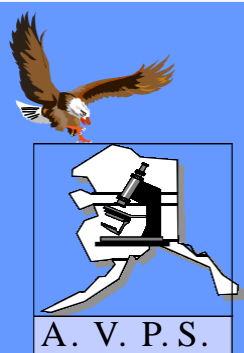


# Post Necropsy protocols



Kathy A. Burek, DVM, MS, DACVP  
**Alaska Veterinary Pathology Services**

# Contact AVPS Tech (Natalie Rouse) and Kathy!

**Fixed**



**Frozen**



# Frozen Tissues – What to do

- Freeze as quickly as possible
- As cold as Possible!
- Contact AVPS Tech and Kathy
- Shipping for distribution / Case management



# Shipping samples

- Let us know when they are coming
- Tracking number
- Ship with blue ice packs or dry ice
- No FEDEX!
- Cargo Priority / Goldstreak
- Send COD
- Proper coolers
- Multiple layers of bags
- SQUEEZE OUT THE AIR!!!!
- Paperwork!!
- NO NASTY SAMPLES!!!!



# Stickers

- If a carcass = CHILL stickers
- If already frozen use FREEZE stickers
- EXEMPT – Normal animal
- UN3373 – Animal that died
- NOT HAZMAT!!!!

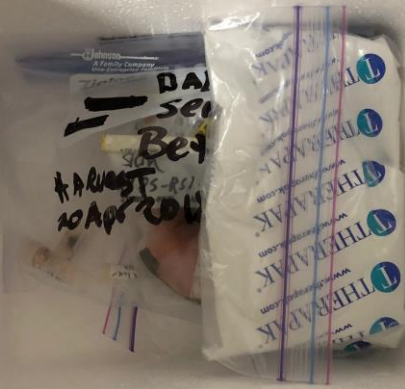
CHILL

FREEZE

EXEMPT ANIMAL  
SPECIMEN

**Biological  
Substances  
Category B**





MARINE MAMMAL STRANDING REPORT - LEVEL A DATA

FIELD # 201008

NMFS REGIONAL # \_\_\_\_\_ NMFS USE: \_\_\_\_\_ NATIONAL DATABASE (NMFS USE): \_\_\_\_\_

COMMON NAME: Gray whale

EXAMINER Name: Kelly Krueger

Address: 212 W. Marine Way, Kodiak, AK 99588

Phone: 907-486-4443

Spawning Agreement or Authority: NMFS Section 109(b) partner

CONFIDENCE CODE (Check ONE)

INITIAL OBSERVATION

DATE: Year 2010 Month June Day 21

First Observed: ☒ Beach/Lowest ☐ Floating ☐ Other \_\_\_\_\_

LOCATION: State Alaska County Kodiak Borough Kodiak City Kodiak

Body of Water: Pigeon Point Bay

Locality Details: Shore edge of Pigeon Point, 1/2 mile south of Pigeon Point, 1/2 mile west of Pigeon Point, 1/2 mile north of Pigeon Point, 1/2 mile east of Pigeon Point, 1/2 mile south of Pigeon Point, 1/2 mile north of Pigeon Point, 1/2 mile west of Pigeon Point, 1/2 mile east of Pigeon Point

Lat (DD, MM, SS): 58.31, 158.21

Long (DD, MM, SS): 158.21, 58.31

How Determined (Check ONE)

☒ GPS ☐ Map ☐ Other \_\_\_\_\_

CONDITION AT INITIAL OBSERVATION (Check ONE)

☒ 1. Fresh Dead ☐ 2. Advanced Decomposition ☐ 3. Moderate Decomposition ☐ 4. Condition Unknown

LIVE ANIMAL INFORMATION

INITIAL LIVE ANIMAL DISPOSITION (Check one or more)

☐ 1. Left at Site ☐ 2. Dead at Site ☐ 3. Fresh Dead ☐ 4. Advanced Decomposition ☐ 5. Moderate Decomposition ☐ 6. Condition Unknown

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# TADA!



