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*Northern River Basins Study*



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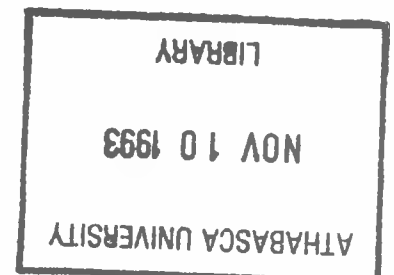
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by  
Hvenegaard, Paul J., and  
Boag, Thomas D.,  
D.A. Westworth & Associates Ltd.

Community Contributors:  
Steve Auger, John d'Or Prairie  
Norris Bates, Grande Prairie  
George Chalafieux, High Prairie  
Pierre Chowace, Sturgeon Lake  
John Crisp, Paddle Prairie  
Daniel Loonskin, Fox Lake  
Brian MacDonald, Grande Prairie  
Warren Matisskus, Beaver Ranch  
Dennis Siverston, Carcajou

NORTHERN RIVER BASINS STUDY PROJECT REPORT NO. 12  
**BURBOT COLLECTIONS,**  
**SMOKEY, WAPITI AND PEACE RIVERS**  
**OCTOBER AND NOVEMBER, 1992**

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## **PREFACE:**

The Northern River Basins Study was initiated through the "Canada-Alberta-Northwest Territories Agreement Respecting the Peace-Athabasca-Slave River Basin Study, Phase II - Technical Studies" which was signed September 27, 1991. The purpose of the Study is to understand and characterize the cumulative effects of development on the water and aquatic environment of the Study Area by coordinating with existing programs and undertaking appropriate new technical studies.

This publication reports the method and findings of particular work conducted as part of the Northern River Basins Study. As such, the work was governed by a specific terms of reference and is expected to contribute information about the Study Area within the context of the overall study as described by the Study Final Report. This report has been reviewed by the Study Science Advisory Committee in regards to scientific content and has been approved by the Study Board of Directors for public release.

It is explicit in the objectives of the Study to report the results of technical work regularly to the public. This objective is served by distributing project reports to an extensive network of libraries, agencies, organizations and interested individuals and by granting universal permission to reproduce the material.



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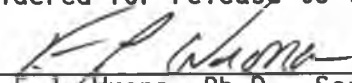
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Alberta, Canada, June, 1993.

Whereas the above publication is the result of a project conducted under  
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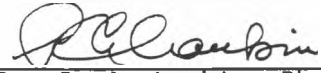
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(Date)



**BURBOT COLLECTIONS  
SMOKY, WAPITI AND PEACE RIVERS  
OCTOBER AND NOVEMBER, 1992**

**STUDY PERSPECTIVE**

Indigenous and other peoples in northern Canada have long considered burbot and particularly burbot liver a culinary delicacy. In lakes and rivers, burbot are aggressive carnivores at the top of the food web. They have the potential to bioaccumulate and biomagnify contaminants to levels that make these fish unfit for human consumption. Consumption advisories have been issued by the province of Alberta which recommend that the organs of burbot, including livers, not be eaten from fish caught in the upper reaches of the Peace River drainage and the Athabasca River upstream of Iron Point.

This report describes the population characteristics of burbot caught in the Smoky River and downstream through the Wapiti and Peace rivers to a site above the Vermilion Chute near the Fox Lake Indian Reserve. Burbot were collected from ten sites below pulp mills, at traditional fishing areas, or near Indian Reserves. These fish will be analyzed for contaminants such as heavy metals (eg. mercury), pesticides, dioxins, furans, chlorophenols, PCB's and other contaminants.

In addition to providing information on the burbot population in these three rivers, the report lists sites that native peoples identified as traditional fish harvesting areas. Only 4 sites were identified for the Peace River from its confluence with the Smoky River to Vermilion Chute. No sites were identified on the Smoky or Wapiti rivers.

***Related Study Questions***

- 1a) *How has the aquatic ecosystem, including fish and/or other aquatic organisms, been affected by exposure to organochlorines or other toxic compounds?*
- 4a) *What are the contents and nature of the contaminants entering the system and what is their distribution and toxicity in the aquatic ecosystem with particular reference to water, sediments and biota?*
- b) *Are toxins such as dioxins, furans, mercury, etc. increasing or decreasing and what is their rate of change?*
- 8) *Recognizing that people drink water and eat fish from these river systems, what is the current concentration of contaminants in water and edible fish tissue and how are these levels changing through time and by location?*
- 12) *What native traditional knowledge exists to enhance the physical science studies in all areas of enquiry?*



## EXECUTIVE SUMMARY

Burbot were collected between 24 October and 11 November, 1992, from the Wapiti, Smoky, and Peace rivers to determine the distribution of contaminants within this species throughout the NRBS study area. Three collection sites were located on the Smoky River, one on the Wapiti River, and six on the Slave River downstream from the Town of Peace River. Collection sites were located downstream from pulp mills.

In total, 157 burbot were collected using baited set lines and retained for contaminant analysis. Burbot collected from the Peace River ranged between 358 and 1043 mm TL and from 4 to 19 years. The longest burbot (1043 mm) was collected downstream from the Diashowa Mill and represents a length record for burbot in Alberta. Burbot from the Wapiti River had higher growth rates than burbot sampled from the Smoky or Peace rivers. Preferred habitats of burbot were those with moderately deep or deep water or low velocity such as side-channels, snyes and back eddies.

Few traditional fishing sites on the rivers were identified by native liaisons. Between the Keg and Wolverine rivers, the Peace River has several deep holes and is a traditional fish area. The only other traditional fishing areas identified were the mouths of the Wabasca, Lawrence, and Wentzel rivers and the Vermilion Chutes.

## **Acknowledgements**

A number of individuals contributed to the successful completion of this project. Special thanks are extended to Mr. Brad Kachuk, Alberta Forestry, Lands and Wildlife, Fish and Wildlife Division, Native Liaison Officer, Peace River Region for his provision of community contacts and logistical advice. Also, appreciation is extended to the Grande Prairie, Peace River and High Level Fish and Wildlife offices (D. Matier, D. Watty and J. Gerwing, respectfully) for the use of freezer space. We are especially grateful to Mr. G. Chalafieux (Resource Management Assistant) for his capable assistance and perseverance in the field. Denis Siverston, Steve Auger and Daniel Loonskin are acknowledged for their assistance in the field collections on the Peace River at Carcajou, John d'Or Prairie and Fox Lake respectively.



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## 1.0 INTRODUCTION

Forestry development in northern Alberta has potential to significantly affect fish populations and habitat (D.A. Westworth & Associates Ltd. 1992). A number of pulp mills presently operate within the Peace, Athabasca and Smoky River drainages. Ultimately, proposed expansion of the pulp and paper industry will require the construction of additional mills along these river systems. Discharge from extant pulp and paper mills, although subject to rigorous pollution standards, has the potential to exceed them. Expansion of the pulp and paper industry will release additional contaminants to northern river systems. The fate of environmental contaminants such as dioxins and furans in aquatic ecosystems and their cumulative effects is of general concern to northern residents who rely on fish as part of their diet.

Contaminants released by pulp and paper mills have been shown to bioaccumulate through aquatic food chains and affect wildlife. Bioaccumulation and biomagnification of environmental contaminants through aquatic ecosystems ultimately affects top predators. For example, preliminary research suggests that adult burbot (*Lota lota*), which prey on fish and fish eggs, bioaccumulate dioxins (W. Koning, Alberta Environment, pers. comm.).

The Northern River Basins Study (NRBS) has, as one of its main objectives, the determination of contaminant levels in fish throughout the Peace, Athabasca and Slave rivers. Burbot sampled from the Peace and Athabasca drainages in 1990 had elevated levels of contaminants (Terms of Reference). Knowledge of the distribution of contaminants in these rivers is limited.

### 1.1 Objectives

D. A. Westworth and Associates Ltd. was retained by the NRBS to conduct a special collection of burbot to determine the distribution of contaminants within this species throughout the NRBS study area. Specific study objectives were:

- a) to complete a geographic overview of the distribution of contaminants in this species
- b) to solicit local community knowledge (particularly natives) in terms of site selection.

## 2.0 STUDY AREA

Burbot were collected from the Peace, Smoky, and Wapiti rivers (Table 1). Six collection sites were located on the Peace River downstream from the Town of Peace River (Figure 1). Only one collection site was located on the Wapiti River, a major tributary of the Smoky River. The Smoky River, which is a major tributary of the Peace River, was sampled at three collection sites (Figure 1). Collection sites were located downstream from existing pulp mills and were below the zone of complete effluent mixing.

**Table 1.** Location of burbot collection sites along the Smoky, Wapiti, and Peace Rivers.

River	Site	General Location	Legal Land Description	NTS Map Sheet
Smoky	A	Canfor main haul road bridge crossing	15-30 - 67 - 6 W6	83L/15
	B	Highway 34 bridge crossing	9-17 - 72 - 2 W6	83M/1
	C	Near Watino (Hwy 49 bridge crossing)	8-34 - 77 - 24 W6	83N/12
Wapiti	D	Below Proctor & Gamble Cellulose Mill	2-24 - 70 - 5 W6	83M/2
Peace	F	Below Diashowa Canada Co. Ltd.	13-31 - 85 - 20 W5	84C/6
	G	Near mouth of Notikewin River	6-35 - 95 - 20 W5	84F/6
	H	Near Carcajou	11-14 - 101 - 19 W5	84F/14-15
	I	Near Beaver Ranch Indian Reserve	11-14 - 101 - 19 W5	84J/5
	J	Near John d'Or Prairie Indian Reserve	14-15 - 108 - 7 W5	84J/6
	K	Near Fox Lake Indian Reserve	4-35 - 9 - 4 W5	84J/8-10

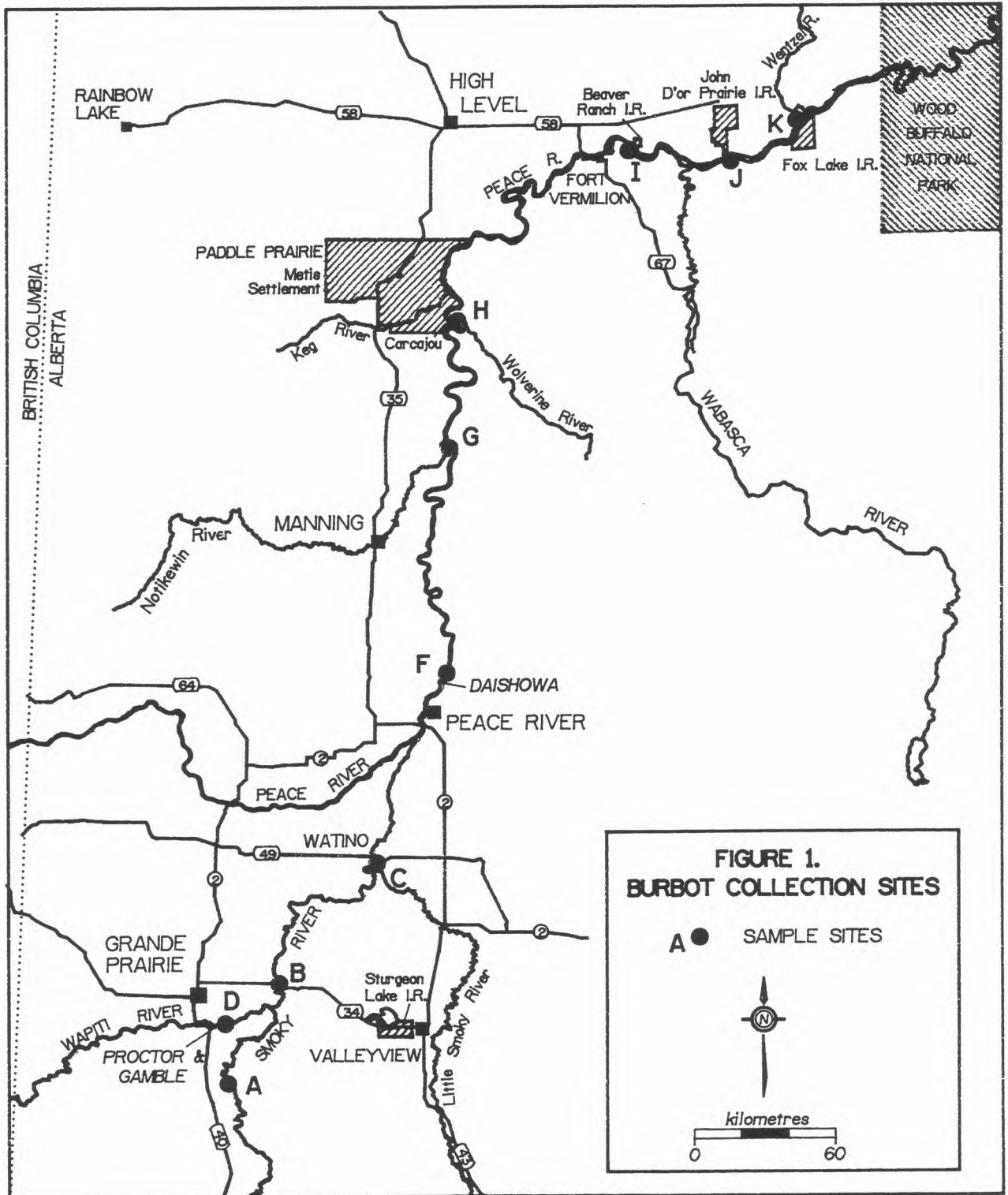


Figure 1. Burbot collection sites.

### 3.0 METHODS

#### 3.1 Sample Collection

Burbot were collected from 24 October to 11 November 1992 from three locations within each of the ten collection sites within the study area (Table 1, Appendix A). Each collection location was assigned a character code and a numeric sub-code (with 1 being furthest downstream) (Appendix A). For example, site F2 referred to the middle collection site on the Peace River below Diashowa. Where possible, information on traditional fishing sites was obtained in consultation with local native residents.

All fish were collected using set lines constructed from 22.7 kg braided dacron line to which were attached 20 size 1/0 hooks at 0.6 m intervals and baited with commercial smelts (*Osmerus mordax*) (Photo 1). At each collection site, 7 to 14 set lines were cast by hand and fished near to the river bed. Each line was anchored in place with a burlap sack filled with cobble tied to its end and set in the river. The free end was secured to shore. Set lines at each sample location were set during the day and fished overnight. An attempt was made to apportion sampling effort evenly between the three locations at each collection site. The following information was recorded for each fish captured and processed (Photo 2) (Appendix B and C):

- Sampling effort (to the nearest 1/4 h)
- Location of set
- Number and species captured
- Weight (to the nearest g)
- Number of hooks fished
- Habitat fished
- Time of capture
- Length (to the nearest mm)

Gross pathology of burbot was also examined. Results of the examination were recorded on data sheets supplied by the Northern River Basins Study office (Appendix D).

Processed burbot were bagged individually in contaminant free FDA approved plastic bags and placed immediately in a freezer to await transport to Alberta Environment in Edmonton. Each bag was labelled with the following information:

- Sample Number
- Length
- Collection site
- Collector name(s)
- Species
- River
- Date

Sagittal otoliths were removed from each burbot during processing and stored in a whirlpak sample bag that contained a solution of 10% glycerol and 90% alcohol. Otoliths were assigned ages as described by Mackay et al. (1990). Fish were assigned ages blindly (without the individual assigning ages having prior knowledge of the size or sample number of the fish from which the otolith was removed).





**Photo 1.** Resource Management Assistant preparing to throw baited set line into river (top photo) and holding the burbot (1043 mm TL) caught downstream from the Diashowa Mill (Bottom photo).



**Photo 2.** Equipment used for processing a captured burbot. Note abrasion from the river bottom on the burbot.

### 3.2 Data Analysis

Catch data were analyzed using descriptive statistics. Length-frequency histograms were generated and mean length-at-age determined for burbot from each of the three rivers sampled. Weight-length data of burbot were plotted for each river to determine the presence of outlier sample points (potential sources of error), correlation co-efficients, and the equations describing the relationship between length and weight for burbot from each river. Data were log transformed to reduce variability in the relationship between length and weight for each river.

Although not required by the Terms of Reference (Appendix E), it was felt that additional analysis might provide additional insight into factors which may affect the distribution of burbot within the Peace, Smoky, and Wapiti rivers. To determine differences in growth rate between burbot populations sampled in the three rivers, an analysis of covariance (ANCOVA) was completed on the slope of the regression lines that described the relationship between length and weight. Catch-per-unit-effort (CPUE) was calculated for burbot for each set line fished based on the number of burbot captured per one hundred hook hours fished. CPUE was used to describe preferred habitats of burbot.

## 4.0 RESULTS AND DISCUSSION

In total, 157 burbot were captured from ten collection sites and retained for contaminant analysis (Table 2). Northern pike (*Esox lucius*), walleye (*Stizostedion vitreum*) and goldeye (*Hiodon alosoides*) were caught incidentally (n = 19, 7, and 2 respectively) (Appendix B).

Burbot comprised 85% of the total catch which demonstrated the species-specific nature of the sampling method used. The highest CPUE (0.82 burbot per 100 hook-h) was recorded at the Wapiti River (Table 2, Appendix C). Preferred habitats, as indicated by CPUE, were those with depth and/or low velocity such as side-channels, snyes and back eddies (Appendix C).

**Table 2.** Catch-per-unit-effort (CPUE) (number/100 hook hours) by species and site during fall, 1992.

River	Site	No. of Sets	Effort (hook-h)	Catch <sup>a</sup>				BURB CPUE <sup>b</sup>
				BURB	NRPK	WALL	GOLD	
Smoky	A	7	2270	15	0	0	0	0.66
	B	7	2820	10	0	0	0	0.36
	C	12	3711	18	0	0	0	0.49
	Total	26	8801	43	0	0	0	0.21
Wapiti	D	7	2673	20	0	0	0	0.75
	Total	7	2673	20	0	0	0	0.75
Peace	F	13	6123	19	4	0	0	0.31
	G	12	5785	13	5	1	1	0.39
	H	13	5089	20	3	1	0	0.41
	I	12	4973	17	2	1	1	0.34
	J	13	5199	9	4	2	0	0.17
	K	14	5615	16	1	2	0	0.29
	Total	77	32784	94	19	7	2	0.29
TOTAL		110	44258	157	19	7	2	0.36

<sup>a</sup> Burb - burbot; NRPK - northern pike; WALL - walleye; GOLD - goldeye

<sup>b</sup> Includes individuals observed (i.e. escaping) while retrieving the line.

