILI Monitoring During Avian Influenza Outbreaks”
- Objectives included:
 - Identify best practices for successful monitoring of people exposed to HPAI during outbreak responses in the US
 - Determine gaps in current monitoring policies, procedures, and practices for people exposed to HPAI viruses
 - Revise current protocols to reflect the lessons learned and outcomes from the review

Worker Protection and Occupational Health

- **Critical Incident Stress Management**
 - A formal, highly structured and professionally recognized process to assist responders with:
 - Sharing experiences
 - Venting emotions
 - Learning about stress reactions and symptoms
 - Referrals for treatment if warranted
 - It is not psychotherapy. It is a confidential, voluntary, and educative process, sometimes called “psychological first aid.”