Biological  
Substances  
Category B



Biological  
Substances  
Category B



## FREEZE

AK Air Cargo cust ID number **CID 33153**  
TO: Dr. Kathy Burek-Huntington  
Alaska Veterinary Pathology Services  
23834 The Clearing Dr.  
Eagle River, 99577  
Phone to Notify: 907 242-2566  
Sonia 303 570-9898

## CHILL

## CHILL

AK Air Cargo cust ID number **CID 33153**  
TO: Dr. Kathy Burek-Huntington  
Alaska Veterinary Pathology Services  
23834 The Clearing Dr.  
Eagle River, 99577  
Phone to Notify: 242-2566  
Sonia 303 570-9898

AK Air Cargo cust ID number **CID 33153**  
TO: Dr. Kathy Burek-Huntington  
Alaska Veterinary Pathology Services  
23834 The Clearing Dr.  
Eagle River, 99577  
Phone to Notify: 242-2566  
Sonia 303 570-9898

**EXEMPT ANIMAL  
SPECIMEN**

**EXEMPT ANIMAL  
SPECIMEN**

# What happens to the Samples?

- DMSO – SWFSC
  - Genetics archives
- Teflon bags – NIST
  - Tox Archive
- Small Whirls
  - DZ Archive
  - Research projects
    - Protozoal PCR
    - Virus background
    - FAs and SIs

## MINIMAL SEAL SAMPLING

ANIMAL ID:		Necropsy Date:	
Location:			
Latitude:		Longitude:	
Reported by:		Contact info:	
Necropsied by:		Contact info:	
Species:		Age (circle): AD; SA; YOY; Pup; Fetus; Unknown	
Forms done: Level A HI		Sex (circle): M F Unknown	
Straight Length: cm/in		Weight: lb/kg est or actual	
Axillary girth: cm/in		blubber depth: VAX = mm; X = mm	
Carcass Code			
(circle): 2 (fresh); 2.5 (mild decomp); 3 (moderate); 4 (poor); 5 (mummified / skeletal)			
Body condition			
(circle): Robust; Good; Average; Poor; Emaciated			
Brief History:			
Necropsy notes:			
<b>10% NBF DON'T FREEZE</b> Skin Uterus Muscle Ovary / testes Lung Placenta Heart Stomach Liver Intestine Spleen Lymph node Kidney Brain Lesions		<b>small Whirl (FREEZE)</b> Skin Uterus Lesions Claw Muscle Whisker Lung Placenta Heart Stomach Liver Intestine Spleen LN Kidney Brain	
<b>DMSO VIAL (Freeze)</b> Skin Muscle <b>Teflon bag (VERY FRESH*)</b> Blubber Liver Kidney <b>Other:</b>		<b>Large whirl with foil (FREEZE) #</b> Blubber VAX or Xiphoid (circle) <b>Amber vial (FREEZE)</b> Bile <b>Centrifuge Tubes (FREEZE)</b> Stomach content (15ml) Urine (15ml) Feces (50ml) <b>Museum kit - Color top cryovials (FREEZE)</b> Liver, kidney, muscle, spleen, heart <b>Whirl (FREEZE)</b> whisker, claw <b>Large bag (FREEZE)</b> Skull	
<b>Swabs (FREEZE)</b> Nasal (VTMx2) Rectal (VTMx2) <b>Quart Ziplock (FREEZE)</b> Mandible <b>Large bags (FREEZE)</b> Entire stomach			

\*For Swabs and Teflon samples: ONLY quite fresh non-frozen animals. VAX = ventral axillary; X = Xiphoid



# What happens to the Samples?

## Swabs (FREEZE)\*

Nasal (VTMx2)

Rectal (VTMx2)