Burbot from the Peace River had the greatest range in total length (358 - 1043 mm TL) (Figure 2). The longest individual (1043 mm) was collected downstream from the Diashowa Mill and represents a length record for this species in the province (Nelson and Paetz 1992). Burbot captured in the Smoky River were shorter than those of the Wapiti and Peace rivers. Almost 80% of burbot collected from the Smoky River ranged from 430 to 530 mm TL (Figure 2). The relationship between length and body weight for burbot from the three rivers is shown in Figure 3.

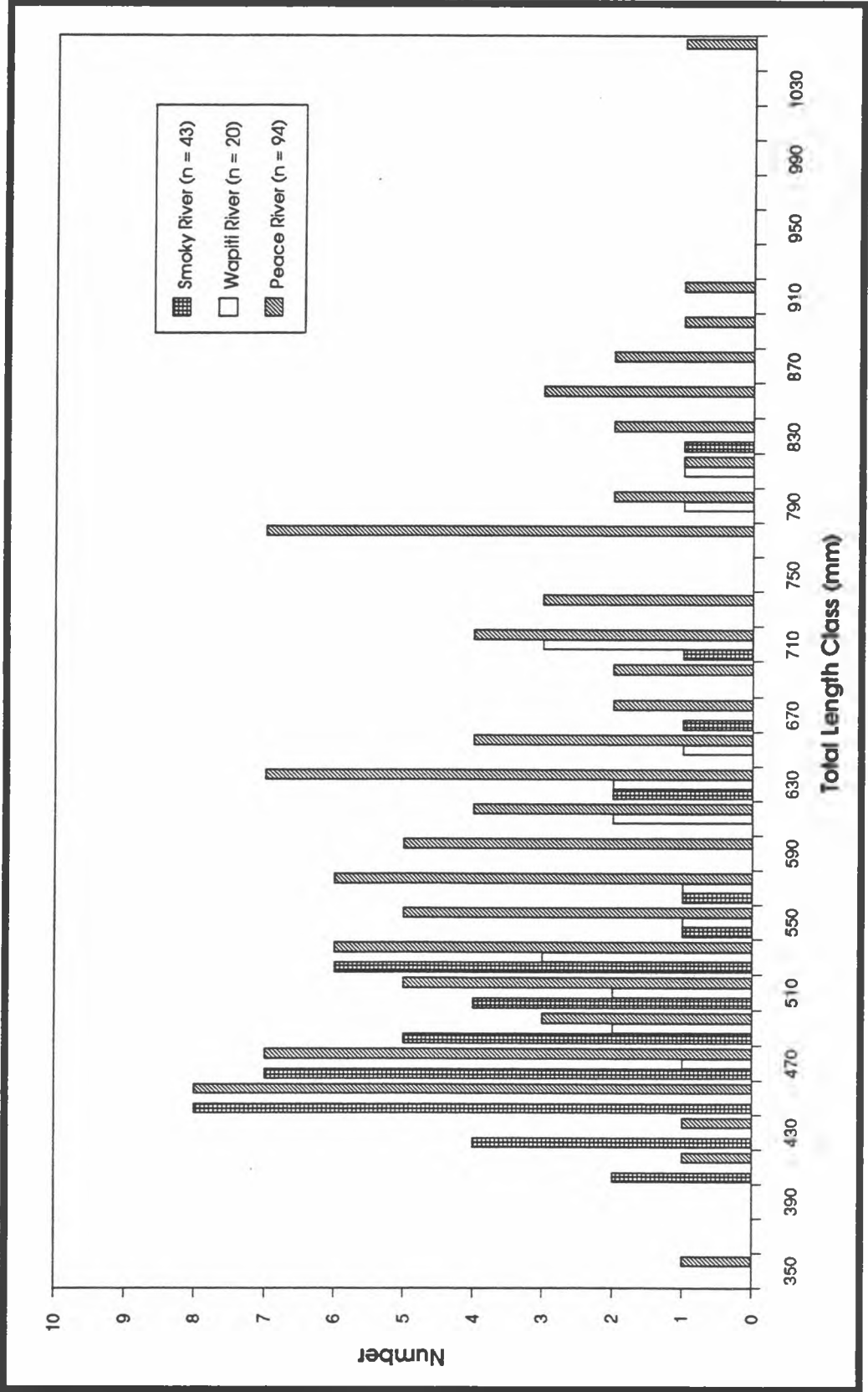
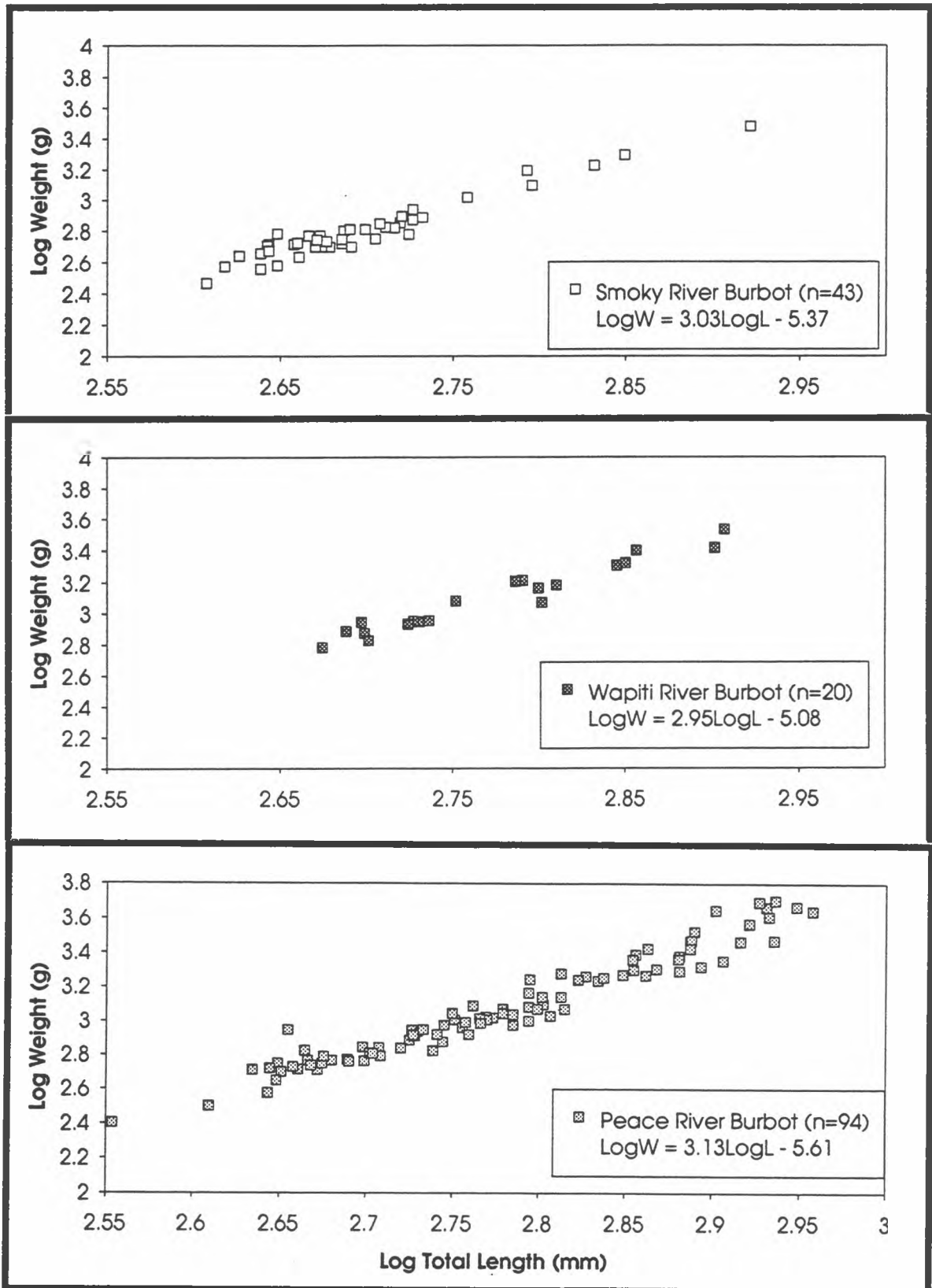


Figure 2. Total length-frequency distribution of burbot sampled from the Smoky, Wapititi, and Peace Rivers.



**Figure 3.** Log length-log weight regression for burbot sampled from the Smoky, Wapiti, and Peace rivers.

Burbot collected from the ten sites ranged in age from 4 to 19 years. Burbot in Alberta mature after age 3 (Nelson and Paetz 1992), and thus it is likely that only adults were captured during this study. The median ages for burbot from the Smoky, Wapiti, and Peace rivers were 9, 10 and 11 years, respectively (Table 3). The oldest burbot were collected from the Peace River.

**Table 3.** Mean length-at-age (mm) of burbot collected from the Smoky, Wapiti, and Peace rivers. (Sample size denoted in brackets).

Age	Length (mm)			Age	Length (mm)		
	Smoky	Wapiti	Peace		Smoky	Wapiti	Peace
4	405 (1)	-	-	12	640 (3)	789 (1)	703 (10)
5	445 (2)	-	383 (2)	13	835 (1)	808 (1)	717 (5)
6	452 (7)	501 (2)	463 (6)	14	-	-	797 (5)
7	-	504 (3)	468 (9)	15	-	-	801 (6)
8	469 (9)	-	492 (7)	16	-	-	-
9	478 (10)	524 (4)	541 (10)	17	-	-	888 (1)
10	533 (9)	645 (6)	600 (12)	18	-	-	907 (1)
11	621 (1)	656 (3)	634 (19)	19	-	-	1043 (1)

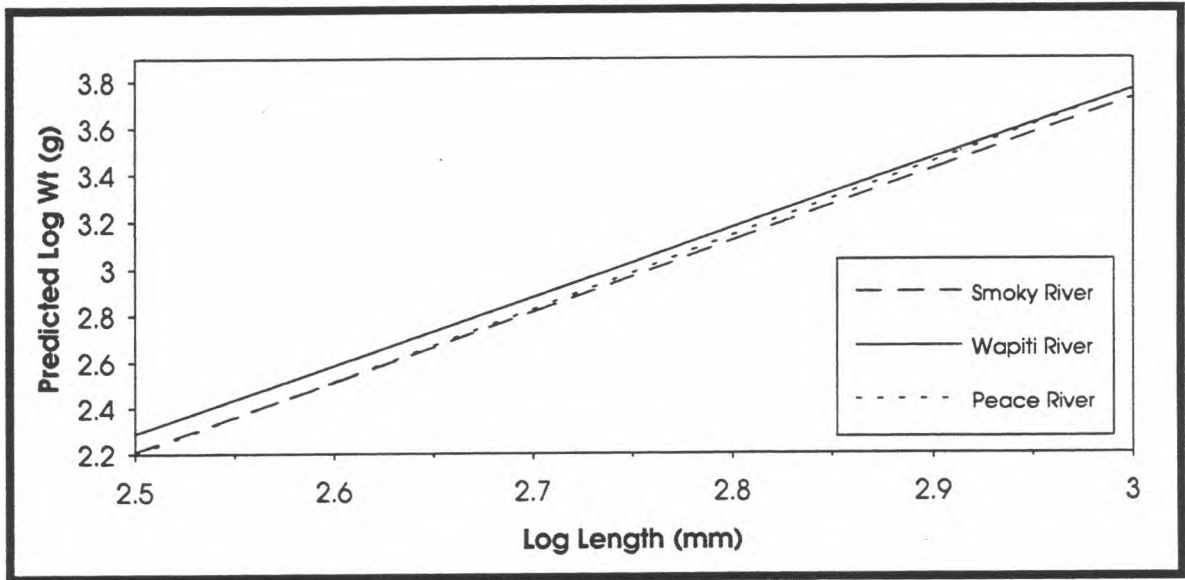
Growth rates differed significantly between all three rivers (Table 4 and Figure 4). Burbot from the Wapiti River were heavier at any given length than burbot sampled from the Smoky or Peace river (Figure 4). Mean length-at-age of burbot from the Wapiti River between ages 6 and 12 were greater than mean length-at-age of burbot from the other rivers except for age 9 burbot from the Peace River (Table 3).

Growth rates of burbot sampled from the Smoky, Wapiti and Peace rivers were lower than those recorded in central Alberta lakes (Boag 1989). This phenomenon has been recorded for riverine versus lake dwelling populations of burbot and likely reflects different thermal and environmental conditions in lakes and rivers. Higher growth rates exhibited by burbot from the Wapiti River suggests that the river may be more productive than either the Smoky or Peace river. Increased productivity of the Wapiti River may have resulted from the release of effluent from the pulp mill at Grande Prairie.

**Table 4.** The relationship ( $\log_{10}$  transformed) between length and weight of burbot from the Smoky, Wapiti, and Peace rivers.

River	Regression		Coefficient of Determination	Sample Size	Calculated F statistic		
	slope	y-intercept			Smoky	Wapiti	Peace
Smoky	3.03	-5.37	0.93	43	-	38.7	53.2
Wapiti	2.95	-5.08	0.95	20	38.7	-	103.9
Peace	3.15	-5.61	0.95	94	53.2	103.9	-





**Figure 4.** Predicted log length-log weight relationships for burbot sampled from the Smoky, Wapiti and Peace Rivers

During the course of the study it became evident that there may be fewer traditional fishing sites on the rivers than earlier thought. The present level of usage is declining through attrition of elders. This became apparent through conversations and personal observations (Table 5). Very few boats were seen at historic launch sites (e.g. Adams Landing) or throughout villages. It is highly recommended that a user survey be conducted to achieve a complete understanding of the degree of usage of the fishery resource in the Peace River.

**Table 5.** Summary of community contacts and obtained information for the special burbot collection project, fall 1992.

Collection Area	Person Contacted	Affiliation	Phone No.	Comments
Smoky River at Hwy 34	Pierre Chowace	Sturgeon Lake Indian Reserve	524-3307	- very little (or no) fishing done at Hwy 34 bridge - at best, fishing on the Smoky is at a recreational level - most fishing on the Smoky is done between Grande Prairie & Edson - band members fish primarily at Sturgeon Lake
Wapiti River below Proctor & Gamble	Brian McDonald	Proctor & Gamble Cellulose	539-9500	- provided essential access to collection sites - no fishing takes place below mill - an extremely co-operative individual - would like to be aware of study results - excellent walleye fishing (8-10 lbs) at mouth of Bear R. but would not consider eating any
Smoky River at Watlino	Norris Bates	Local angler	532-1933	- excellent walleye fishing at mouth of L. Smoky
Peace River below Daishowa	Norris Bates Ian McDonald	Local angler	532-1933	- uncooperative in terms of providing access to river
Peace River at Notikewin	Dave Wally	Daishowa Canada Co. Ltd. Fish & Wildlife (Peace River)	624-7046 624-6405	- stated that the river does not mix completely until 30 km downstream
Peace River at Carcajou	John Crisp John Crisp Dennis Siverston	Paddle Prairie Metis Settlement Paddle Prairie Metis Settlement Local guide/outfitter	981-2227 981-2227 981-2373	- stated most people from Paddle Prairie & Keg River fish at Notikewin Provincial Park - considered most Metis living along the river fish between the Keg & Wolverine rivers - considers river water unfit for human consumption since construction of Daishowa pulp mill - good walleye run in the Wolverine River - Wolverine River mouth a favourite local fishing site
Peace River at Beaver Ranch Indian Reserve	Warren Matliskus	Beaver Ranch Indian Reserve	no phone	- some fishing at old boat launch - most fishing done at the Wabasca River
Peace River at John d'Or Prairie Indian Reserve	Steve Auger	John d'Or Prairie Indian Reserve	759-3920	- amount of fishing in the Peace River has decreased since the mill was constructed - mouth of the Wabasca and Lawrence rivers are traditional fishing sites - most fishing by band members done on near-by lakes
Peace River at Fox Lake Indian Reserve	Daniel Loonskin	Fox Lake Indian Reserve	659-3921	- mouth of Wentzel River and Vermillion Chutes are traditional fishing sites

