### Fish Health Inspection Report

**Company:** Blackwater Creek Koi Farms  
**Facility:** Blountstown Facility  
**Location:** 24946 State Road 69 NE, Blountstown, FL 32424 USA  
**Site Manager:** Joe Pawlak  
**Phone:** (352) 357-4563  
**Water Source:** Well  
**Water Treatment:** None

#### Type of Fish Examined: Hatchery

<table>
<thead>
<tr>
<th>Species</th>
<th>Lot ID</th>
<th>Age</th>
<th>Number in Lot</th>
<th>Eggs (E) or Fish (F) Origin</th>
<th>Sample Date(s)</th>
<th>Viruses</th>
<th>Bacteria</th>
<th>Parasites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carassiusaurus</td>
<td>M12-089</td>
<td>~12mo</td>
<td>10,000</td>
<td>(E) Blackwater Creek Koi Farms (FL)</td>
<td>08-Feb-12</td>
<td>P24B</td>
<td>15</td>
<td>neg</td>
</tr>
<tr>
<td>goldfish</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P42B</td>
<td>15</td>
<td>neg</td>
</tr>
<tr>
<td>Cyprinus carpio koi koi</td>
<td>M12-090</td>
<td>~12mo</td>
<td>200,000</td>
<td>(E) Blackwater Creek Koi Farms (FL)</td>
<td>08-Feb-12</td>
<td>P24B</td>
<td>135</td>
<td>neg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>P42B</td>
<td>135</td>
<td>neg</td>
</tr>
</tbody>
</table>

*Notes: * See other side of sheet for explanations of Pathogens - Methods and Results coding.

All lots were tested according to World Organization for Animal Health (OIE) "Manual of Diagnostic Tests for Aquatic Animals" (2009) protocols. At the time of collection, all fish were visually examined by Kathleen Hartman, DVM (USDA/APHIS/VS) for the presence of gross clinical signs consistent with Epizootic Ulcerative Syndrome (EUS). None of the fish examined from lot M12-089 or M12-090 had clinical signs of EUS.

**Samples Collected By:** Sherri Kasper, DVM  
**Affiliation:** Northwood Animal Hospital  
**Telephone:** (850) 385-8181  
**Client Reference #:**

**Inspecting Biologist:** William R. Keleher, Jr., Fish Health Official

*Notes are located on the last Page of this report*
PATHOGEN ABBREVIATIONS

BACTERIAL PATHOGENS:
Encoded as follows:
A = Live, healthy fish
B = Moribund fish
C = Mortalities

Primary Isolation
RESULTS ARE REPORTED AS (-) IF NEGATIVE AND AS +/# SAMPLED IF POSITIVE.

In lots of fish less than one year of age, the age is listed in arabic numerals followed by mo. for month; for fish older than one year, the age is expressed in arabic numerals followed by a plus sign to indicate "older than".

Findings are reported in columns from top to bottom for each lot as follows: number of fish examined; methods used; results. Positive results include the number of positive individuals (or pools).

RESULTS ARE REPORTED AS (-) IF NEGATIVE AND AS #/# SAMPLED IF POSITIVE.

FOR BKD, APPROXIMATE LEVELS OF INFECTION ARE ALSO REPORTED (e.g., 10/50 fields)

FOOTNOTES:

First letter = Health of fish sampled
A = Live, healthy fish
B = Moribund fish
C = Mortalities

Number = Material sampled
1 = kidney
2 = hindgut
3 = lesion
4 = gill
5 = ovarian fluid
6 = seminal fluid
7 = Other___________________

Last letter = Pooling of samples
A = individual fish
B = five fish pools
C = Other___________________

PRINCIPAL DIAGNOSIS:
A = Standard culture medium TSA/BHI
B = Cytophaga agar
C = KDM2/SKDM2
D = Kidney smear/impression
E = Gram stain, kidney smears
F = Standard biochemical/physical test
G = Giemsa stain
H = Slide agglutination
I = Direct fluorescent antibody test
J = Indirect fluorescent antibody test
K = ELISA
L = Immunodot
M = Fluorescent immunoassay
N = PCR