## Quart Ziplock (FREEZE)

Mandible

## Large bags (FREEZE)

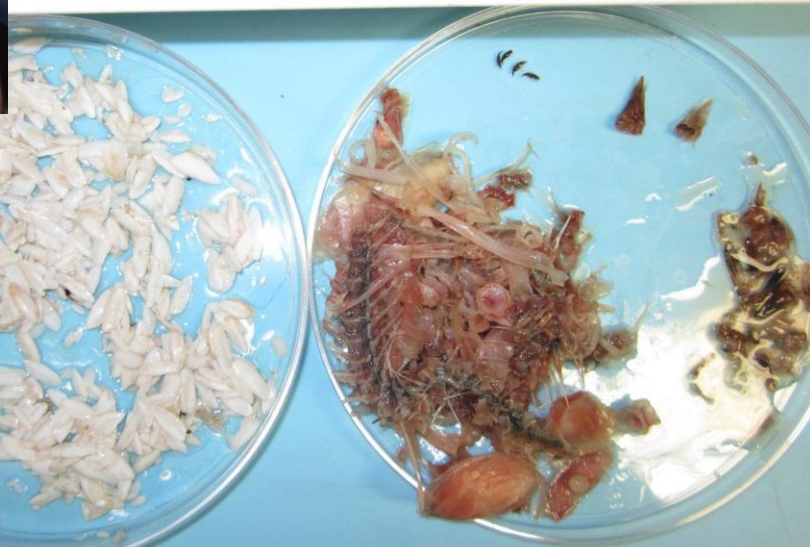
Entire stomach

- Swabs
  - Influenza PCR
  - morbillivirus PCR
- Mandible / teeth
  - Aging
- Stomach – ADFG
  - Prey analysis

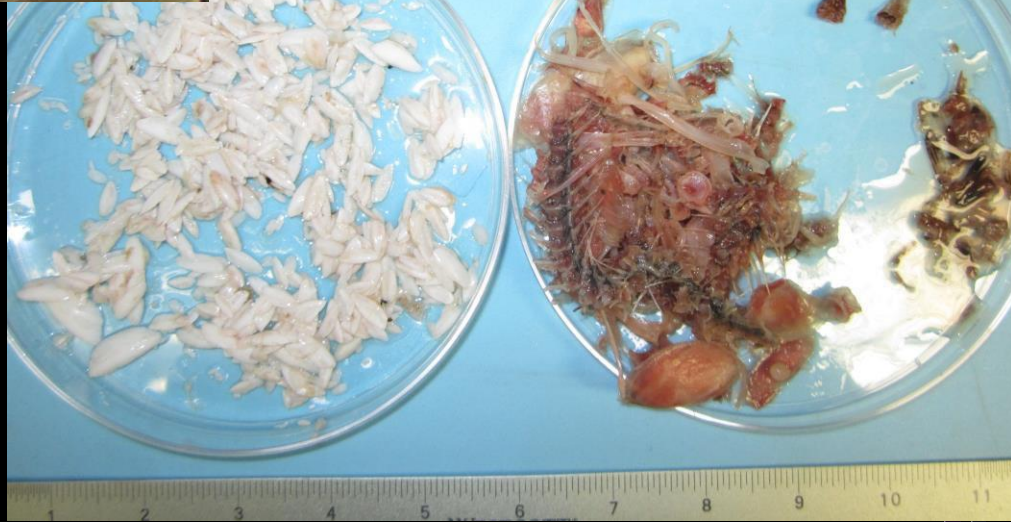




**Seal - top left are squid eyeballs and quills, right are squid parts, bottom left are whole squid, and bottom right are squid beaks.**



**Beluga - fish otoliths, fish bones, polychaete jaws, isopod telsons, and shrimp parts**



# What happens to the Samples?

- Blubber and amber vials- NWFSC
  - POPS
  - PAHs
- Cent tubes – NWFSC HABS
  - Domoic acid
  - PSP
- Museum – Fairbanks

**Large whirl with foil (FREEZE) #**  
Blubber VAX or Xiphoid  
(circle)

**Amber vial (FREEZE)**  
Bile

**Centrifuge Tubes (FREEZE)**  
Stomach content (15ml)  
Urine (15ml)  
Feces (50ml)

**Museum kit - Color top cryovials (FREEZE)**

Liver, kidney, muscle, spleen, heart

**Whirl (FREEZE)**  
whisker, claw

**Large bag (FREEZE)**  
Skull





# Formalin Safety

- Protect yourself from fumes!
  - fume hood
  - or in a well ventilated area (outside with a breeze)
- Don't base it on whether you can smell it!



## PPE

- Gloves
- Safety goggles
- Apron
- Rubber boots

## Handling Procedures

- Keep all containers tightly closed to minimize hazards
- Do not allow formalin to contaminate clothing
- Be prepared for a spill!