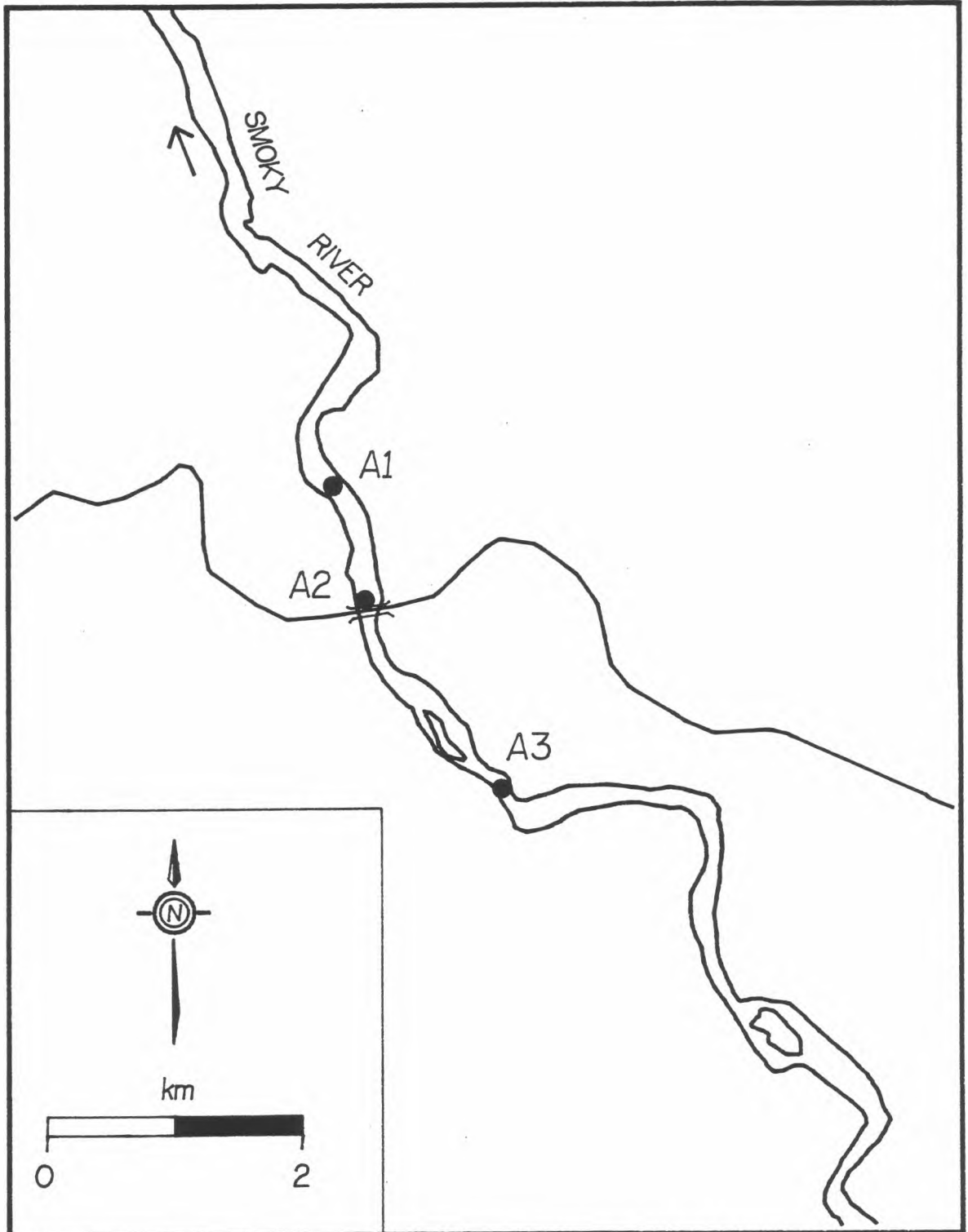


## 5.0 LITERATURE CITED

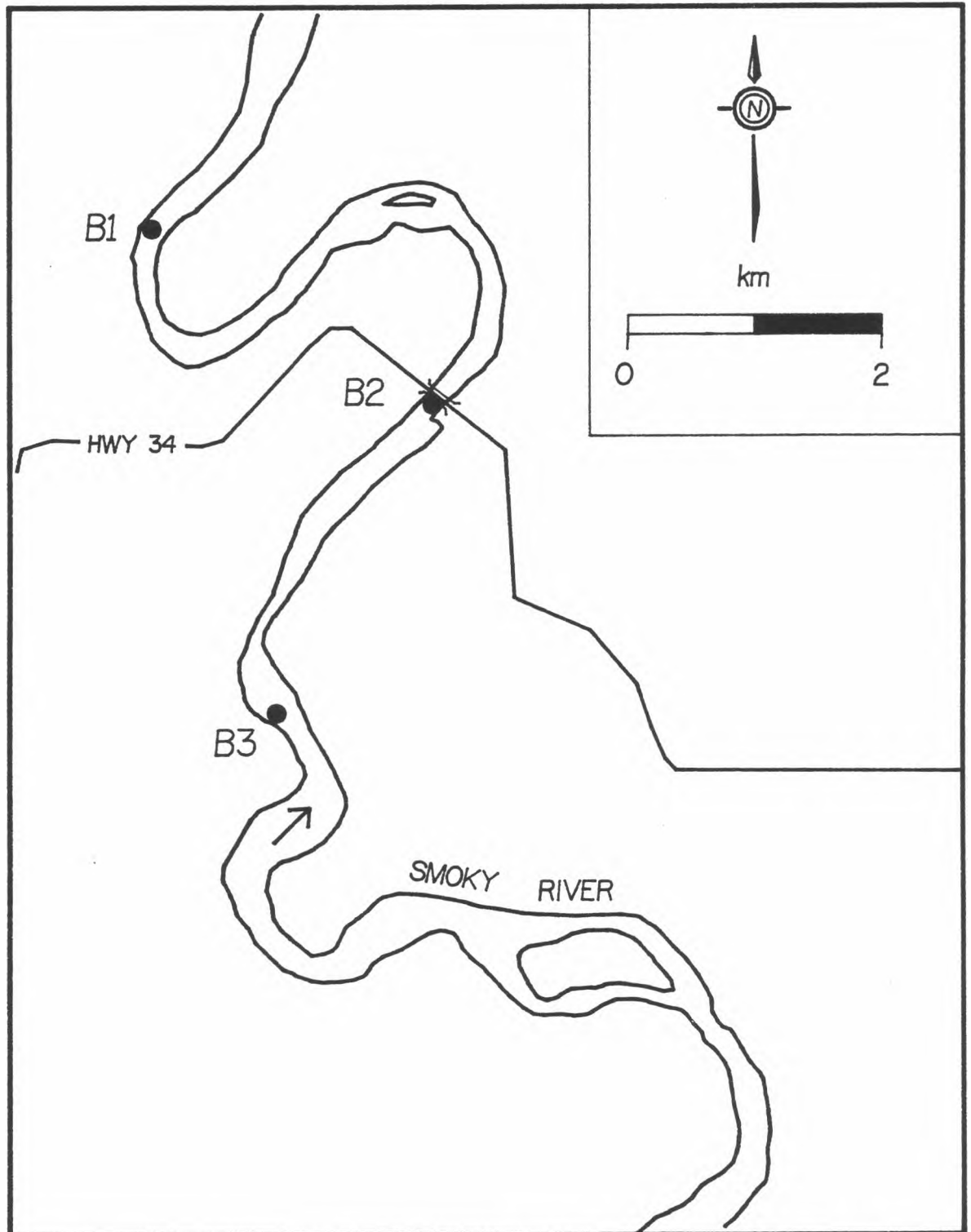
- Boag, T.D. 1989.** Aspects of growth and fecundity of Burbot, Lota lota L., in two Alberta lakes. M.Sc. Thesis, Dep. of Zoology, Univ. of Alberta, Edmonton, Alberta.
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**Appendix A.** UTM Coordinates and 1:50,000 Maps of Burbot Collection Locations on the Smoky, Wapiti, and Peace rivers.

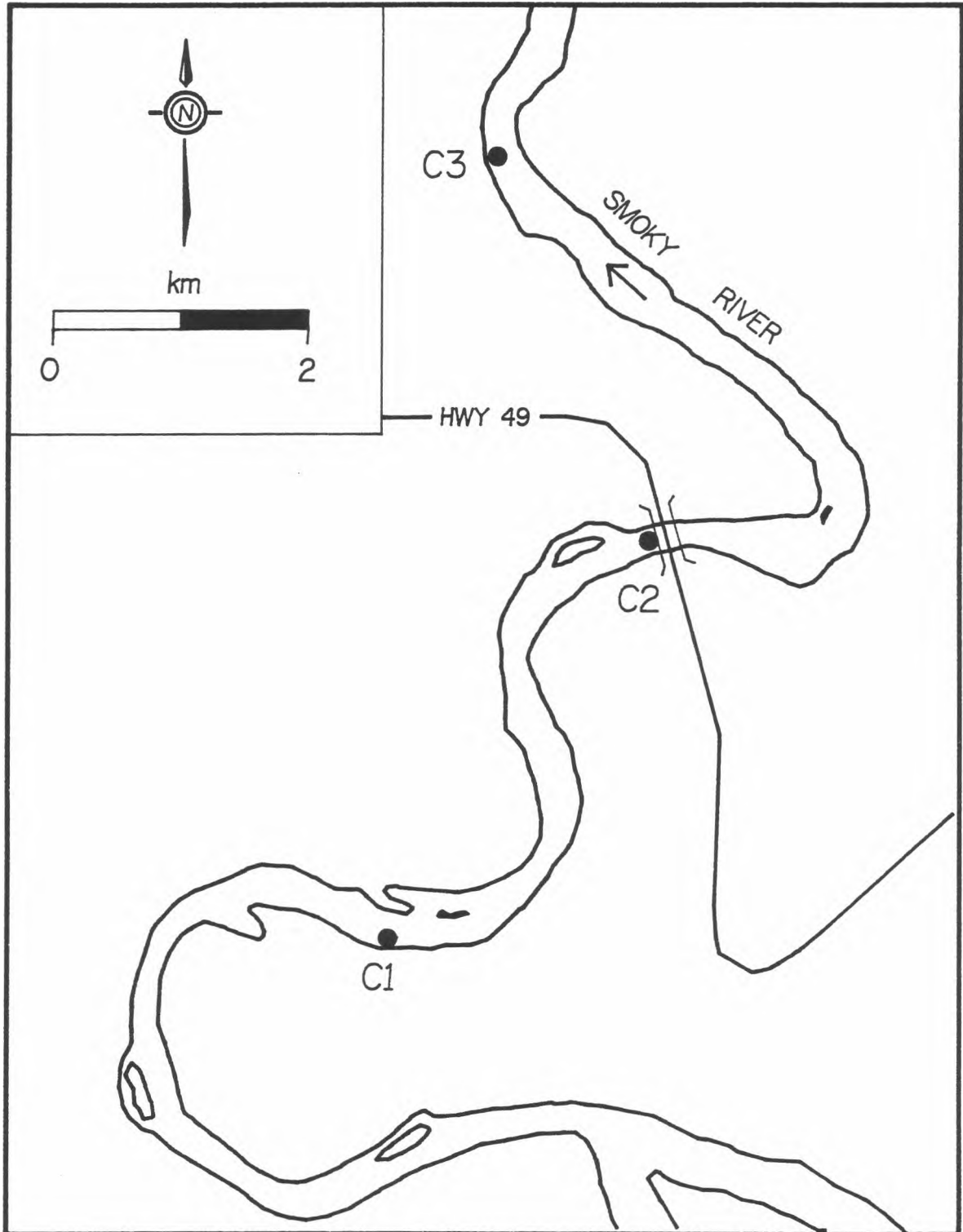
River	Site Location	UTM X	UTM Y
Smoky	A1	397250	6078450
	A2	397550	6077500
	A3	398550	6076150
	B1	417650	6123100
	B2	419900	6121800
	B3	418500	6119300
	C1	458700	6171450
	C2	460850	6174400
	C3	459700	6177300
Wapiti	D1	397000	6104500
	D2	396400	6103800
	D3	394100	6102750
Peace	F1	491500	6544000
	F2	490300	6525500
	F3	489300	6495500
	G1	491250	6351550
	G2	492000	6349000
	G3	494700	6348550
	H1	492400	6404900
	H2	500530	6402020
	H3	493500	6400660
	I1	573400	6475300
	I2	572200	6476450
	I3	571800	6477700
	J1	616250	6473250
	J2	614450	6472850
	J3	612400	6473400
K1	643150	6489300	
K2	641950	6486850	
K3	641600	6484700	



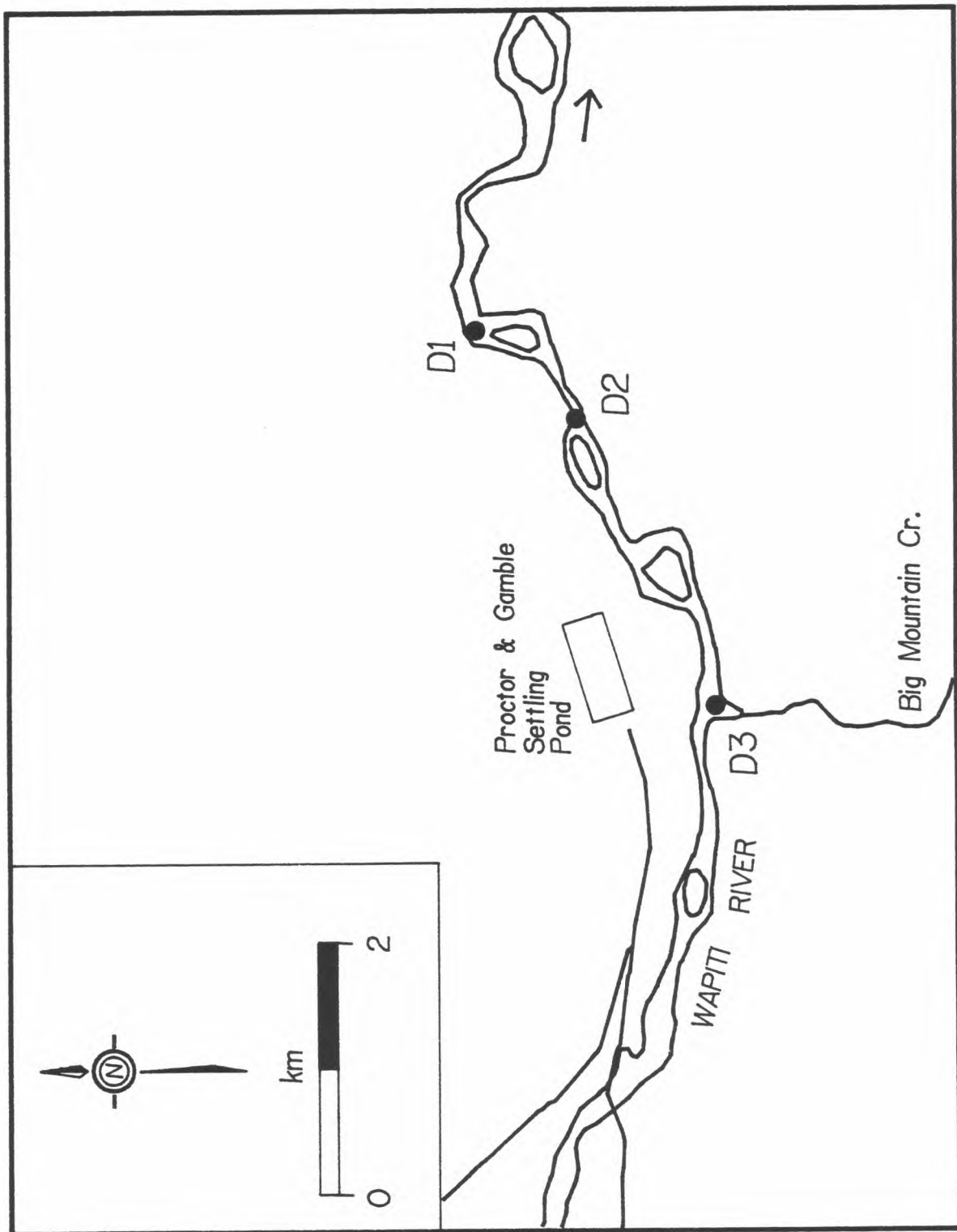
Collection locations at site A, Smoky River, near the Canfor main haul road bridge crossing.



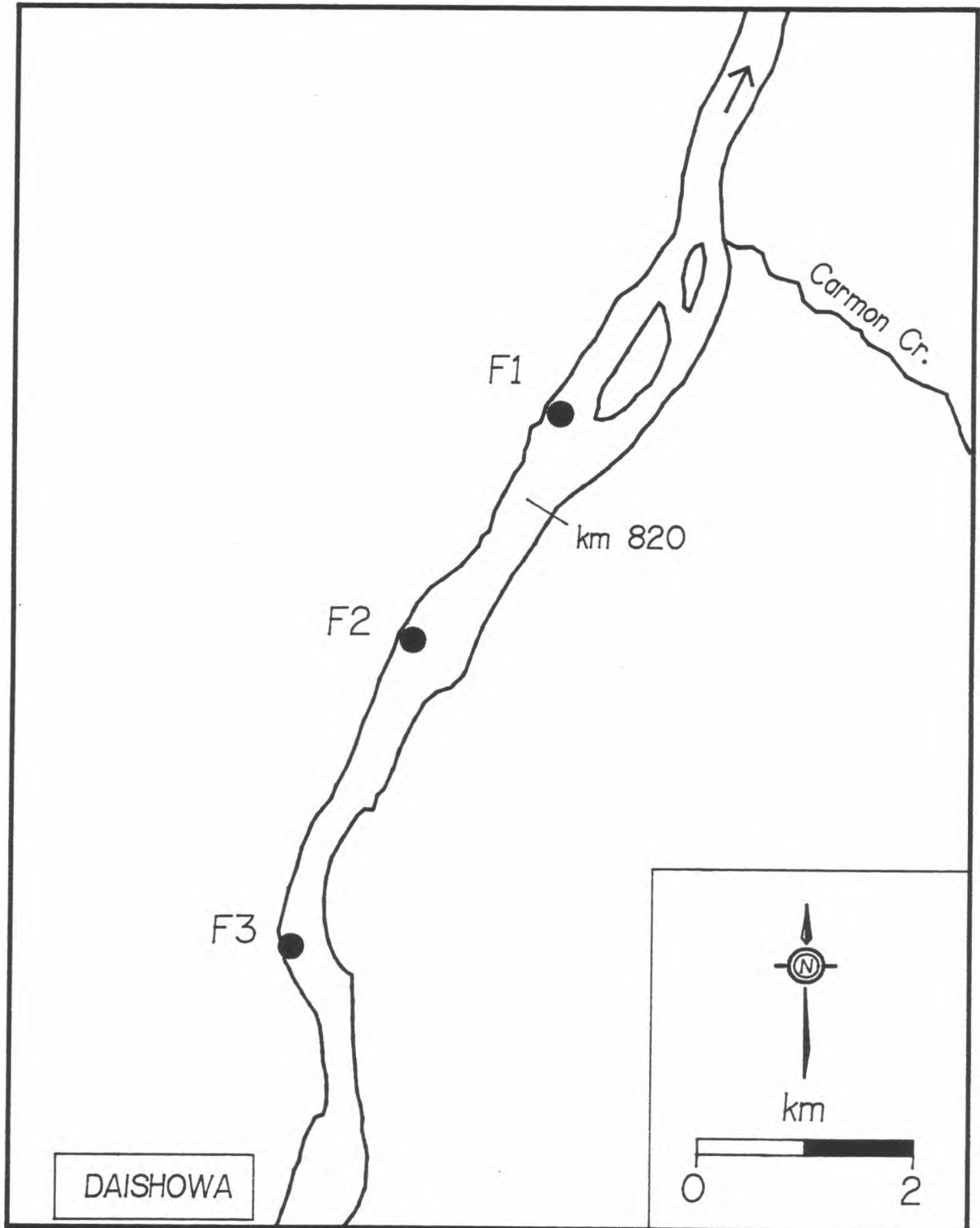
Collection locations at site B, Smoky River, near the Highway 34 bridge crossing.