PROTOZOAN/PARASITIC PATHOGENS:

A = Digestion method
B = Plankton centrifuge method
C = Examination of stained smear
D = Gross Examination
E = PCR (Polymerase Chain Reaction)
F = Microscopic Examination

Infectious Pancreatic Necrosis virus
Infectious Hematopoietic Necrosis virus
Viral Hemorrhagic Septicemia virus
Viral Erythrocytic Necrosis virus
Herpesvirus salmonis
Spring Viremia Carp virus
Yamame Tumor virus
Epizootic Epitheliotropic virus
Infectious Salmon Anemia virus
Epizootic Haematopoietic Necrosis virus
Aeromonas salmonicida
Yersinia ruckeri
Renibacterium salmoninarum
Myxobolus cerebralis
Ceratomyxa shasta
Proliferative Kidney Disease
Heterosporis spp.
Bothriocephalidis achiognathi (Asian Tapeworm)

Presumptive Diagnosis

Numbers = continuous cell lines used
1 = RTG-2 (rainbow trout gonad)
2 = CHSE-214 (chinook salmon embryo)
3 = FHM (fathead minnow)
4 = EPC (epithelioma papillosum cyprini)
5 = BF-2 (blue/gill fry)
6 = SHK-1/3 (salmon head kidney)
7 = ASK (atlantic salmon kidney)
8 = SSN-1 (striped snake head)
9 = KF-1 (kol fin)
10 = CCQ (Channel Catfish Ovary)

confirmatory diagnosis

H = Slide agglutination
I = Direct fluorescent antibody test
J = Indirect fluorescent antibody test
K = ELISA
L = Immunodot
M = Fluorescent immunoassay
N = PCR

Infectious Pancreatic Necrosis virus
Infectious Hematopoietic Necrosis virus
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**Facility:** Blountstown Facility  
**Location:** 24946 State Rd 69 NE, Blountstown, FL 32424, US  
**Site Manager:** Joe Pawlak  
**Phone:** (352) 357-4563  
**Water Source:** Well  
**Water Treatment:** None  
**Current Inspection:** 28-Nov-12  
**Prior Inspections:** 08-Feb-12

**Type of Fish Examined:** Hatchery

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<tr>
<th>Species</th>
<th>Lot ID</th>
<th>Age</th>
<th>Number in Lot</th>
<th>Eggs (E) or Fish (F) Origin</th>
<th>Sample Date(s)</th>
<th>Virus</th>
<th>Parasite</th>
</tr>
</thead>
</table>
| *Cyprinus carpio*  
*kipoi*          | M13-004| ~6-12 mo | 25,000        | (E) Blackwater Creek Koi Farms (FL)| 28-Nov-12      | P24B  | P42B     |
|                  |        |          |               |                                   |                | P94B  | P42B     |
|                  |        |          |               |                                   |                | 120   | 120      |
|                  |        |          |               |                                   |                | neg   | neg      |
| *Carassius auratus*  
*goldfish*       | M13-005| ~6-12 mo | 8,000         | (E) Blackwater Creek Koi Farms (FL)| 28-Nov-12      | P24C  | P42C     |
|                  |        |          |               |                                   |                | P42C  | P42C     |
|                  |        |          |               |                                   |                | 30    | 30       |
|                  |        |          |               |                                   |                | neg   | neg      |

Notes: * See other side of sheet for explanations of Pathogens - Methods and Results coding  
All lots were tested according to World Organization for Animal Health (OIE) "Manual of Diagnostic Tests for Aquatic Animals" (2009) protocols. At the time of collection, all fish were visually examined by Sherri Kasper, DVM for the presence of gross clinical signs consistent with Epizootic Ulcerative Syndrome (EUS).