# Formalin First Aid

## Skin Contact

- Symptoms
  - Redness, pain
- First Aid
  - Immediately flush skin with water for at least 15 minutes. Seek medical attention if necessary

## Eye Contact

- Symptoms
  - Redness, pain, blurred vision, blindness
- First Aid
  - Immediately flush skin or eyes with water for at least 15 minutes. Seek medical attention if necessary

## Hypersensitivity

- Be aware it can happen
- Consult a doctor



# Formalin First Aid

## Inhalation

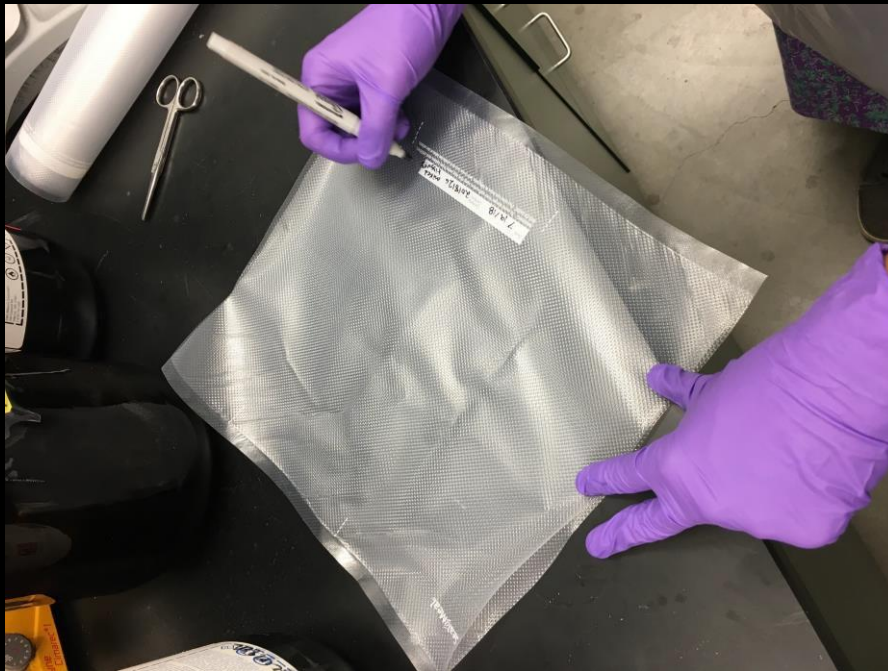
- Symptoms
  - May cause sore throat, coughing, shortness of breath. Also causes irritation of respiratory tract.
- First Aid
  - Remove to fresh air immediately. Get medical attention immediately.

## Contaminated clothing

- Symptoms
  - Redness, pain, intense burning, may cause blister formation
- First Aid
  - Remove contaminated clothing and immediately flush affected area with water for at least 15 minutes. Seek medical attention if necessary.
- Decontamination
  - Place clothing in a well ventilated area to allow formalin to off-gas. Clothing can be washed to speed up process

# Packaging

**Label: date, ID, and type of tissues**



## Double seal one side



**Drain out excess formalin in separate bucket**



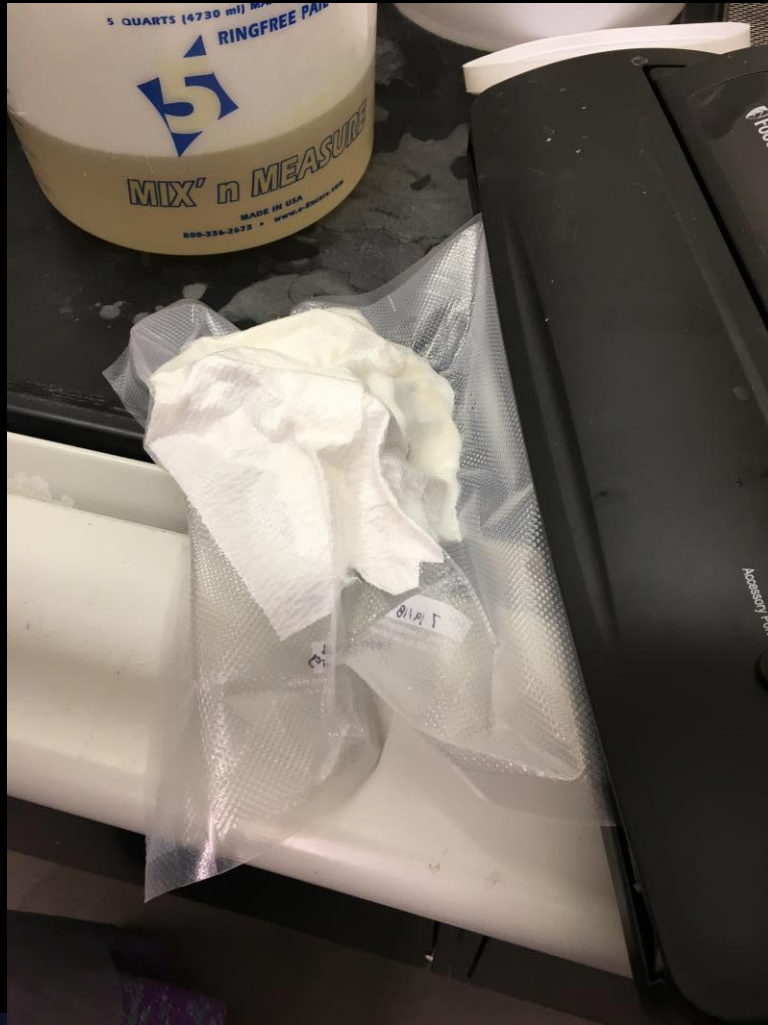
**Place colander over bucket with several paper towels and dump the samples out**