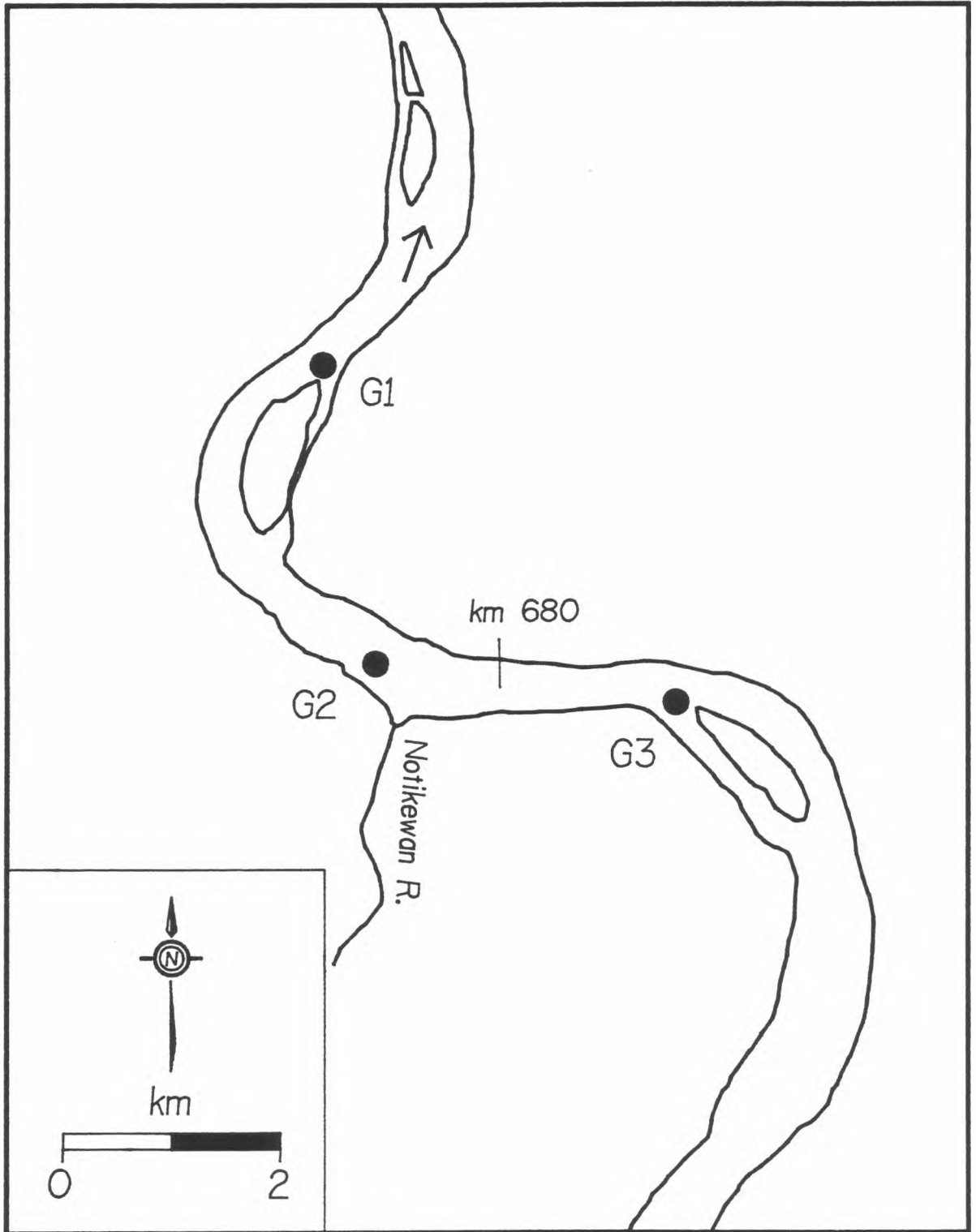
Collection locations at site C, Smoky River, near Watino at the Highway 49 bridge crossing.



Collection locations at site D, Wapiti River, near the Proctor and Gamble Cellulose Mill..

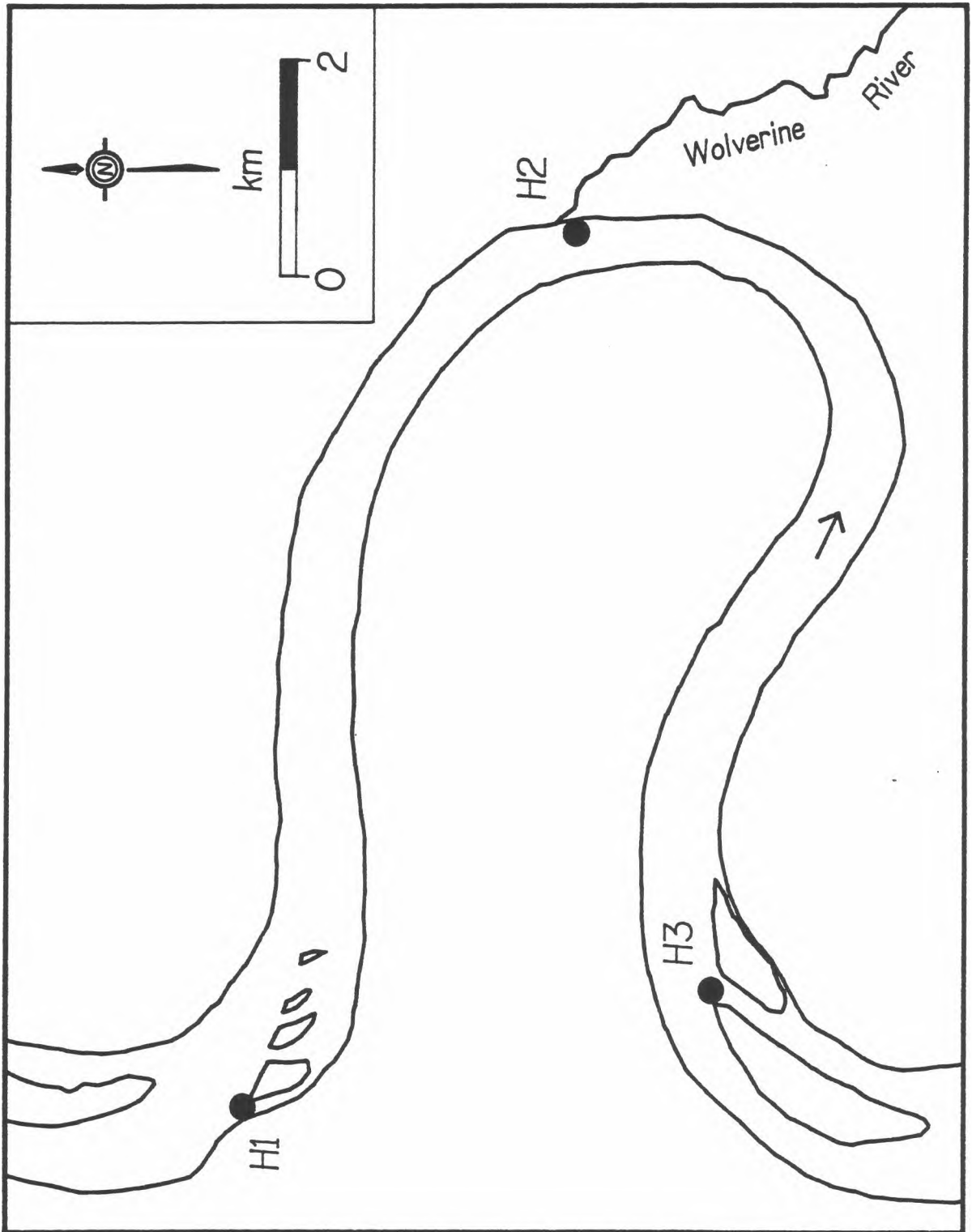


Collection locations at site F, Peace River, near Diashowa Canada Co. Ltd.

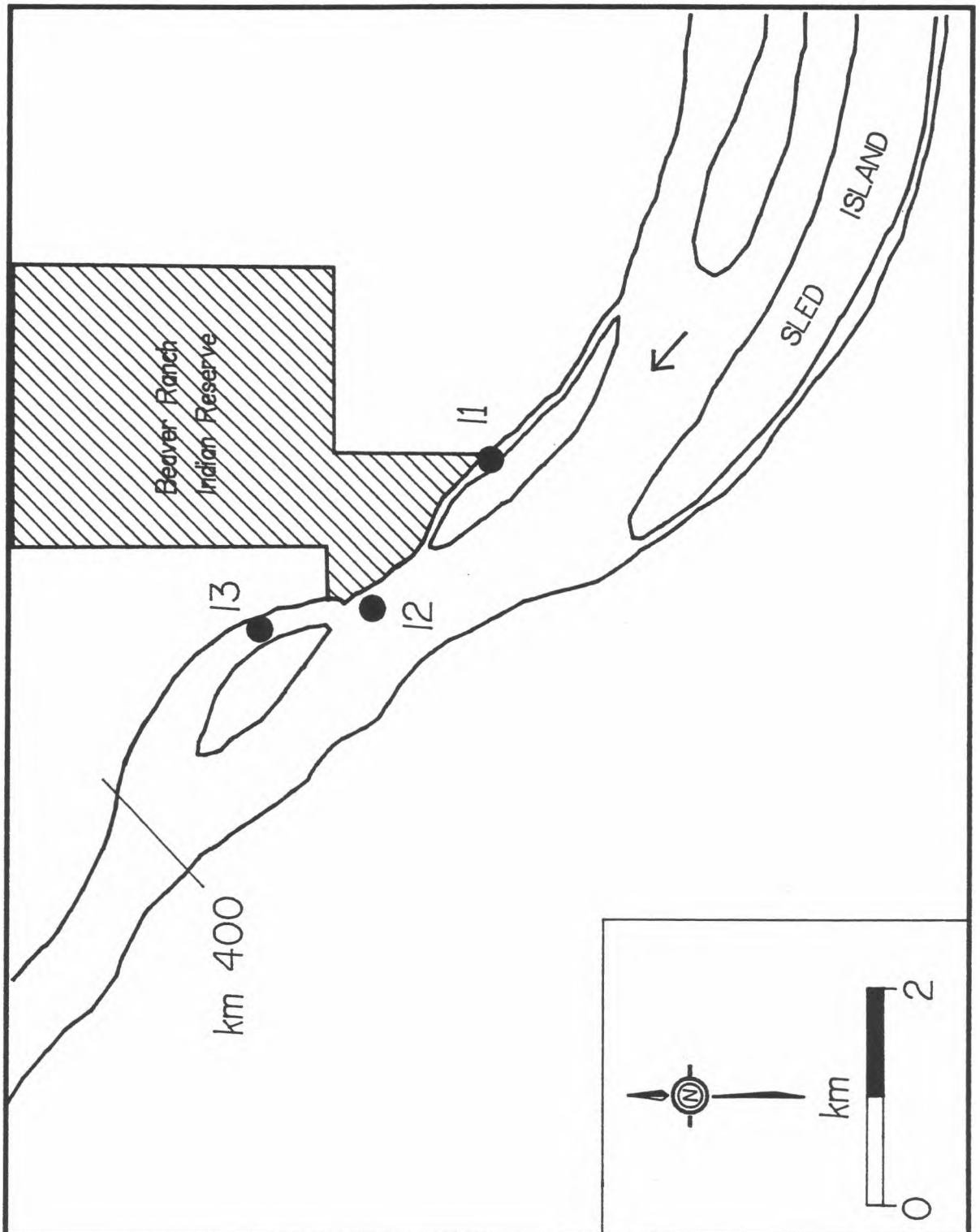


Collection locations at site G, Peace River, near the mouth of the Notikewin River.

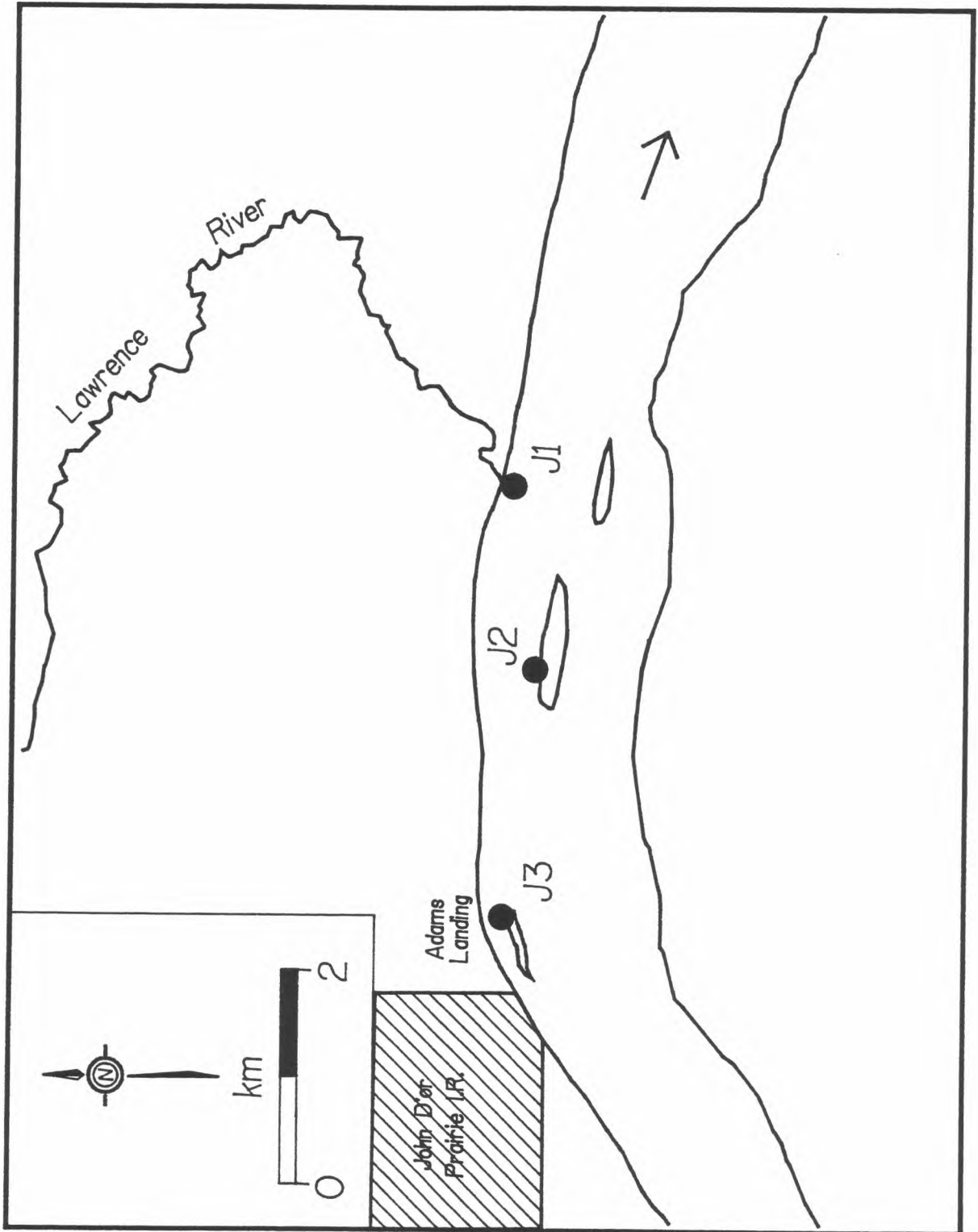




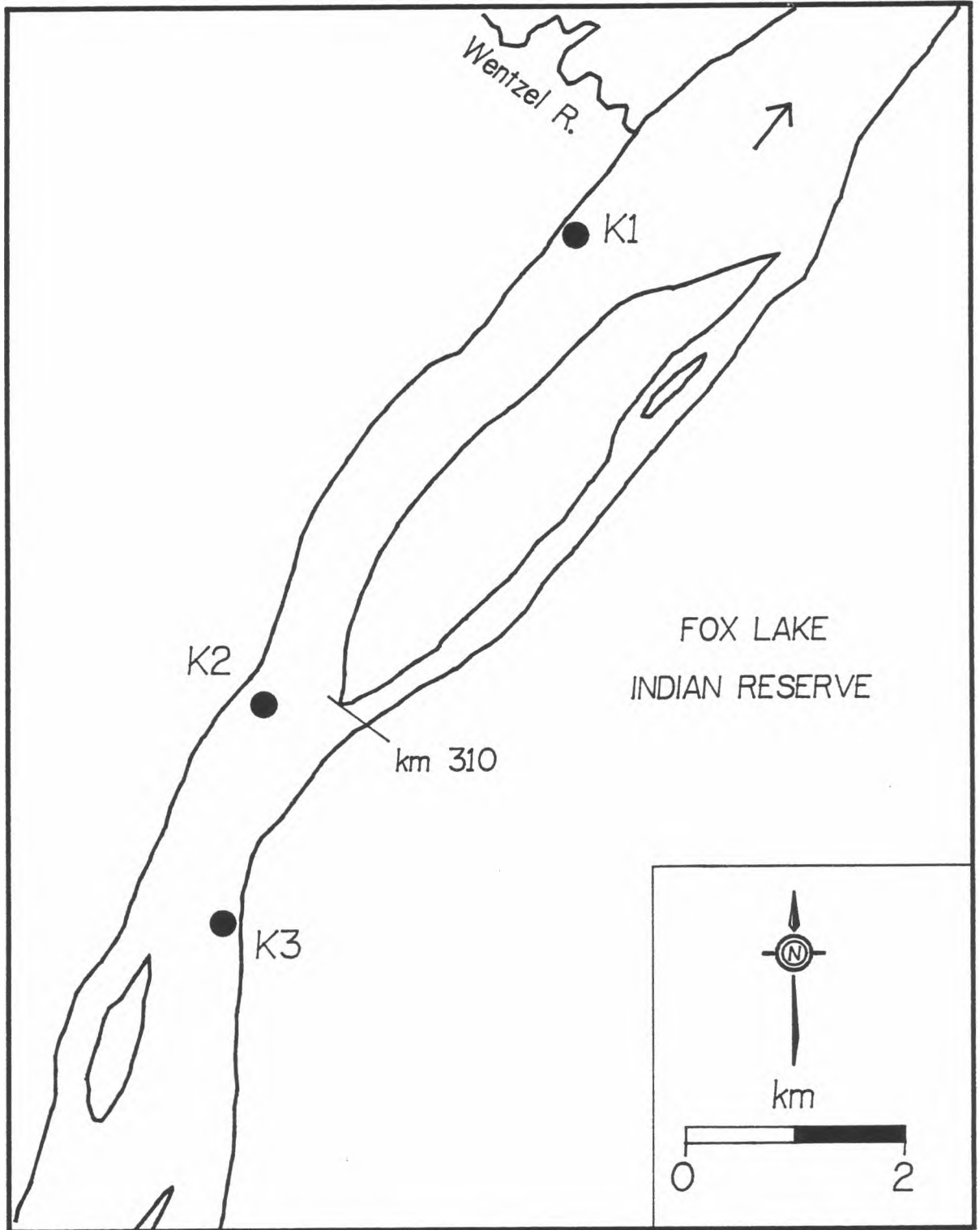
Collection locations at site H, Peace River, near Carcajou.



Collection locations at site 1, Peace River, near Beaver Ranch Indian Reserve.



Collection locations at site J, Peace River, near John d'Or Prairie Indian Reserve.



Collection locations at site K, Peace River, near Fox Lake Indian Reserve.