**Samples Collected By:** Sherri Kasper, DVM  
**Affiliation:** Northwood Animal Hospital  
**Telephone:** (850) 385-8181  
**Client Reference #:**

**Inspecting Biologist:**

William R. Keleher, Jr., Fish Health Inspector

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PATHOGEN ABBREVIATIONS

<table>
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<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHNV</td>
<td>Epizootic Hematopoietic Necrosis virus</td>
</tr>
<tr>
<td>IHNV</td>
<td>Infectious Hematopoietic Necrosis virus</td>
</tr>
<tr>
<td>IPNV</td>
<td>Pancreatic Necrosis virus</td>
</tr>
<tr>
<td>ISAV</td>
<td>Infectious Salmon Anemia virus</td>
</tr>
<tr>
<td>KHV</td>
<td>Koi Herpes virus</td>
</tr>
<tr>
<td>RSIV</td>
<td>Red Sea Bream iridovirus</td>
</tr>
<tr>
<td>SVCV</td>
<td>Viral Viremia of Carp virus</td>
</tr>
<tr>
<td>VHSV</td>
<td>Viral Hemorrhagic Septicemia virus</td>
</tr>
<tr>
<td>EUS</td>
<td>Epizootic ulcerative syndrome</td>
</tr>
<tr>
<td>GYRO</td>
<td>Gyrodactylus salaris</td>
</tr>
</tbody>
</table>

In lots of fish less than one year of age, the age is listed in arabic numerals followed by mo. for month; for fish older than one year, the age is expressed in arabic numerals followed by a plus sign to indicate “older than”.

FOOTNOTES:

First letter = sampling method

- A = whole fry homogenates (minus head, tail, yolk sac if present)
- B = whole visceral homogenates
- C = kidney/spleen
- D = ovarian fluids
- E = kidney/spleen/heart
- F = kidney/spleen/liver
- G = kidney/spleen/heart/liver/pyloric caeca/gill
- H = kidney/spleen/swim bladder
- I = kidney/spleen/heart/liver
- J = brain/eye
- K = kidney/spleen/pyloric caeca/gill
- L = kidney/spleen/heart/swim bladder
- M = kidney/spleen/liver/swim bladder
- N = kidney/spleen/heart/liver/swim bladder
- O = kidney/spleenl/heart/pyloric caeca/gill
- P = kidney/spleenl/heart/liver/gill

Numbers = continuous cell lines used

1 = GF-1 (grunt fin)
2 = CHSE-214 (chinook salmon embryo)
3 = FHM (fathead minnow)
4 = EPC (epithelioma papillosum cyprini)
5 = BF-2 (bluegill fry)
6 = CCO (channel catfish ovary)
7 = ASK (atlantic salmon kidney)
8 = SSN-1 (striped snake head)
9 = KF-1 (koi fin)

Last letter = Pooling of samples

A = individual fish
B = five fish pools
C = other___________________

RESULTS ARE REPORTED AS (-) IF NEGATIVE AND AS # +/- # SAMPLED IF POSITIVE.

FOR BKD, APPROXIMATE LEVELS OF INFECTION ARE ALSO REPORTED (e.g., 10/50 fields)

VIRAL PATHOGENS:

- epizootic hematopoietic necrosis virus (EHNV)
- infectious hematopoietic necrosis virus (IHNV)
- infectious pancreatic necrosis virus (IPNV)
- infectious salmon anemia virus (ISAV)
- koi herpes virus (KHV)
- red sea bream iridovirus (RSIV)
- spring viremia of carp virus (SVCV)
- viral hemorrhagic septicemia virus (VHSV)
- epizootic ulcerative syndrome (EUS)
- gyrodactylus salaris (GYRO)

PARASITIC PATHOGENS

- epizootic hemorrhagic necrosis virus (EHNV)
- infectious hematopoietic necrosis virus (IHNV)
- infectious pancreatic necrosis virus (IPNV)
- infectious salmon anemia virus (ISAV)
- koi herpes virus (KHV)
- red sea bream iridovirus (RSIV)
- spring viremia of carp virus (SVCV)
- viral hemorrhagic septicemia virus (VHSV)
- epizootic ulcerative syndrome (EUS)
- gyrodactylus salaris (GYRO)