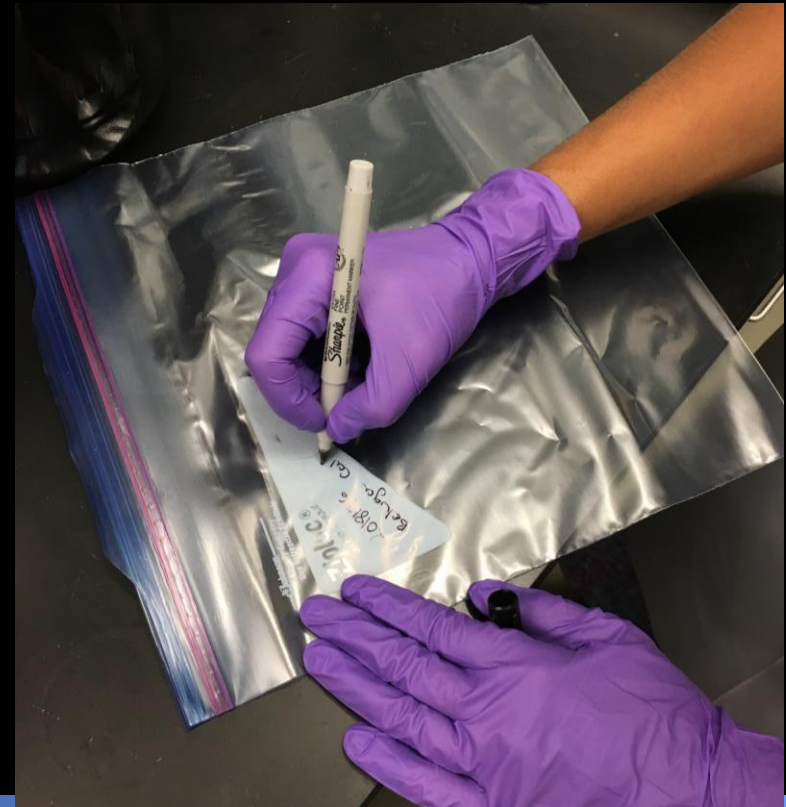
**Squeeze out any excess.  
No liquid for shipping!**