**Appendix B.** Special Burbot Collection Project Fish List

Sample No.	Species	Length (mm)	Weight (g)	Age	Collection Date	River	Site	Set No.	Comments
1	BURB	435	452	6	24-Oct-92	Smoky	B3	1	
2	BURB	525	784	10	24-Oct-92	Smoky	B2	1	
3	BURB	679	1684	12	24-Oct-92	Smoky	B2	1	
4	BURB	491	497	10	24-Oct-92	Smoky	B2	1	
5	BURB	468	498	8	24-Oct-92	Smoky	B2	1	
6	BURB	533	873	10	24-Oct-92	Smoky	B2	1	
7	BURB	439	506	6	24-Oct-92	Smoky	B2	1	
8	BURB	475	541	5	25-Oct-92	Smoky	B2	2	
9	BURB	545	895	9	25-Oct-92	Wapiti	D3	1	
10	BURB	530	850	9	25-Oct-92	Wapiti	D3	1	
11	BURB	520	661	8	26-Oct-92	Smoky	B2	4	
12	BURB	472	499	9	26-Oct-92	Smoky	B2	5	
13	BURB	565	1196	10	27-Oct-92	Wapiti	D1	1	
14	BURB	634	1177	10	27-Oct-92	Wapiti	D1	1	
15	BURB	498	876	6	27-Oct-92	Wapiti	D1	1	
16	BURB	488	769	9	27-Oct-92	Wapiti	D1	1	
17	BURB	500	744	7	27-Oct-92	Wapiti	D1	1	
18	BURB	719	2484	11	27-Oct-92	Wapiti	D3	3	
19	BURB	646	1512	10	27-Oct-92	Wapiti	D3	3	
20	BURB	798	2592	12	27-Oct-92	Wapiti	D3	3	
21	BURB	618	1619	11	27-Oct-92	Wapiti	D2	3	
22	BURB	709	2089	10	27-Oct-92	Wapiti	D2	3	
23	BURB	534	891	9	27-Oct-92	Wapiti	D2	1	
24	BURB	701	2006	10	27-Oct-92	Wapiti	D2	1	
25	BURB	631	1451	11	27-Oct-92	Wapiti	D2	1	
26	BURB	503	672	6	27-Oct-92	Wapiti	D2	1	
27	BURB	612	1587	10	27-Oct-92	Wapiti	D2	2	
28	BURB	808	3396	13	27-Oct-92	Wapiti	D2	2	
29	BURB	473	602	7	27-Oct-92	Wapiti	D2	2	
30	BURB	538	881	7	27-Oct-92	Wapiti	D2	2	
31	BURB	835	2994	13	28-Oct-92	Smoky	A2	1	
32	BURB	445	605	8	28-Oct-92	Smoky	A3	2	
33	BURB	524	714	10	28-Oct-92	Smoky	A3	2	
34	BURB	457	528	9	28-Oct-92	Smoky	A3	2	
35	BURB	477	496	9	28-Oct-92	Smoky	A3	2	
36	BURB	486	631	9	28-Oct-92	Smoky	A3	2	
37	BURB	485	525	9	28-Oct-92	Smoky	A1	1	
38	BURB	440	516	9	28-Oct-92	Smoky	A1	1	
39	BURB	533	744	12	28-Oct-92	Smoky	A1	2	
40	BURB	500	646	10	28-Oct-92	Smoky	A1	2	
41	BURB	455	516	9	28-Oct-92	Smoky	A1	2	
42	BURB	464	588	9	28-Oct-92	Smoky	A2	3	
43	BURB	440	516	6	28-Oct-92	Smoky	A2	3	
44	BURB	423	434	8	28-Oct-92	Smoky	A2	3	
45	BURB	471	586	8	28-Oct-92	Smoky	A3	1	
46	BURB	540	773	10	29-Oct-92	Smoky	C3	1	
47	BURB	530	598	9	29-Oct-92	Smoky	C2	2	

Sample No.	Species	Length (mm)	Weight (g)	Age	Collection Date	River	Site	Set No.	Comments
48	BURB	507	559	8	29-Oct-92	Smoky	C1	1	
49	BURB	490	646	10	29-Oct-92	Smoky	C1	1	
50	BURB	415	373	5	29-Oct-92	Smoky	C2	1	
51	BURB	435	358	8	29-Oct-92	Smoky	C1	2	
52	BURB	440	469	6	29-Oct-92	Smoky	C1	2	
53	BURB	458	428	6	29-Oct-92	Smoky	C2	3	
54	BURB	510	703	6	29-Oct-92	Smoky	C2	4	
55	BURB	625	1249	10	29-Oct-92	Smoky	C2	4	
56	BURB	405	291	4	31-Oct-92	Smoky	C3	4	
57	BURB	573	1045	10	31-Oct-92	Smoky	C3	3	
58	BURB	621	1562	11	31-Oct-92	Smoky	C3	3	
59	BURB	485	556	8	31-Oct-92	Smoky	C3	3	
60	BURB	445	379	6	31-Oct-92	Smoky	C1	4	
61	BURB	707	1960	12	31-Oct-92	Smoky	C1	4	
62	BURB	469	553	8	31-Oct-92	Smoky	C1	2	
63	BURB	514	665	9	31-Oct-92	Smoky	C1	2	
64	BURB	853	4601	14	31-Oct-92	Peace	F1	3	
65	BURB	531	765	11	31-Oct-92	Peace	F2	1	
66	BURB	776	3332	14	31-Oct-92	Peace	F1	1	
67	BURB	610	1089	11	31-Oct-92	Peace	F1	1	
68	BURB	610	944	11	31-Oct-92	Peace	F1	2	
69	BURB	623	1206	12	31-Oct-92	Peace	F1	3	
70	BURB	564	1015	11	31-Oct-92	Peace	F1	3	
71	BURB	555	749	10	31-Oct-92	Peace	F1	3	
72	BURB	653	1179	12	31-Oct-92	Peace	F1	3	
73	BURB	623	999	12	31-Oct-92	Peace	F1	3	
74	BURB	730	2660	10	31-Oct-92	Peace	F1	3	
75	BURB	594	1040	11	31-Oct-92	Peace	F1	3	
76	BURB	537	862	10	31-Oct-92	Peace	F1	3	
77	BURB	635	1246	11	31-Oct-92	Peace	F1	3	
78	BURB	706	1862	11	31-Oct-92	Peace	F1	3	
79	BURB	470	511	8	31-Oct-92	Peace	F2	3	
80	BURB	358	253	5	31-Oct-92	Peace	F3	1	
81	NRPK	550	1151	-	01-Nov-92	Peace	F3	1	cont. analysis
82	BURB	1043	5250	19	01-Nov-92	Peace	F2	5	
83	BURB	440	375	7	01-Nov-92	Peace	F1	4	
84	BURB	431	513	6	03-Nov-92	Peace	G1	1	
85	BURB	551	831	10	03-Nov-92	Peace	G1	2	
86	BURB	783	2076	15	03-Nov-92	Peace	G1	3	
87	BURB	588	1054	8	03-Nov-92	Peace	G1	4	
88	BURB	718	2439	11	03-Nov-92	Peace	G2	2	
89	BURB	772	2909	15	03-Nov-92	Peace	G2	2	
90	BURB	535	814	9	03-Nov-92	Peace	G2	1	
91	BURB	570	912	10	03-Nov-92	Peace	G2	1	
92	BURB	907	4368	18	03-Nov-92	Peace	G2	1	
93	BURB	738	2006	11	03-Nov-92	Peace	G3	2	
94	BURB	533	883	9	03-Nov-92	Peace	G3	2	
95	BURB	499	697	9	03-Nov-92	Peace	G3	3	
96	BURB	572	979	9	03-Nov-92	Peace	G3	3	
97	BURB	504	642	9	05-Nov-92	Peace	K3	1	

Sample No.	Species	Length (mm)	Weight (g)	Age	Collection Date	River	Site	Set No.	Comments
98	BURB	634	1385	11	05-Nov-92	Peace	K3	2	
99	BURB	445	443	6	05-Nov-92	Peace	K2	1	
100	BURB	407	316	5	05-Nov-92	Peace	K2	2	
101	BURB	466	544	6	05-Nov-92	Peace	K2	3	
102	BURB	834	3679	14	05-Nov-92	Peace	K2	3	
103	BURB	845	4928	13	05-Nov-92	Peace	K1	1	
104	BURB	474	612	8	05-Nov-92	Peace	K1	2	
105	BURB	772	2658	12	05-Nov-92	Peace	K1	3	
106	BURB	578	1228	13	05-Nov-92	Peace	K1	3	
107	BURB	650	1901	13	05-Nov-92	Peace	K1	3	
108	BURB	562	1108	9	05-Nov-92	Peace	K1	4	
109	BURB	798	4408	12	05-Nov-92	Peace	K1	4	
110	BURB	441	523	7	05-Nov-92	Peace	K3	4	
111	BURB	506	637	8	05-Nov-92	Peace	K3	5	
112	BURB	534	826	10	05-Nov-92	Peace	K3	6	
113	BURB	672	1819	9	07-Nov-92	Peace	I1	1	
114	BURB	583	1033	11	07-Nov-92	Peace	I1	1	
115	BURB	556	941	11	07-Nov-92	Peace	I1	1	
116	BURB	650	1385	13	07-Nov-92	Peace	I1	1	
117	BURB	448	499	6	07-Nov-92	Peace	I1	1	
118	BURB	716	1986	11	07-Nov-92	Peace	I1	2	
119	BURB	452	884	8	07-Nov-92	Peace	I1	4	
120	BURB	806	2262	11	07-Nov-92	Peace	I1	4	
121	BURB	510	693	9	07-Nov-92	Peace	I2	1	
122	BURB	773	2947	15	07-Nov-92	Peace	I2	1	
123	BURB	602	1110	12	07-Nov-92	Peace	I3	2	
124	BURB	715	2294	12	07-Nov-92	Peace	I3	2	
125	BURB	464	581	7	07-Nov-92	Peace	I3	2	
126	BURB	665	1733	10	07-Nov-92	Peace	I3	3	
127	BURB	575	828	10	07-Nov-92	Peace	I3	3	
128	BURB	548	664	11	07-Nov-92	Peace	I3	3	
129	BURB	458	516	7	07-Nov-92	Peace	I3	4	
130	BURB	473	557	7	09-Nov-92	Peace	J1	2	
131	BURB	511	619	7	09-Nov-92	Peace	J1	2	
132	BURB	462	666	8	09-Nov-92	Peace	J1	2	
133	BURB	584	968	11	09-Nov-92	Peace	J1	2	
134	BURB	455	532	7	09-Nov-92	Peace	J2	3	
135	BURB	624	1749	10	09-Nov-92	Peace	J2	3	
136	BURB	623	1462	11	09-Nov-92	Peace	J2	3	
137	BURB	760	2308	15	09-Nov-92	Peace	J3	3	
138	BURB	490	573	8	09-Nov-92	Peace	J3	4	
139	BURB	863	5027	13	11-Nov-92	Peace	H3	3	
140	BURB	888	4641	17	11-Nov-92	Peace	H3	3	
141	BURB	825	2907	12	11-Nov-92	Peace	H3	3	
142	BURB	446	558	6	11-Nov-92	Peace	H3	2	
143	BURB	500	576	9	11-Nov-92	Peace	H2	1	
144	BURB	761	1962	14	11-Nov-92	Peace	H2	1	
145	BURB	856	4045	15	11-Nov-92	Peace	H2	2	
146	BURB	688	1788	12	11-Nov-92	Peace	H2	3	
147	BURB	862	2955	15	11-Nov-92	Peace	H2	3	

Sample No.	Species	Length (mm)	Weight (g)	Age	Collection Date	River	Site	Set No.	Comments
148	BURB	641	1074	10	11-Nov-92	Peace	H2	3	
149	BURB	541	886	6	11-Nov-92	Peace	H2	4	
150	BURB	489	588	7	11-Nov-92	Peace	H2	4	
151	BURB	728	1844	12	11-Nov-92	Peace	H1	1	
152	BURB	525	686	9	11-Nov-92	Peace	H1	1	
153	BURB	602	1180	11	11-Nov-92	Peace	H1	2	
154	BURB	683	1710	11	11-Nov-92	Peace	H1	3	
155	BURB	761	2406	14	11-Nov-92	Peace	H1	3	
156	BURB	630	1180	10	11-Nov-92	Peace	H1	4	
157	BURB	589	1012	10	11-Nov-92	Peace	H1	4	
158	BURB	479	583	7	11-Nov-92	Peace	H1	4	
159	NRPK	531	-	-	31-Oct-92	Peace	F1	1	released
160	NRPK	601	-	-	31-Oct-92	Peace	F1	4	released
161	NRPK	540	-	-	31-Oct-92	Peace	F2	4	released
162	NRPK	418	-	-	3-Nov-92	Peace	G1	4	released
163	NRPK	522	-	-	3-Nov-92	Peace	G2	1	released
164	NRPK	411	-	-	3-Nov-92	Peace	G2	1	released
165	NRPK	464	-	-	3-Nov-92	Peace	G2	1	released
166	GOLD	307	-	-	3-Nov-92	Peace	G2	1	released
167	WALL	483	-	-	3-Nov-92	Peace	G2	4	released
168	NRPK	586	-	-	3-Nov-92	Peace	G3	2	released
169	NRPK	517	-	-	1-Nov-92	Peace	H1	1	released
170	WALL	519	-	-	1-Nov-92	Peace	H1	2	released
171	NRPK	409	-	-	1-Nov-92	Peace	H2	3	released
172	NRPK	477	-	-	1-Nov-92	Peace	H2	4	released
173	WALL	572	-	-	7-Nov-92	Peace	I1	1	released
174	NRPK	601	-	-	7-Nov-92	Peace	I1	3	released
175	NRPK	326	-	-	7-Nov-92	Peace	I2	3	released
176	GOLD	219	-	-	7-Nov-92	Peace	I2	3	released
177	NRPK	592	-	-	9-Nov-92	Peace	J1	1	sacrificed
178	NRPK	481	-	-	9-Nov-92	Peace	J1	3	sacrificed
179	NRPK	534	-	-	9-Nov-92	Peace	J1	3	sacrificed
180	WALL	311	-	-	9-Nov-92	Peace	J1	4	sacrificed
181	NRPK	489	-	-	9-Nov-92	Peace	J2	3	sacrificed
182	WALL	421	-	-	9-Nov-92	Peace	J3	1	sacrificed
183	WALL	569	-	-	9-Nov-92	Peace	K1	2	sacrificed
184	WALL	484	-	-	9-Nov-92	Peace	K3	1	sacrificed
185	NRPK	529	-	-	9-Nov-92	Peace	K3	2	sacrificed



## **Appendix C.** Special Burbot Collection Project Catch-Per-Unit-Effort and Habitat Data

Site	Habitat Type	Depth*	Set No.	No. of Hooks	Effort (h)	Hook-Hours	Burbot			Other Species**	
							Caught	Observed	Total	CPUE	NRPK
<b>Smoky River</b>											
A1	mouth of snye	m	1	20	18.00	360	2		2	0.56	
A1	snye	s	2	20	18.00	360	3		3	0.83	
A2	mud flat	s	1	15	19.00	285	1		1	0.35	
A2	mud flat	s	2	15	19.00	285	0	1	1	0.35	
A2	back eddy	d	3	20	15.00	300	3		3	1.00	
A3	back eddy	d	1	20	17.00	340	1		1	0.29	
A3	side channel	m	2	20	17.00	340	5		5	1.47	
	<b>Site "A" Total</b>					2270	15		16	0.70	
B1	back eddy	m	1	20	17.00	340	0		0	0.00	
B2	hole	d	1	20	17.00	340	6	1	7	2.06	
B2	hole	d	2	20	22.25	445	1		1	0.22	
B2	mud flat	s	3	20	21.75	435	0		0	0.00	
B2	hole	d	4	20	23.50	470	1		1	0.21	
B2	deep mud flat	d	5	20	22.50	450	1		1	0.22	
B3	inside current line	s	1	20	17.00	340	1		1	0.29	
	<b>Site "B" Total</b>					2820	10		11	0.39	
C1	inside current line	s	1	15	18.00	270	2		2	0.74	
C1	off gravel bar below riffle	s	2	20	18.25	365	2		2	0.55	
C1	deep back eddy	d	3	20	18.00	360	3		3	0.83	
C1	deep back eddy	d	4	15	17.40	261	1		1	0.38	
C2	back eddy	m	1	20	16.50	330	1		1	0.30	
C2	inside current line	s	2	20	16.50	330	1		1	0.30	
C2	mud flat	m	3	20	15.25	305	1		1	0.33	
C2	mud flat	m	4	20	16.25	325	2		2	0.62	
C3	mouth of snye	m	1	15	18.50	277.5	1		1	0.36	
C3	off pt. into main current	s	2	15	18.00	270	2		2	0.74	
C3	off gravel point	s	3	15	17.50	262.5	0		0	0.00	
C3	side channel	m	4	20	17.75	355	2	1	3	0.85	
	<b>Site "C" Total</b>					3711	18		19	0.51	
	<b>Smoky River Total</b>					8801	43		46	0.52	

Site	Habitat Type	Depth*	Hook-			Burbot			Other Species**					
			Set No.	No. of Hooks	Effort (h)	Hook-Hours	Caught	Observed	Total	CPUE	NRPK	WALL	GOLD	Comments
<b>Wapiti River</b>														
D1	deep back eddy	d	1	20	23.00	460	5	1	6	1.30				
D2	back eddy	m	1	15	22.00	330	4		4	1.21				
D2	inside current line	m	2	20	22.25	445	4		4	0.90				
D2	mud flat	m	3	15	22.00	330	2		2	0.61				
D3	deep mud flat	d	1	20	20.50	410	0		0	0.00				lost
D3	deep back eddy	d	2	15	20.50	307.5	2	1	3	0.98				
D3	mouth of side channel	m	3	20	19.50	390	3		3	0.77				
	<b>Site "D" Total</b>					2672.5	20		22	0.82				
	<b>Wapiti River Total</b>					2672.5	20		22	0.82				
<b>Peace River</b>														
F1	mud flat	s	1	20	28.00	560	2		2	0.36			1	
F1	mud flat	s	2	20	28.00	560	1		1	0.18				
F1	snye	m	3	20	27.50	550	11		11	2.00				
F1	back eddy	m	4	20	19.00	380	1		1	0.26			1	
F1	off gravel pt.	s	5	20	18.70	374	0		0	0.00				
F2	deep back eddy	d	1	20	27.20	544	1		1	0.18				
F2	back eddy	m	2	20	27.10	542	0		0	0.00				
F2	mud flat	s	3	20	26.75	535	1		1	0.19				
F2	back eddy	m	4	20	18.75	375	0		0	0.00			1	
F2	mud flat	m	5	20	18.75	375	1		1	0.27				
F3	back eddy	d	1	15	27.50	412.5	1		1	0.24			1	
F3	mouth of effluent inlet	s	2	20	27.00	540	0		0	0.00				
F3	mud flat	m	3	20	18.75	375	0		0	0.00				
	<b>Site "F" Total</b>					6122.5	19		19	0.31				
G1	mud flat	s	1	20	26.25	525	1		1	0.19				
G1	inside snye	s	2	15	26.00	390	1		1	0.26				
G1	mouth of snye	m	3	15	25.50	382.5	1		1	0.26				
G1	cobble side channel	s	4	20	25.00	500	1		1	0.20			1	
G2	mud flat	m	1	20	27.00	540	3		3	0.56			3	
G2	mouth of Notikewin R.	s	2	15	26.00	390	2		2	0.51			1	

Site	Habitat Type	Depth*	Set No.	No. of Hooks	Effort (h)	Hook-Hours	Burbot			Other Species**				
							Caught	Observed	Total	CPUE	NRPK	WALL	GOLD	Comments
G2	mouth of Notikewin R.	s	3	20	25.70	514	0	0	0	0.00				
G2	deep back eddy	d	4	20	25.00	500	0	0	0	0.00		1		
G2	deep back eddy	d	5	20	25.00	500	0	0	0	0.00				lost
G3	off gravel pt.	s	1	20	26.00	520	0	0	0	0.00				
G3	mouth of snye	m	2	20	25.75	515	2	2	2	0.39		1		
G3	inside snye	m	3	20	25.40	508	2	2	2	0.39				
	<b>Site "G" Total</b>					5784.5	13	13	13	0.22				
H1	mouth of snye	m	1	20	20.75	415	2	2	2	0.48		1		
H1	mouth of snye	m	2	20	20.75	415	1	1	1	0.24				
H1	mouth of snye	m	3	10	21.00	210	2	1	3	1.43				
H1	inside snye	s	4	15	21.50	322.5	3	3	3	0.93				
H1	inside snye	s	5	15	20.75	311.25	0	0	0	0.00				
H1	inside snye	s	6	20	20.75	415	0	0	0	0.00				
H2	mouth of Wolverine R.	f	1	15	22.00	330	2	2	2	0.61				
H2	back eddy	m	2	20	22.25	445	1	1	1	0.22				
H2	back eddy	m	3	20	22.25	445	3	3	3	0.67		1		
H2	sand flat	s	4	20	22.50	450	2	2	2	0.44		1		
H3	mud flat	s	1	20	23.00	460	0	0	0	0.00				lost
H3	deep hole	d	2	20	23.00	460	1	1	1	0.22				
H3	deep hole	d	3	20	20.50	410	3	3	3	0.73				
	<b>Site "H" Total</b>					5088.8	20	21	21	0.41				
I1	deep side channel	d	1	20	22.25	445	5	5	5	1.12		1		
I1	deep side channel	d	2	20	22.25	445	1	1	1	0.22				
I1	deep side channel	d	3	20	22.50	450	0	0	0	0.00		1		
I1	deep side channel	d	4	15	22.50	337.5	2	2	2	0.59				
I2	mud flat	dm	1	20	22.25	445	2	2	2	0.45				
I2	mud flat	m	2	20	22.25	445	0	0	0	0.00				
I2	mud flat	m	3	20	22.50	450	0	0	0	0.00				1
I2	mud flat	m	4	20	22.75	455	0	0	0	0.00				
I3	inside snye	s	1	15	22.75	341.25	0	0	0	0.00				lost
I3	inside snye	s	2	15	21.25	318.75	3	3	3	0.94				
I3	mouth of snye	m	3	20	21.00	420	3	3	3	0.71				
I3	mud flat	m	4	20	21.00	420	1	1	2	0.48				
	<b>Site "I" Total</b>					4972.5	17	18	18	0.36				

Site	Habitat Type	Depth*	Set No.	No. of Hooks	Effort (h)	Hook-Hours	Burbot			Other Species**			
							Caught	Observed	Total	CPUE	NRPK	WALL	GOLD
J1	cobble scour pool	m	1	15	22.00	330	0	0	0	0.00	1		
J1	cobble flat	s	2	20	23.75	475	2	2	2	0.42			
J1	cobble flat	s	3	20	23.00	460	0	0	0	0.00	2		
J1	cobble flat	s	4	20	22.50	450	0	0	0	0.00		1	
J2	deep mud flat	d	1	10	22.00	220	0	0	0	0.00			
J2	deep mud flat	d	2	20	22.25	445	2	2	2	0.45			
J2	mud flat	m	3	20	21.25	425	3	3	3	0.71	1		
J2	mud flat	m	4	20	21.00	420	0	0	0	0.00			
J3	deep side channel	d	1	15	22.75	341.25	0	0	0	0.00		1	
J3	deep side channel	d	2	20	22.50	450	0	0	0	0.00			
J3	deep side channel	d	3	15	21.50	322.5	1	1	1	0.31			
J3	deep side channel	d	4	20	21.50	430	1	1	1	0.23			
J3	deep side channel	d	5	20	21.50	430	0	0	0	0.00			
	<b>Site "J" Total</b>					5198.8	9	9	9	0.17			
K1	deep hole	d	1	20	20.00	400	1	1	1	0.25			
K1	deep hole	d	2	20	20.25	405	1	1	1	0.25			1
K1	deep hole	d	3	15	20.25	303.75	3	3	3	0.99			
K1	off gravel pt.	s	4	20	20.00	400	2	2	2	0.50			
K2	shallow sand flat	s	1	15	22.25	333.75	1	1	1	0.30			
K2	shallow sand flat	s	2	15	22.50	337.5	1	1	1	0.30			
K2	shallow sand flat	s	3	20	22.00	440	2	2	2	0.45			
K2	off point of island	s	4	20	22.00	440	0	0	0	0.00			
K3	mud flat	m	1	20	23.50	470	1	1	1	0.21			1
K3	mud flat	m	2	20	23.75	475	1	1	1	0.21			
K3	mud flat	m	3	20	20.50	410	0	0	0	0.00			
K3	mud flat	m	4	20	20.00	400	1	1	1	0.25			
K3	mud flat	m	5	20	20.00	400	1	1	1	0.25			
K3	mud flat	m	6	20	20.00	400	1	1	2	0.50			
	<b>Site "K" Total</b>					5615	16	17	17	0.30			
	<b>Peace River Total</b>					32782	94	97	97	0.30			

\* Depth: s - shallow (< 1.0 m); m - moderate (1.0 - 3.0 m); d - deep (>3.0).  
\*\* Species Code: NRPK - northern pike; WALL - walleye; GOLD - goldeye.



**Appendix D.** Special Burbot Collection Project Gross Pathology (External)  
Examination Sheets





NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 24/10/92

SAMPLE NO.: 1

LOCATION: B3

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 0930

EXAMINATION TIME: 1030

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendi

DATE: 24/10/92

LOCATION: B2

CAPTURE METHOD: set Line

EXAMINATION TIME: 1035

SAMPLE NO.: 2

SPECIES: Ling

CAPTURE TIME: 1000

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 3  
SPECIES: Ling  
CAPTURE TIME: 1000

DATE: 24/10/92  
LOCATION: B2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1040

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Peritoneal Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 24/10/92  
LOCATION: B2  
SAMPLE NO.: 4  
SPECIES: Ling  
CAPTURE TIME: 1030  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1045

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 24/10/92  
LOCATION: B2  
SAMPLE NO.: 5  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1000  
EXAMINATION TIME: 1050

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 6  
SPECIES: Ling  
CAPTURE TIME: 1000

DATE: 24/10/92  
LOCATION: B2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1055

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 7  
SPECIES: Ling  
CAPTURE TIME: 1000

DATE: 24/10/92  
LOCATION: B2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1100

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
(  ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
(  ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petecnial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

Lo 1/2  
SAMPLE NO.: 8  
SPECIES: Ling  
CAPTURE TIME: 0915

DATE: 25/10  
LOCATION: B-2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 0955

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 25/10/92  
LOCATION: D-3  
SAMPLE NO.: 9  
SPECIES: Line  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1230  
EXAMINATION TIME: 1248

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 25/10/92

SAMPLE NO.: 10

LOCATION: D3

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1230

EXAMINATION TIME: 1255

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 26/10/92

SAMPLE NO.: 11

LOCATION: B-2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 0900

EXAMINATION TIME: 0922

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: ( ) Normal ( ) Pale ( ) Mottled (  ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 26/10/92  
LOCATION: B-2  
SAMPLE NO.: 12  
SPECIES: King  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 0900  
EXAMINATION TIME: 0922

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: yellow streak on left operculum, "lighter" in color overall

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: ( ) Normal (X) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended (fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 13  
SPECIES: Ling  
CAPTURE TIME: 1100

DATE: 27/10/92  
LOCATION: D-1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1130

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spot on caudal peduncle

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 14  
SPECIES: Ling  
CAPTURE TIME: 1100

DATE: 27/10/92  
LOCATION: D-1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1130

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 27/10

SAMPLE NO.: 15

LOCATION: D-1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1400

EXAMINATION TIME: 1130

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 27/10/92  
LOCATION: D-1  
SAMPLE NO.: 16  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1100  
EXAMINATION TIME: 1130

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 27/10/92

SAMPLE NO.: 17

LOCATION: D-1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1100

EXAMINATION TIME: 1130

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spot LEFT side Midway under posterior dorsal fin

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 27/10/92

SAMPLE NO.: 18

LOCATION: D-3

SPECIES: King

CAPTURE METHOD: Set Line

CAPTURE TIME: 0930

EXAMINATION TIME: 0945

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spot on TOP LEFT side ANTERIOR TO dorsal fin

Wet mount/smear: Black spot on Right caudal Penduncle

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 19  
SPECIES: Ling  
CAPTURE TIME: 0930

DATE: 27/10/92  
LOCATION: D-3  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 0945

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendi

DATE: 27/10/92

SAMPLE NO.: 20

LOCATION: D-3

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 0930

EXAMINATION TIME: 0945

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

DATE: 27/10/92

SAMPLE NO.: 21

LOCATION: D-2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1020

EXAMINATION TIME: 1040

GROSS EXTERNAL EXAMINATION

Skin:  Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes:  Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins:  Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills:  Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 27/10/92

SAMPLE NO.: 22

LOCATION: D-2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1020

EXAMINATION TIME: 1045

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 23  
SPECIES: Ling  
CAPTURE TIME: 1000

DATE: 27/10/92  
LOCATION: 10-2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1050

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 27/10/92

SAMPLE NO.: 24

LOCATION: D-2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1000

EXAMINATION TIME: 1055

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 25  
SPECIES: Ling  
CAPTURE TIME: 1000

DATE: 27/10/92  
LOCATION: D-2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1100

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 26  
SPECIES: Ling  
CAPTURE TIME: 1000

DATE: 27/10/92  
LOCATION: 17-2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1105

GROSS EXTERNAL EXAMINATION

Skin: (✓) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (✓) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (✓) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (✓) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petecnia Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 27  
SPECIES: Ling  
CAPTURE TIME: 1030

DATE: 27/10/72  
LOCATION: D-2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 110

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(  ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 27/10/92

SAMPLE NO.: 28

LOCATION: D-2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1030

EXAMINATION TIME: 1115

GROSS EXTERNAL EXAMINATION

Skin:  Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes:  Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: ( ) Normal ( ) Frayed \_\_\_\_\_  Haemorrhagic Caudal  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_ F

Wet mount/smear: \_\_\_\_\_

Gills:  Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 27/10/92  
LOCATION: D-2  
SAMPLE NO.: 29  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1030  
EXAMINATION TIME: 1120

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spot on caudal fin

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

SAMPLE NO.: 30  
SPECIES: Ling  
CAPTURE TIME: 1030

DATE: 27/10/92  
LOCATION: D-2  
CAPTURE METHOD: set line  
EXAMINATION TIME: 1125

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92  
LOCATION: A-2  
SAMPLE NO.: 31  
SPECIES: Ling  
CAPTURE METHOD: 0945  
CAPTURE TIME: 0930  
EXAMINATION TIME: 1045

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spots → Midway left lateral line, dorsal area of head

Wet mount/smear: below right dorsal

Eyes: (✓) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (✓) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92  
LOCATION: A3

SAMPLE NO.: 32

SPECIES: ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1030

EXAMINATION TIME: 1050

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spots @ base of dorsal

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92  
LOCATION: A-3  
SAMPLE NO.: 33  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1030  
EXAMINATION TIME: 1055

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92  
LOCATION: A-3  
SAMPLE NO.: 341  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1030  
EXAMINATION TIME: 1100

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: yellow spot on left isthmus

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid ) ( ) Distended ( mucoid )  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 35  
SPECIES: ling  
CAPTURE TIME: 1030

DATE: 28/10/92  
LOCATION: A3  
CAPTURE METHOD: set line  
EXAMINATION TIME: 1105

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: yellow spot on right isthmus

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 36  
SPECIES: Line  
CAPTURE TIME: 1030

DATE: 28/10/82  
LOCATION: A-3  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1110

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92  
LOCATION: P.A.1  
SAMPLE NO.: 37  
SPECIES: Ling  
CAPTURE METHOD: Sad Line  
CAPTURE TIME: 1000  
EXAMINATION TIME: 1115

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: 1 below left Anterior Dorsal, left lateral line, on right caudal

Wet mount/smear: Produce

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92

SAMPLE NO.: 38

LOCATION: A1

SPECIES: Ling

CAPTURE METHOD: set line

CAPTURE TIME: 1000

EXAMINATION TIME: 1120

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petecnia Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92  
LOCATION: A1  
SAMPLE NO.: 39  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1015  
EXAMINATION TIME: 1125

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spots on head & tail

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 28/10/92

SAMPLE NO.: 410

LOCATION: A-1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1015

EXAMINATION TIME: 1130

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92  
LOCATION: A1  
SAMPLE NO.: 41  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1015  
EXAMINATION TIME: 1135

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Yellow spot on isthmus

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92  
SAMPLE NO.: 42 LOCATION: A2  
SPECIES: Line CAPTURE METHOD: set Line  
CAPTURE TIME: 0900 EXAMINATION TIME: 1140

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92  
SAMPLE NO.: 411 LOCATION: A2  
SPECIES: Ling CAPTURE METHOD: set line  
CAPTURE TIME: 0900 EXAMINATION TIME: 1150

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(  ) Lesions ( ) Single ( ) Multiple ( ) Closed  
(  ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
(  ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
(  ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
(  ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
(  ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
(  ) Telangiectasia ( ) Gas emboli ( ) Cysts  
(  ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

(  ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
(  ) Colour \_\_\_\_\_ ( ) Cysts

Liver: (  ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
(  ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
(  ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
(  ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:

(  ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
(  ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

(  ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
(  ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

(  ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
(  ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
(  ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 28/10/92

SAMPLE NO.: 45

LOCATION: A3

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1000

EXAMINATION TIME: 1155

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 29/10/92

SAMPLE NO.: 46

LOCATION: C3

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1200

EXAMINATION TIME: 1239

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales (X) Abrasions

Location: Head: from capture method.

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 47  
SPECIES: Ling  
CAPTURE TIME: 1145

DATE: 29/10/92  
LOCATION: C2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1243

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Peritoneal Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appe

SAMPLE NO.: 48  
SPECIES: Ling  
CAPTURE TIME: 1115

DATE: 29/10/92  
LOCATION: C1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1250

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
(X) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Blister on L. Lateral line

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
(X) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhage  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 29/10/92  
LOCATION: C1  
SAMPLE NO.: 49  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1115  
EXAMINATION TIME: 1253

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black Spot on head (top)

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 29/10/92  
LOCATION: C2  
SAMPLE NO.: 50  
SPECIES: Ling  
CAPTURE METHOD: sculpin  
CAPTURE TIME: 1145  
EXAMINATION TIME: 1257

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 29/10/92

SAMPLE NO.: 51

LOCATION: C1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1130

EXAMINATION TIME: 1300

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 29/10/92

SAMPLE NO.: 52

LOCATION: C1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1130

EXAMINATION TIME: 1304

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Overall "pale" appearance

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petecnial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 29/10/92  
LOCATION: C2  
SAMPLE NO.: 53  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1000  
EXAMINATION TIME: 1309

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 29/10/92

SAMPLE NO.: 54

LOCATION: C2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1030

EXAMINATION TIME: 1317

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
(  ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 29/10/92

SAMPLE NO.: 55

LOCATION: C2

SPECIES: Ling

CAPTURE METHOD: Set Limp

CAPTURE TIME: 1030

EXAMINATION TIME: 1319

GROSS EXTERNAL EXAMINATION

Skin:  Normal      ( ) Excessive mucus      ( ) Abnormal Colour  
( ) Lesions      ( ) Single      ( ) Multiple      ( ) Closed  
( ) Open      ( ) Haemorrhagic      ( ) Necrotic      ( ) Ulcer  
( ) Blister      ( ) Tumour      ( ) Lost Scales      ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes:  Normal      ( ) Exophthalmia      ( ) Cataract      ( ) Haemorrhagic  
( ) Opaque cornea      ( ) Lens lost      ( ) Parasites      ( ) Bilateral

Fins:  Normal      ( ) Frayed \_\_\_\_\_      ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_      ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills:  Normal      ( ) Pale      ( ) Mottled      ( ) Haemorrhagic  
( ) Necrotic      ( ) Excessive mucus      ( ) Hyperplasia  
( ) Telangiectasia      ( ) Gas emboli      ( ) Cysts  
( ) Large Parasites \_\_\_\_\_      ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal      ( ) Excessive      ( ) Reduced      ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_      ( ) Cysts

Liver: ( ) Normal      ( ) Enlarge      ( ) Reduced      Colour: ( ) Pale      ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single      ( ) Multiple      ( ) Tumour  
( ) Necrotic      ( ) Haemorrhagic      ( ) Cyst (parasite)      ( ) Cyst (Fluid)

Spleen:

( ) Normal      ( ) Enlarged      ( ) Reduced      ( ) Raspberry surface  
( ) Cyst (parasite)      ( ) Cyst (fluid)      ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal      ( ) Distended ( fluid)      ( ) Distended (mucoid)  
( ) Flaccid      ( ) Haemorrhagic      ( ) Cysts (parasite)      ( ) Tumour

Kidney, Posterior:

( ) Normal      ( ) Enlarge      ( ) Lesions      ( ) Single  
( ) Multiple      ( ) Gritty, white      ( ) Cyst (parasite)      ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 31/10/99