**Wrap the samples in more paper towels and vacuum seal (or zip)**

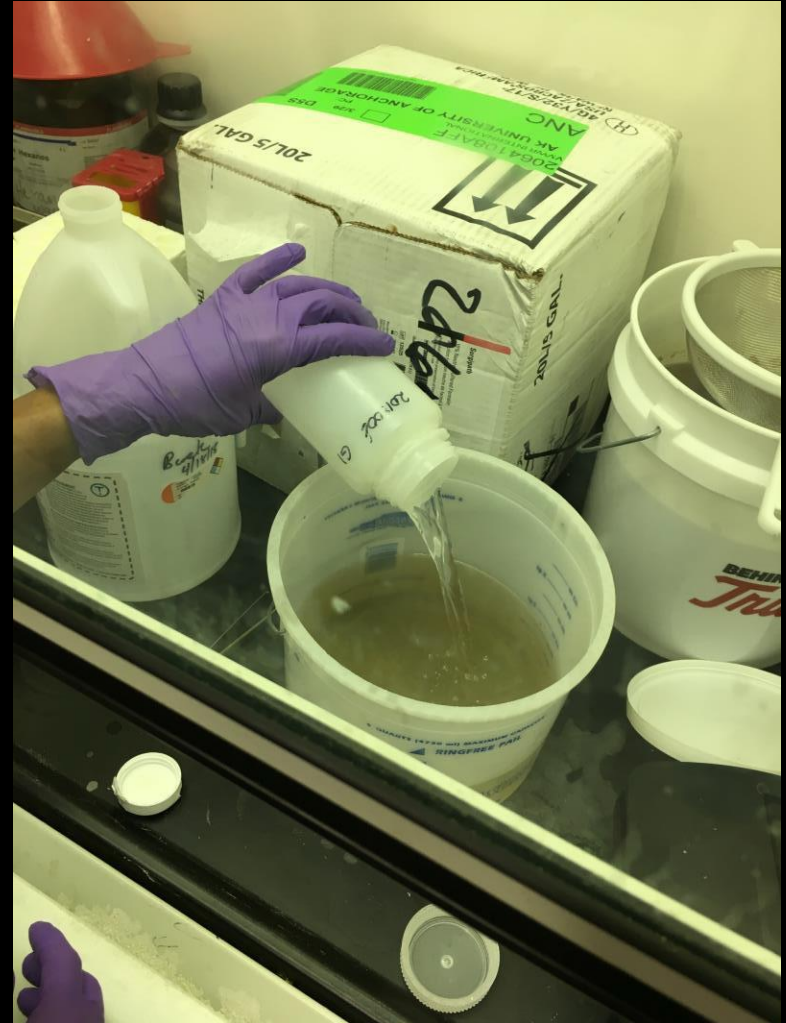


**Place into another zip lock, labeled again. SQUEEZE OUT AIR!!!**



# Disposal

- Neutralize the formalin - Hyde-away
- Stir
- Let it sit in ventilated area
- Down the drain with lots of water.
- Soap and water clean up.



# Ship it to the lab

- Contact Dr. Burek about the case
- Can ship directly to the processing lab or to AVPS
- Include the form!!!

ALASKA VETERINARY PATHOLOGY SERVICES  
23834 The Clearing Dr. / Eagle River, AK 99577-3072  
PH (907) 242-2566 / FAX (907) 696-3565

**Specimen Submission Form:**

Date: \_\_\_\_\_  
Referring Veterinarian / biologist: \_\_\_\_\_  
Clinic / Agency: \_\_\_\_\_  
Address: (Optional if a regular client) \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone ( ) \_\_\_\_\_ FAX ( ) \_\_\_\_\_ email: \_\_\_\_\_

**Urgent:** ( ) yes -- please contact Dr. Burek ( ) no

Who does HCS bill? \_\_\_\_\_

Who receives the slides? AVPS

**Type of report requested:**

( ) full report; ( ) Mini report (no descriptions)

**Patient information:**

Owner: \_\_\_\_\_

Animal name or ID no : \_\_\_\_\_ SPECIES: \_\_\_\_\_

Permit no. : \_\_\_\_\_

Age \_\_\_\_\_ Sex: Male / Female

If necropsy: \_\_\_\_\_

Carcass condition: ( ) fresh ( ) mild autolysis ( ) Moderate autolysis ( ) Frozen;

Manner of death: ( ) died; ( ) Euthanized

Animal's weight \_\_\_\_\_

**Brief clinical history:** Please include duration of illness, number of animals involved, relevant vaccination history, clinical pathology data, other samples submitted and a description of any lesions. (Complete on back of form if necessary):

Sample(s) submitted: \_\_\_\_\_

**Clinical diagnosis(es):** \_\_\_\_\_

SHIPPING: FIX for 24 hours if a small piece, longer for larger pieces, pour off the formalin with just enough to keep the sample moist, wrap WELL in multiple layers of water proof containers (ziplocks are OK) padded by absorbable material. Put in a sturdy shipping container. Put DIAGNOSTIC SAMPLES and UN3373 stickers on the shipping container. Ship to: **LeRoy Brown / Histology Consultation Services / 207 N. Harkness Street / P.O. Box 770 / Everson, WA 98247**

For HCS Use Only:

Date Received: \_\_\_\_\_

Date trimmed: \_\_\_\_\_

AVPS Case No: \_\_\_\_\_