SAMPLE NO.: 56

LOCATION: C3

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 0950

EXAMINATION TIME: 1103

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 31/10/92  
SAMPLE NO.: 57 LOCATION: C3  
SPECIES: Ling CAPTURE METHOD: Set Line  
CAPTURE TIME: 1005 EXAMINATION TIME: 1109

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: ( ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
(  ) Eroded operculum \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
(  ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended ( mucoid )  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 31/10/92

SAMPLE NO.: 58

LOCATION: C3

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1005

EXAMINATION TIME: 1115

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: yellow spots on isthmus & belly

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 59  
SPECIES: Ling  
CAPTURE TIME: 1005

DATE: 31/10/92  
LOCATION: C3  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1121

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 31/10/92

SAMPLE NO.: 60

LOCATION: C1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1030

EXAMINATION TIME: 1128

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended ( mucoid )  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 31/10/97

SAMPLE NO.: 61

LOCATION: C1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1030

EXAMINATION TIME: 1135

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spots → behind head & along dorsal surface, yellow spot near anus

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 31/10/92  
LOCATION: C1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1141

SAMPLE NO.: 62  
SPECIES: Ling  
CAPTURE TIME: 1015

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 63  
SPECIES: Ling  
CAPTURE TIME: 1015

DATE: 31/10/92  
LOCATION: C1  
CAPTURE METHOD: set line  
EXAMINATION TIME: 1148

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture:  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 31/10/92

SAMPLE NO.: 64

LOCATION: F1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1400

EXAMINATION TIME: 1610

GROSS EXTERNAL EXAMINATION

- Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister (  ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Forward R, Lateral line, Yellow spot on Caudal Peduncle

Wet mount/smear: \_\_\_\_\_

- Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

- Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

- Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

- Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

- Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

- Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

- Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

- Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 65  
SPECIES: Living  
CAPTURE TIME: 1410

DATE: 31/10/92  
LOCATION: F2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1617

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 31/10/92  
LOCATION: F1  
SAMPLE NO.: 66  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1530  
EXAMINATION TIME: 1623

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: 2 back spots on dorsal surface

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 31/10/92

SAMPLE NO.: 67

LOCATION: FI

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1530

EXAMINATION TIME: 1628

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Pericardial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
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Appendi

DATE: 31/10/92  
LOCATION: F1  
SAMPLE NO.: 68  
SPECIES: Ling  
CAPTURE TIME: 1500  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1635

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(  ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: lesion @ base of L. pelvic

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: ( ) Normal ( ) Frayed \_\_\_\_\_ (  ) Haemorrhagic tail  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 3/10/92

SAMPLE NO.: 69

LOCATION: F1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1540

EXAMINATION TIME: 1645

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
(  ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
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Appendix

SAMPLE NO.: 70  
SPECIES: Ling  
CAPTURE TIME: 1540

DATE: 31/10/92  
LOCATION: F1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1652

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(X) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: healed on R. side

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
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Appendix

DATE: 3/10/92  
LOCATION: F1  
SAMPLE NO.: 71  
SPECIES: ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1540  
EXAMINATION TIME: 1700

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour Yellow spots  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: L Lateral line (midway)

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended (fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
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Appendix

DATE: 3/10/92

SAMPLE NO.: 72

LOCATION: F1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1540

EXAMINATION TIME: 1708

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Yellow spot behind L. Pelvic

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
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Appendix

SAMPLE NO.: 73  
SPECIES: Line  
CAPTURE TIME: 1540

DATE: 3/10/92  
LOCATION: F1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1715

GROSS EXTERNAL EXAMINATION

Skin:  Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes:  Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins:  Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills:  Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
 Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
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Appendix

DATE: 31/10/92

SAMPLE NO.: 71

LOCATION: F1

SPECIES: ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 15:10

EXAMINATION TIME: 1720

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister (X) Tumour ( ) Lost Scales ( ) Abrasions

Location: Anterior area of anal fin

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture:  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
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Appendix

DATE: 31/10/92  
LOCATION: F1  
SAMPLE NO.: 75  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1540  
EXAMINATION TIME: 1725

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: yellow spots on belly

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
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Appendix

SAMPLE NO.: 76  
SPECIES: Ling  
CAPTURE TIME: 15:10

DATE: 3/10/92  
LOCATION: F1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1730

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
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GROSS PATHOLOGY

Appendix

DATE: 31/10/99

SAMPLE NO.: 77

LOCATION: F1

SPECIES: LINS

CAPTURE METHOD: Set Line

CAPTURE TIME: 1540

EXAMINATION TIME: 1736

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Yellow spot on belly

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 31/10/92  
LOCATION: F1  
SAMPLE NO.: 78  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1540  
EXAMINATION TIME: 1740

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 79  
SPECIES: Ling  
CAPTURE TIME: 1500

DATE: 3/10/92  
LOCATION: F2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1748

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(  ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

SAMPLE NO.: 80  
SPECIES: Ling  
CAPTURE TIME: 1530

DATE: 31/10/92  
LOCATION: F3  
CAPTURE METHOD: Set Ling  
EXAMINATION TIME: 1800

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 31/10/92  
LOCATION: F1  
SAMPLE NO.: 81  
SPECIES: NRPK  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1530  
EXAMINATION TIME: 1805

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appen

DATE: 1/11/92  
LOCATION: F2  
SAMPLE NO.: 82  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 10:10  
EXAMINATION TIME: 1110

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open (X) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Numerous red spots on both sides midway 131mm spots

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagi  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottle  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 83  
SPECIES: Ling  
CAPTURE TIME: 1015

DATE: 2/11/92  
LOCATION: F1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1117

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
(X) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 3/11/92

SAMPLE NO.: 84

LOCATION: 91

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1215

EXAMINATION TIME: 1434

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 3/11/92

SAMPLE NO.: 85

LOCATION: 61

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1215

EXAMINATION TIME: 1439

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spots on body

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 3/11/92

SAMPLE NO.: 86

LOCATION: G1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1200

EXAMINATION TIME: 1444

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 3/11/92

SAMPLE NO.: 87

LOCATION: G1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1145

EXAMINATION TIME: 1447

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

SAMPLE NO.: 88  
SPECIES: Ling  
CAPTURE TIME: 1315

DATE: 3/11/92  
LOCATION: G2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1450

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 3/11/92

SAMPLE NO.: 89

LOCATION: G2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1315

EXAMINATION TIME: 1454

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Discoloured

Wet mount/smear: \_\_\_\_\_

Eyes: ( ) Normal Sunken eye (left) ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoïd)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 31/1/92  
LOCATION: G2  
SAMPLE NO.: 90  
SPECIES: ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1245  
EXAMINATION TIME: 1457

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 31/1/92  
SAMPLE NO.: 91 LOCATION: G2  
SPECIES: Ling CAPTURE METHOD: 1 set 2 in  
CAPTURE TIME: 1245 EXAMINATION TIME: 1500

GROSS EXTERNAL EXAMINATION

Skin:  Normal ( ) Excessive mucus ( ) Abnormal Colour  
 Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes:  Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
 Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins:  Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
 Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills:  Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
 Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 3/11/92

SAMPLE NO.: 92

LOCATION: G2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1245

EXAMINATION TIME: 1510

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 3/11/92  
LOCATION: G-3  
SAMPLE NO.: 93  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1400  
EXAMINATION TIME: 1512

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black spots

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucooid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 3/11/92  
LOCATION: G3  
SAMPLE NO.: 94  
SPECIES: Long  
CAPTURE TIME: 1400  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1514

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 95  
SPECIES: Ling  
CAPTURE TIME: 1345

DATE: 3/1/92  
LOCATION: G3  
CAPTURE METHOD: Soft Lim  
EXAMINATION TIME: 1518

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 96  
SPECIES: Lim  
CAPTURE TIME: 1345

DATE: 3/11/92  
LOCATION: G3  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1520

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendi

SAMPLE NO.: 97 DATE: 5/11/92  
SPECIES: Ling LOCATION: K3  
CAPTURE TIME: 1130 CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1200

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 5/11/92  
SAMPLE NO.: 98 LOCATION: K3  
SPECIES: Ling CAPTURE METHOD: Set Line  
CAPTURE TIME: 1145 EXAMINATION TIME: 1202

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Perichial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: # 99

DATE: 5/11/99

SPECIES: Ling

LOCATION: K2

CAPTURE TIME: 1030

CAPTURE METHOD: Set Line

EXAMINATION TIME: 1206

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 5/11/92

SAMPLE NO.: 100

LOCATION: K2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1100

EXAMINATION TIME: 1209

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
(  ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: # 101  
SPECIES: Ling  
CAPTURE TIME: 1045

DATE: 5/11/92  
LOCATION: K2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1212

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 5/11/92

SAMPLE NO.: 102

LOCATION: K2

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1045

EXAMINATION TIME: 1216

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 103  
SPECIES: Ling  
CAPTURE TIME: 0945

DATE: 5/11/92  
LOCATION: K1  
CAPTURE METHOD: set line  
EXAMINATION TIME: 1220

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 5/11/92  
SAMPLE NO.: #104 LOCATION: K1  
SPECIES: Ling CAPTURE METHOD: Set Line  
CAPTURE TIME: 1000 EXAMINATION TIME: 1228

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(  ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
(  ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
(  ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagi  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottle  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B.

In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 5/11/92  
SAMPLE NO.: #105 LOCATION: K1  
SPECIES: Ling CAPTURE METHOD: Set Line  
CAPTURE TIME: 1000 EXAMINATION TIME: 1232

GROSS EXTERNAL EXAMINATION

Skin:  Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes:  Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins:  Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills:  Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 5/11/92

SAMPLE NO.: 106

LOCATION: K1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1000

EXAMINATION TIME: 1236

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal *Sunken left eye* ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 5/11/92  
LOCATION: K1  
SAMPLE NO.: 107  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1015  
EXAMINATION TIME: 1242

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 108  
SPECIES: King  
CAPTURE TIME: 1015

DATE: 5/11/92  
LOCATION: K1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1249

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(  ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 109  
SPECIES: Ling  
CAPTURE TIME: 1015

DATE: 5/11/92  
LOCATION: K1  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1257

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_  
Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
(  ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendi

DATE: 5/11/92

SAMPLE NO.: 110

LOCATION: K1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1115

EXAMINATION TIME: 1303

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 5/11/92  
LOCATION: K 3  
SAMPLE NO.: 111  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1130  
EXAMINATION TIME: 1310

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 5/11/92

SAMPLE NO.: 112

LOCATION: K3

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 1145

EXAMINATION TIME: 1316

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92  
LOCATION: I 1  
SAMPLE NO.: 113  
SPECIES: King  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 930  
EXAMINATION TIME: 1056

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 7/11/92

SAMPLE NO.: 114

LOCATION: I 1

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 0930

EXAMINATION TIME: 1059

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
(  ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid ) ( ) Distended ( mucoid )  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92  
LOCATION: F1  
SAMPLE NO.: 115  
SPECIES: L. n. g.  
CAPTURE METHOD: SET LINE  
CAPTURE TIME: 9.30  
EXAMINATION TIME: 11.02

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92

SAMPLE NO.: 116

LOCATION: I1

SPECIES: Ling

CAPTURE METHOD: SETLINE

CAPTURE TIME: 0930

EXAMINATION TIME: 1105

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: ( ) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded (X) Deformed

Wet mount/smear: (rear dorsal & tail fin split)

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92

SAMPLE NO.: 117

LOCATION: T1

SPECIES: Ling

CAPTURE METHOD: SET LINE

CAPTURE TIME: 0930

EXAMINATION TIME: 11.07

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

SAMPLE NO.: 118  
SPECIES: ling  
CAPTURE TIME: 0945

DATE: 7/11/92  
LOCATION: I1  
CAPTURE METHOD: SETLINE  
EXAMINATION TIME: 11:09

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92  
LOCATION: I 1  
SAMPLE NO.: 119  
SPECIES: LONG  
CAPTURE METHOD: SET LINE  
CAPTURE TIME: 11 00  
EXAMINATION TIME: 11:12

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 7/11/92

SAMPLE NO.: 120

LOCATION: I

SPECIES: king

CAPTURE METHOD: set line

CAPTURE TIME: 1100

EXAMINATION TIME: 1114

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: ( ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
(X) Opaque cornea left ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoïd)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 121  
SPECIES: Ling  
CAPTURE TIME: 09:30

DATE: 7/1/82  
LOCATION: I 2  
CAPTURE METHOD: SET / line  
EXAMINATION TIME: 11.18

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(X) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 7/11/92  
LOCATION: I 2  
SAMPLE NO.: 122  
SPECIES: Ling  
CAPTURE METHOD: SET/LINE  
CAPTURE TIME: 09:30  
EXAMINATION TIME: 11 21

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92

SAMPLE NO.: 123

LOCATION: I 3

SPECIES: Cling

CAPTURE METHOD: set line

CAPTURE TIME: 10 15

EXAMINATION TIME: 11:23

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92

SAMPLE NO.: 124

LOCATION: I 3

SPECIES: Ling

CAPTURE METHOD: SETLINE

CAPTURE TIME: 10:15

EXAMINATION TIME: 11:27

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92

SAMPLE NO.: 125

LOCATION: J3

SPECIES: King

CAPTURE METHOD: SET LINE

CAPTURE TIME: 10 15

EXAMINATION TIME: 11.29

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 7/11/92

SAMPLE NO.: 126

LOCATION: I 3

SPECIES: L. n. g.

CAPTURE METHOD: SETLINE

CAPTURE TIME: 10<sup>15</sup>

EXAMINATION TIME: 11:32

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92  
LOCATION: I 3  
SAMPLE NO.: 127  
SPECIES: King  
CAPTURE TIME: 10 15  
CAPTURE METHOD: set line  
EXAMINATION TIME: 11.34

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 7/11/92  
LOCATION: I 3  
SAMPLE NO.: 128  
SPECIES: Ling  
CAPTURE METHOD: SET LINE  
CAPTURE TIME: 10 15  
EXAMINATION TIME: 11 37

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 7/11/92  
LOCATION: I 3  
SAMPLE NO.: 129  
SPECIES: Ling  
CAPTURE METHOD: SET/LINE  
CAPTURE TIME: 10.30  
EXAMINATION TIME: 11.40

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 9/11/92

SAMPLE NO.: 130

LOCATION: 31

SPECIES: Ling

CAPTURE METHOD: setline

CAPTURE TIME: 10.45

EXAMINATION TIME: 11.33

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petecnial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 9/11/92  
SAMPLE NO.: 131 LOCATION: J1  
SPECIES: Ling CAPTURE METHOD: set line  
CAPTURE TIME: 10 45 EXAMINATION TIME: 11 35

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_  
Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 9/11/92  
LOCATION: 51  
SAMPLE NO.: 132  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 10:15  
EXAMINATION TIME: 11:37

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 9/11/92  
LOCATION: 51  
SAMPLE NO.: 133  
SPECIES: Ling  
CAPTURE METHOD: set line  
CAPTURE TIME: 10:15  
EXAMINATION TIME: 11.39

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (  ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: (Black dot LEFT side)

Wet mount/smear: \_\_\_\_\_

Eyes: ( ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
(  ) Opaque cornea (LEFT) ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 9/11/92  
LOCATION: J2  
SAMPLE NO.: 134  
SPECIES: L.119  
CAPTURE METHOD: SET line  
CAPTURE TIME: 10 00  
EXAMINATION TIME: 11 41

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 135  
SPECIES: Ling  
CAPTURE TIME: 10.00

DATE: 9/11/92  
LOCATION: 32  
CAPTURE METHOD: SET/LINE  
EXAMINATION TIME: 11.45

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: ( ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
(X) Opaque cornea (left eye blind) ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 9/11/92  
LOCATION: 52  
SAMPLE NO.: 136  
SPECIES: Ling  
CAPTURE TIME: 10.00  
CAPTURE METHOD: Set line  
EXAMINATION TIME: 11.43

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 137  
SPECIES: Ling  
CAPTURE TIME: 11:00

DATE: 9/11/92  
LOCATION: J3  
CAPTURE METHOD: SETLINE  
EXAMINATION TIME: 11:51

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(X) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: TOP OF HEAD & TOP RIGHT SIDE

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 9/11/92  
LOCATION: 53  
SAMPLE NO.: 138  
SPECIES: Ling  
CAPTURE METHOD: set line  
CAPTURE TIME: 11:00  
EXAMINATION TIME: 11:55

GROSS EXTERNAL EXAMINATION

Skin:  Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: ( ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea  Lens lost ( ) Parasites ( ) Bilateral  
(Blind Right eye)

Fins:  Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills:  Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 11/11/92  
LOCATION: H3  
SAMPLE NO.: 139  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 1000  
EXAMINATION TIME: 1054

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: ( ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: Cyst on right side of caudal fin

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

SAMPLE NO.: 140  
SPECIES: Ling  
CAPTURE TIME: 0915

DATE: 11/11/92  
LOCATION: H3  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1057

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 141  
SPECIES: Ling  
CAPTURE TIME: 0915

DATE: 11/11/92  
LOCATION: H3  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1100

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 11/11/92

SAMPLE NO.: 142

LOCATION: H3

SPECIES: Ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 0915

EXAMINATION TIME: 1103

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

SAMPLE NO.: 143  
SPECIES: Ling  
CAPTURE TIME: 0930

DATE: 11/11/92  
LOCATION: H2  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1106

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 11/11/92  
SAMPLE NO.: 144 LOCATION: H2  
SPECIES: Ling CAPTURE METHOD: Set Line  
CAPTURE TIME: 0930 EXAMINATION TIME: 1108

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single (X) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Black and Red spots

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: ( ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ (X) Deformed Split Anal Fin

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 11/11/92  
SAMPLE NO.: 145 LOCATION: H12  
SPECIES: Line CAPTURE METHOD: Set Line  
CAPTURE TIME: 0945 EXAMINATION TIME: 1112

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales (X) Abrasions

Location: Scratches on top of head

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 11/11/92

SAMPLE NO.: 146

LOCATION: 412

SPECIES: Leis

CAPTURE METHOD: Set Line

CAPTURE TIME: 0930

EXAMINATION TIME: 1116

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 11/11/92  
LOCATION: H2  
SAMPLE NO.: 147  
SPECIES: ling  
CAPTURE METHOD: Set line  
CAPTURE TIME: 0930  
EXAMINATION TIME: 1119

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus (X) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Pale numerous black & yellow spots

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 11/11/92

SAMPLE NO.: 148

LOCATION: 112

SPECIES: Ling

CAPTURE METHOD: setline

CAPTURE TIME: 0930

EXAMINATION TIME: 1122

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Peritoneal Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 11/11/92  
LOCATION: H2  
SAMPLE NO.: 149  
SPECIES: Ling  
CAPTURE TIME: 0945  
CAPTURE METHOD: Set Line  
EXAMINATION TIME: 1124

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 11/11/92  
LOCATION: H2  
SAMPLE NO.: 150  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 0945  
EXAMINATION TIME: 1126

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 11/11/92  
LOCATION: 411  
SAMPLE NO.: 151  
SPECIES: Line  
CAPTURE METHOD: 6/ Line  
CAPTURE TIME: 0845  
EXAMINATION TIME: 1129

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: ( ) Normal (  ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append

DATE: 11/11/92  
LOCATION: H1  
SAMPLE NO.: 152  
SPECIES: ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 0915  
EXAMINATION TIME: 1132

GROSS EXTERNAL EXAMINATION

Skin: (X) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 11/11/99

SAMPLE NO.: 153

LOCATION: #1

SPECIES: King

CAPTURE METHOD: Set Line

CAPTURE TIME: 0915

EXAMINATION TIME: 1134

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Scar on left side

Wet mount/smear: \_\_\_\_\_

Eyes: (X) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (X) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (X) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst (parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts (parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 11/11/92

SAMPLE NO.: 154

LOCATION: H11

SPECIES: Ling

CAPTURE METHOD: Set Ling

CAPTURE TIME: 0845

EXAMINATION TIME: 440 1137

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: Scars on left side

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 11/11/92  
LOCATION: F11  
SAMPLE NO.: 155  
SPECIES: Ling  
CAPTURE METHOD: Set Line  
CAPTURE TIME: 0845  
EXAMINATION TIME: 1140

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed ( ) Haemorrhagic  
(  ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fax to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Append.

DATE: 11/11/82

SAMPLE NO.: 156

LOCATION: F11

SPECIES: ling

CAPTURE METHOD: Set Line

CAPTURE TIME: 0900

EXAMINATION TIME: 1140

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic \_\_\_\_\_  
(  ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
(  ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: 11/11/92

SAMPLE NO.: 157

LOCATION: H1

SPECIES: Ling

CAPTURE METHOD: 1 set L. nr

CAPTURE TIME: 0900

EXAMINATION TIME: 1143

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
(  ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid ) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appen

DATE: 21/11/92  
LOCATION: 111  
SAMPLE NO.: 158  
SPECIES: Line  
CAPTURE METHOD: set Line  
CAPTURE TIME: 0900  
EXAMINATION TIME: 1145

GROSS EXTERNAL EXAMINATION

Skin: (  ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: (  ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: (  ) Normal ( ) Frayed \_\_\_\_\_ ( ) Haemorrhagic  
( ) Eroded \_\_\_\_\_ ( ) Deformed \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Gills: (  ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites \_\_\_\_\_ ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:

( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour \_\_\_\_\_ ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other \_\_\_\_\_ Texture: \_\_\_\_\_  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:

( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour \_\_\_\_\_

Stained smear: \_\_\_\_\_

Intestines:

( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoid)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:

( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055

## Appendix E. Terms of Reference





## NORTHERN RIVER BASINS STUDY

### SCHEDULE OF TERMS OF REFERENCE

#### PROJECT 3118-B1 SPECIAL BURBOT COLLECTIONS (PEACE RIVER DRAINAGE - TO INCLUDE SITES HISTORICALLY USED BY NATIVE PEOPLES

#### DESCRIPTION

The Northern River Basins Study has as one of its main objectives, the determination of dioxin and furan and other contaminant concentrations in fish throughout the Peace, Athabasca and Slave River systems. Additional burbot collections are required for analysis of liver and muscle tissues to complete a geographic overview on the distribution of contaminants in this species. Other fish species used for food will be collected only as incidental mortalities.

In 1990, the Fish and Wildlife Division of Alberta Forestry, Lands and Wildlife collected 771 fish from 23 sites in the Athabasca and Peace River basins. Seventeen burbot from this collection were analyzed for dioxins and furans. The results have shown burbot to be sensitive bioaccumulators of dioxins/furans. These limited analyses from the Smoky-Wapiti Rivers have resulted in the issuance of a public health fish consumption advisory for the Peace River and its tributaries. Major data gaps exist for the Peace River. Given the general understanding that burbot livers are a preferred food source for residents along the Peace River, particularly natives, there is need for more burbot tissue analysis to better delineate the specific areas of concern.

Of initial importance is the need to define the extent of contamination in fish stocks utilized by local communities along the Peace River. Although preliminary collection sites have been identified and some collections were done this past spring, this project will actively solicit community involvement in site selection. The services of the Fish and Wildlife Division's Native Liaison Officer (Peace River) will be used to establish community contacts (preliminary list attached) as well as local boat operators/guides and fishermen. The contractor will be responsible for following up the community contact and retaining the necessary services to make the fish collections.

This project is also designed to benefit from the Fish and Wildlife Division's Resource Management Assistant Program. The RMA Program is directed at providing native and metis young people with an opportunity to gain a technical education from an accredited technical institute/college as well as "hands-on" experience in the field of wildlife management. Involvement of an RMA will be a condition of the project's contract and will work for the contractor in making the field collections.

The samples will be provided to Project 2343 for analysis.

## GENERAL OBJECTIVES

- A. To collect, preserve and transport burbot taken at various sites along the Peace River and three of its tributaries, preferably from sites traditionally fished by native peoples.
- B. To prepare collected fish samples in accordance with prescribed protocols, and to deliver to Alberta Environment for temporary storage.

## TERMS OF REFERENCE

### Contractor will:

1. Provide the equipment and supplies to collect, preserve, and transport fish. (The Northern River Basins Study Office will supply Fisheries and Oceans Canada's recommended contaminant free bags for fish).
  2. Coordinate with the Fish and Wildlife Division Native Liaison Officer (Peace River) obtaining direction from native communities adjacent to the Peace River as to the location of traditional fish harvest areas.
  3. Arrange to pay, in a timely fashion, the Resource Management Assistant (to be identified by the Native Liaison Officer in Peace River) and local boat operators hired to provide transportation, food, lodging and guide services.
    - a) The Resource Management Assistant will be paid at normal government rates. Subsistence will be paid at the government subsistence rate when food and lodging is not supplied.
  4. Collect 18 burbot of larger adult sizes from a minimum of 3 sample sites at or near the locations noted below, or as amended by input received through community input.
    - a) Smoky River - near Canfor Cold Creek Crossing 67-4-W6.
    - b) Smoky River - where Highway 34 crosses the river.
    - c) Smoky River - near Watino Flats.
    - d) Wapiti River - near or below Procter & Gamble Cellulose mill.
    - \* e) Peace River - near Dunvegan.
    - f) Peace River - near but downstream of Daishowa mill (left bank looking downstream).
    - g) Peace River - near confluence with Notikewin.
    - \* h) Peace River - near Carcajou.
    - i) Peace River - near Beaver Ranch Indian Reserve.
    - j) Peace River - near Jean d'Or Indian Reserve.
    - k) Peace River - near Fox Lake Indian Reserve.
- \* Collections at these sites will be dependent upon collections from other projects, as a result communication with the Northern River Basins Study Office will be required prior to collections.

5. Provide detailed records of all species captured, gear used, catch per unit effort, individual fish length and general habitat conditions.
6. Collect, preserve, label and transport the samples in accordance with the protocols outlined in Schedule B.
7. Collect fish using capture methods and equipment required to honour the protocols described in Schedule B.
8. Transport and deliver in a timely and competent manner, fish samples, according to procedures outlined in Schedule B, all the while ensuring the integrity and continuity (i.e., document possession and transfer) of the samples are safeguarded.
9. Complete field collection prior to freeze-up or November 30, 1992, whichever comes first, and endeavour to complete the collections in the shortest interval of time practical.
10. Prepare DRAFT and FINAL reports in a generally accepted format for reporting a project of this kind. The reports are to include among other things:
  - a) maps of traditional use/collections (recommend mylars of 1:50000 NTS maps noting fish sample sites);
  - b) records of community contacts providing information on traditional use. Record to include information pertinent to being able to re-contact the individual, e.g. date of contact, name, address, phone number, as well as summary of pertinent information;
  - c) methods used to capture, process and transport samples;
  - d) specifics on each sample taken as to date, location (legal land, latitude and longitude), method of capture, species, length of time to process a specific sample from time to capture, length-weight and age of fish, general condition of fish (externally) making note of any abnormalities. Complete the Gross Pathology Sheet (Appendix 1);
  - e) analysis of field methods and collections, with recommendations on methods and direction of doing similar collections;
  - f) photographic documentation of methods and equipment.

Ten (10) copies of the draft report are to be received by the Northern River Basins Study office by **December 11, 1992**.

Thirty (30) copies of the final report are to be received by the Northern River Basins Study office two weeks after the receipt of comments on the DRAFT report.



## NORTHERN RIVER BASINS STUDY

### PROJECT 3118-B1 SPECIAL BURBOT COLLECTIONS (PEACE RIVER DRAINAGE - TO INCLUDE SITES HISTORICALLY USED BY NATIVE PEOPLES

#### SCHEDULE B COLLECTION PROTOCOL

#### STANDARD OPERATING PROCEDURES

1. Fish may be collected using a variety of techniques including:
  - Electro-fishing
  - Trap nets
  - Gill nets
  - Seines
  - Set lines
  - Angling
2. A sample numbering system must be designed and used to facilitate tracking of sub-samples from the same fish.
3. Record the fish length and weight to nearest mm and 1 gm, respectively.
4. Examine fish for external lesions and record any abnormalities. Complete the Gross Pathology Sheet (Appendix 1).
5. The use of dry ice for initial freezing and shipping is mandatory unless alternative arrangements are approved by the Study Office's project representative.
6. The use of sturdy styrofoam coolers is most practical and is recommended. Styrofoam coolers of weak construction may not assure constant freezing and may break down during shipping. Coleman type coolers may be used but not necessarily be returned immediately for repetitive use. The Contractor is responsible for picking up coolers when notified by Alberta Environment.
7. Place dry ice both on top and bottom of coolers to assure that no freeze-thaw cycles will occur during transport.

N.B.: Any freeze-thaw, however moderate it may be, will cause contaminant migration within a sample and this may affect contaminant concentration levels in tissues.
8. Ship frozen samples as soon as possible or, if not possible, samples must be kept frozen in a freezer at -20°C until shipping.

## SCHEDULE B

Any contractor/consultant or government personnel that is transporting fish to Edmonton must contact one of the following people before leaving place of origin:

Earle Baddaloo      Work: (403) 427-6102  
                                 Home: (403) 434-8967

Sub Ramamoorthy    Work: (403) 427-6102  
                                 Home: (403) 435-8137

If the above personnel are not in, a message indicating fish is on its way and approximate time of arrival in Edmonton must be left with the secretary (in office) between 8:15 a.m. and 4:30 p.m., or on an answering machine (home) after 4:30 p.m., before leaving place of origin.

Upon arrival in Edmonton with specimens from Northern River Basins Study projects, contractor(s) or consultant(s) should contact one of the above personnel again.

If the above personnel cannot be contacted on a weekday (Monday to Friday), contractor(s)/consultant(s) should proceed directly to **VERSACOLD** only between 8:00 a.m. and 4:00 p.m. Drop cargo (fish) off at **VERSACOLD** under the name of Earle Baddaloo, Alberta Environment. **DO NOT LEAVE FISH OUTSIDE OF VERSACOLD!!**

**VERSACOLD IS OPEN BETWEEN 0800 AND 1600 HOURS, MONDAY THROUGH FRIDAY.**

ADDRESS:      9002 - 20 Street  
                                 Edmonton, Alberta

TELEPHONE:    (403) 464-1770  
CONTACT:      Mr. Merve Permann

If fish tissue arrive after 4:00, contractor(s)/consultant(s) must make every effort to contact Mr. Baddaloo or Dr. Ramamoorthy so that alternate storage for the night or weekend may be found.

It is, therefore, imperative to call contacts before leaving place of origin so that they (contacts) will be aware of the transport activity and can make arrangements for the arrival of the specimens.

### **WEEKEND TRANSPORT**

If fish has to be transported to Edmonton on the weekend (Saturday, Sunday or public holiday), the contractor(s)/consultant(s) or government personnel should contact Mr. Baddaloo or Dr. Ramamoorthy on the last working day before the weekend or public holiday. (If contacts are not available, messages must be left with the secretary.) Again, before leaving place of origin, please call contacts at home and leave a message if they are not there; and upon arrival in Edmonton, please call contact again.

## SCHEDULE B

9. Any deviation from the above established protocol/procedure should be justified and accounted for in writing and a detailed description of what was done is to be submitted with the fish sample; this is to assure credibility and validity of results.
10. Develop a photographic record of equipment and techniques to capture and process fish samples. As appropriate, take close-up photographs of fish exhibiting external abnormalities. Use 35 mm, 100 ASA Fuji slide film in a camera having a 50-55 mm lens. Maintain records to associate photographs with sample material.





NORTHERN RIVER BASINS STUDY

PROJECT 3118-B1 SPECIAL BURBOT COLLECTIONS (PEACE RIVER DRAINAGE -  
TO INCLUDE SITES HISTORICALLY USED BY NATIVE PEOPLES

SCHEDULE C  
DUE DATES FOR DELIVERABLES

1. Draft Report (supply 10 copies) December 11, 1992
2. Final Project Report within 2 weeks of comments being received on Draft Report.

Supply 30 copies and the camera-ready original of the final draft and reports as well as electronic disks (Word Perfect)

PAYMENT

1. Subject to prior approval from the Department, payments will be made based on monthly invoices submitted up to 90 percent to the maximum contract amount of \$ \_\_\_\_\_.
  - (a) Subject to prior approval from the Department travel expenses incurred in performing the services will be paid as follows:
    - (i) accommodation - at cost on submission of receipts;
    - (ii) transportation - at cost on submission of receipts;
    - (iii) meals - at cost on submission of receipts or as specified below without receipts:

- Breakfast	\$ 5.80
- Lunch	\$ 7.40
- Dinner	\$13.50
  - (b) Incidental expenses incurred in performing the services will be reimbursed at cost on submission of receipts.
  - (c) Travel by private vehicle will be reimbursed at the rate of \$0.27 per kilometre and this shall include fuel and maintenance.
2. The final payment, not greater than 10 percent of the contract amount, will be made upon acceptance of the final report.

## SCHEDULE C

### REPORTING

1. The Northern River Basins Study must be provided with (30) hard copies of the final report and (1) camera ready copy, as well as a 3½" electronic disk (Word Perfect).
2. Specific data within the reports must be placed into D-Base format language for incorporation into other government data storage facilities.
3. Photographs, prefer 35 mm, 200 ASA Fuji slide film in a camera having a 50-55 mm lens.

NORTHERN RIVER BASINS STUDY

PROPOSAL EVALUATION

PROJECT: 3118-B1 Special Burbot Collections (Peace River Drainage -  
To Include Sites Historically Used By Native Peoples)

DATE: \_\_\_\_\_ REVIEWER(S): \_\_\_\_\_

CONSULTANTS:					
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CRITERIA	MAX. POINTS	POINTS AWARDED				
COMPREHENSION						
General Objectives	_____					
Scope & Importance	_____					
METHODS						
General Approach	_____					
Field	_____					
PERSONNEL (Key Ones)						
Training, Experience, Past Performance	_____					
Commitment to Project	_____					
COMPANY CAPABILITY						
Field Equipment	_____					
Office Support	_____					
Past Performance	_____					
COSTS						
Total	_____					
SCHEDULE	_____					
OTHER	_____					
Community Involvement	_____					
COMMENT:						
	100					

Signature \_\_\_\_\_  
Date \_\_\_\_\_

3 1510 00135 5727

NORTHERN RIVER BASINS STUDY  
EXAMINATION SHEETS  
GROSS PATHOLOGY

Appendix

DATE: \_\_\_\_\_

SAMPLE NO.: \_\_\_\_\_

LOCATION: \_\_\_\_\_

SPECIES: \_\_\_\_\_

CAPTURE METHOD: \_\_\_\_\_

CAPTURE TIME: \_\_\_\_\_

EXAMINATION TIME: \_\_\_\_\_

GROSS EXTERNAL EXAMINATION

Skin: ( ) Normal ( ) Excessive mucus ( ) Abnormal Colour  
( ) Lesions ( ) Single ( ) Multiple ( ) Closed  
( ) Open ( ) Haemorrhagic ( ) Necrotic ( ) Ulcer  
( ) Blister ( ) Tumour ( ) Lost Scales ( ) Abrasions

Location: \_\_\_\_\_

Wet mount/smear: \_\_\_\_\_

Eyes: ( ) Normal ( ) Exophthalmia ( ) Cataract ( ) Haemorrhagic  
( ) Opaque cornea ( ) Lens lost ( ) Parasites ( ) Bilateral

Fins: ( ) Normal ( ) Frayed ( ) Haemorrhagic  
( ) Eroded ( ) Deformed

Wet mount/smear: \_\_\_\_\_

Gills: ( ) Normal ( ) Pale ( ) Mottled ( ) Haemorrhagic  
( ) Necrotic ( ) Excessive mucus ( ) Hyperplasia  
( ) Telangiectasia ( ) Gas emboli ( ) Cysts  
( ) Large Parasites ( ) Fungus Visible

Wet amount/smear: \_\_\_\_\_

GROSS INTERNAL EXAMINATION

Adipose Tissue:  
( ) Normal ( ) Excessive ( ) Reduced ( ) Petechial Haemorrhagic  
( ) Colour ( ) Cysts

Liver: ( ) Normal ( ) Enlarge ( ) Reduced Colour: ( ) Pale ( ) Mottled  
( ) Other Texture:  
( ) Lesions: ( ) Single ( ) Multiple ( ) Tumour  
( ) Necrotic ( ) Haemorrhagic ( ) Cyst (parasite) ( ) Cyst (Fluid)

Spleen:  
( ) Normal ( ) Enlarged ( ) Reduced ( ) Raspberry surface  
( ) Cyst(parasite) ( ) Cyst (fluid) ( ) Colour

Stained smear: \_\_\_\_\_

Intestines:  
( ) Normal ( ) Distended ( fluid) ( ) Distended (mucoïd)  
( ) Flaccid ( ) Haemorrhagic ( ) Cysts(parasite) ( ) Tumour

Kidney, Posterior:  
( ) Normal ( ) Enlarge ( ) Lesions ( ) Single  
( ) Multiple ( ) Gritty, white ( ) Cyst (parasite) ( ) Cyst (fluid)  
( ) Tumour

Stained smear: \_\_\_\_\_

OTHER: \_\_\_\_\_

N.B. In the event that a significant number of specimen at any site have abnormalities, the contractor is asked to immediately notify the Study Office.  
Phone: 427-1742 or fab to 422-3055



